

AMERICAN MEN OF SCIENCE

A BIOGRAPHICAL DIRECTORY

EDITED BY

J. MCKEEN CATTELL
AND

JAQUES CATTELL

SIXTH EDITION

NEW YORK
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1938

PREFACE TO THE FIFTH EDITION

THE FIFTH EDITION of this work of reference contains about three thousandographical sketches, a more than five-fold increase over the first edition of 1903. This great increase in the number of scientific workers in America reflects the rapid progress of scientific research in the modern world and the greater share taken by the United States. The large number of those now engaged in scientific research makes the task of compilation and editing. The editors are under very great obligations to the many learned scientific men who have assisted in selecting the names, as also to those who have contributed in the book for supplying the material and correcting the proofs. They also appreciate the cooperation of all who make possible the publication of the book by their financial support. Among those who have assisted in the editorial work are Mrs. E. E. Ross, Dr. Lewis C. Spencer, Miss Margaret Barlow, Miss Alice Halsey, Miss A. C. Garrison, Miss Anna Lewis, Mrs. J. Laurence Jones, Miss Florence Carpenter, Miss Anna MacVean, Mr. and Mrs. Mary Martin. * * * *

The 250 scientific men who are judged by their colleagues to have attained a position among our thousand leading scientific men in the course of the last five years are indicated by a star prefixed to the subject of research. There have now been added to the book, beginning with a thousand in 1903; in the present edition an index number after each name indicates the edition of the book in which it was first assigned. In an appendix are included selected lists of the 250 names added in the present edition and a complete list of the thousand leading men of science in 1903, given in the order of merit for each science, together with other material concerning the distribution of American men of science.

GRAND CENTRAL TERMINAL, NEW YORK, N. Y.,
March, 1933

PREFACE TO THE SIXTH EDITION

THIS SIXTH EDITION of the Biographical Directory of American Men of Science contains about 28,000 entries; in the first edition there were about 1,000. The United States has attained in a single generation a position of leadership among the nations in its contributions to the advancement of science and to human welfare. The compilation of the book has become increasingly difficult with each new edition and the obligations of the editors to those who have cooperated in the work have become increasingly great. Those who have taken part in the editorial and office work of the present edition include Mrs. E. E. Ross, Dr. Frances A. Coventry, Miss Jennie Gregory, Miss Jane M. Wertz, Miss Dorothy E. Eastwood, Miss Janet H. Stimson, Mrs. Ruth H. Little, Miss Jane E. Westman and Mrs. Kathryn B. Bern. Acknowledgment should also be made to the proofreaders, compositors and pressmen of The Science Press Printing Company for the skill with which they have accomplished a difficult task.

A selection has again been made by their colleagues of the two hundred and fifty who in the course of five years have attained a position among our leading scientific workers. They are marked by a star with '6' as an index number. The objective methods used in the selection have been described fully in previous editions and extended studies have been published concerning origins, distribution and other subjects. Further statistical and other studies have been made, included in them being the thousand who contributed most to science in this country prior to the present century; but publication of this work must be postponed.

GARRISON, N. Y., AND LANCASTER, PA.,
July, 1938



AMERICAN MEN OF SCIENCE

Aamodt, Prof. Olaf S(verre), University of Wisconsin, Madison, Wis. *Genetics, Agronomy*. St. Paul, Minn., Aug. 9, 92. B.S., Minnesota, 17; M.S., 22; Ph.D., 27; Cornell, 22. Assoc. pathologist, office cereal investigations, U. S. Dept. Agr., 17-28; instr. genetics, Minnesota, 24-27; plant breeding insts., Europe, 27-28; prof. genetics and plant breeding, Alberta, 28-35; head dept. field crops, 33-35; prof. agron. and chairman dept., Wisconsin, 35- A.A.; Genetic Asn.; Soc. Agron.; Phytopath. Soc.; Can. Soc. Tech. Agr.; West. Can. Soc. Agron. (pres., 33-35). Field crops; breeding for disease resistance in plants.

Aase, Prof. Hannah (Caroline), State College of Washington, Pullman, Wash. *Botany*. Elkpoint, S. Dak., July 12, 83. A.B., South Dakota, 06; Ph.D., Chicago, 14. Instr. bot., State Col. Wash., 14-19; asst. prof., 19-36; assoc. prof., 36- A.A.; Bot. Soc.; Mycol. Soc. Cytology; histology.

Abbe, Dr. Ernst C(leveland), University of Minnesota, Minneapolis, Minn. *Botany*. Washington, D. C., Aug. 21, 05. B.S. Cornell, 28; M.S., 30; A.M., Harvard, 31; fellow, 32-33; Ph.D., 34. Asst. bot., Cornell, 27-30; Harvard, 31-32; nat. research fellow biol., Columbia and Cornell, 33-35; instr. bot., Minnesota, 35-37; asst. prof., 37- Botanist, Grenfell-Forbes exped., Labrador, 31; mem., Arnold Arboretum exped., British Columbia and Alberta, 32. A.A.; Bot. Soc.; New Eng. Bot. Club. Phylogeny of the Betulaceae; phytogeography of northeastern Labrador; morphogenesis in Phaseolus vulgaris and Zea mays; cellular cytology.

Abbe, Dr. Truman, 3737 Huntington St., Washington, D. C. *Medicine*. Washington, D. C. Nov. 1, 73. A.B., Harvard, 95; M.D., Columbia, 99; Berlin. Instr. physics, physiol. and surg., Georgetown, 02-05; physiol., med. sch., George Washington, 06-10; surg., 10-20; assoc. visiting surgeon, Columbia Hosp. for Women, 16- Trustee, Nat. Parks Asn. Silver medal, Jamestown Expos. Am. Med. Asn. Radiotherapy; surgery; neoplastic diseases.

Abbitt, Prof. W(illiam) H(enry), Texas Technological College, Lubbock, Texas. *Physics*. Richmond, Va., Jan. 30, 94. A.B., Virginia, 19; Ph.D., Chicago, 26. Instr., Bingham Sch., 19-20; assoc. physics, Colorado, 20-21; prof., Texas Tech. Col., 26- Lieut., F.A., 17-18. A.A.; Physical Soc. Dielectric constants; sand storm electrification.

Abbot, Dr. Charles G(reely), Smithsonian Institution, Washington, D. C. *¹Astrophysics. Wilton, N. H., May 31, 72. B.S. Mass. Inst. Tech., 94; M.S., 95; D.Sc., Melbourne, 14; Sc.D., Case, 30; George Washington, 37; LL.D., Toronto, 33. Asst., astrophys. observatory, Smithsonian Institution, 95-96, aid, acting in charge, 96-07; director, 07-, asst. sec'y., Smithsonian Institution, 18-28; sec'y., 28- Director, Research Corp., New York, 28-; Fed. Am. Nat. Bank, Wash., D. C., 29-33. Draper medal, Nat. Acad., 10; Rumford medal, Am. Acad., 16. Nat. Acad. (home sec'y., 19-23); A.A.; Astron. Soc. (v. pres., 30); Am. Acad.; Philos. Soc. Wash. (v. pres., 08-10); Wash. Acad.; Royal Astron. Soc.; Soc. astron. de France; Deuts. Meteorol. Gesell.; Soc. Astron. de Mex.; Acad. Modena. Solar physics; infra-red solar spectrum; solar constant of radiation; sensitive galvanometer; osmotic pressure; absolute recording pyrheliometer; variability of sun and of terrestrial temperatures; utilization of solar heat.

Abbot, Dr. E(dward) Stanley, 29 Gloucester St., Boston, Mass. *Psychiatry, Mental hygiene*. Beverly, Mass., Dec. 13, 63. A.B., Harvard, 87; M.D., 93. Asst. histol., Harvard Med. Sch., 90-92; house officer, Boston City Hosp., 92-94; asst. physician, McLean Hosp., 94-98; first asst. physician, Northampton State Hosp., 99; asst. supt., Boston City Hosp., 00-04; first asst. physician, McLean Hosp., 04-09; clin. pathologist, 09-17; med. director mental hygiene cmt., Pub. Charities Asn. Pa., 19-22. Major, M.C., 17, chief neuropsychiat. clinic, 17-18.

A.A.; Am. Med. Asn.; Psychol. Asn.; Psychiat. Asn.; Orthopsychiat. Asn.; New Eng. Soc. Psychiat.; Mass. Soc. Psychiat.; Mass. Soc. Mental Hygiene; Boston Soc. Psychiat. and Neur. (pres., 33). Fundamentals of psychology and psychiatry.

Abbott, Prof. Cha(rles) E(lloitt), University of Florida, Gainesville, Fla. *Horticulture*. Gotha, Fla., Sept. 19, 92. B.S.A., Florida, 23; M.S., Mich. State Col., 27. Prin. pub. schs., Fla., 12-17, high sch., 19-20; instr. hort., Florida, 23-27, asst. prof., 27-33; prof. fruits and vegetables, 33- U.S.N.R., 17-18. Soc. Hort. Sci.; Fla. Hort. Soc. Fruit-bud development in the tung-oil tree; fruiting habits of grapefruit, orange and satsuma.

Abbott, Prof. C(harles) H(arlan), University of Redlands, Redlands, Calif. *Zoology*. Antrim, N. H., March 1, 89. A.B., Brown, 13, A.M., 14, Ph.D., 18. Instr. zool., State Col. Wash., 14-15; biol., Haverford Col., 16-17; asst., Yale, 19; instr. zool., Mass. Col., 19-22; prof., Redlands, 22- 2nd lieut., Sanit. C., 18. A.A.; Ecol. Soc.; West. Soc. Nat.; Oceanog. Soc. Pacific. Ecology; light reactions and ecology of land isopods.

Abbott, Clinton G(lbert), Natural History Museum, Balboa Park, San Diego, Calif. *Ornithology*. Liverpool, Eng., April 17, 81. A.B., Columbia, 03. Confidential sec'y. and ed., Conservation Cmn., N. Y., 18-21; in charge pub. educ., Nat. Hist. Museum, Balboa Park, 21-22; director, 22- Ornith. Union; Cooper Ornith. Club (pres., south. div., 34); Soc. Mammal; Linnaean Soc., N. Y. (sec'y., 04-11, v. pres., 11-14); fel. San Diego Soc. Nat. Hist. (pres., 23-25). Life histories of birds.

Abbott, Dr. Ernest J(ames), Physicists Research Co., Ann Arbor, Mich. *Physics*. Battle Creek, Mich., Sept. 11, 00. B.S., Michigan, 24; M.S., 25; Ph.D., 32, E.E., 35. Asst., dept. eng. research, Michigan, 25-27; asst. investigator, 27-29; assoc. investigator, 29-30; research physicist, 30-35; *Physicists Research Co.*, 35- Acoustical Soc.; Soc. Refrig. Eng. Applied industrial research; noise reduction; surface roughness.

Abbott, Dr. E(rnest) V(ictor), U. S. Department of Agriculture, Houma, La. *Plant pathology*. Ashland, Oregon, July 9, 99. B.S., Oregon State Col., 22; M.S., Iowa State Col., 23; Ph.D., 25. Asst. plant pathologist, Exp. Sta., Louisiana, 25-26; asst. chief soil chem. and soil bacter., Exp. Sta., Iowa State Col., 26-27; plant pathologist, Estación Exp. Agr., Lima, Peru, 27-30; assoc. pathologist, bur. plant indust., U. S. Dept. Agr., 30- A.A.; Phytopath. Soc.; Int. Soc. Sugar Cane Technol. Soil fungi; Peruvian plant pathology; sugar cane diseases.

Abbott, Prof. George A(lonzo), University of North Dakota, Grand Forks, N. Dak. *Chemistry*. Alma, Ill., July 7, 74. B.S., DePauw, 95, A.M., 96; fellow, Chicago, 04-05; Austin fellow, Mass. Inst. Tech., 04-06; Ph.D., 08. Teacher, high schs., Ind. and Minn., 96-04, 06-08; asst. prof. org. and indust. chem., N. Dak. Col., and asst. chemist, Exp. Sta., 09-10; prof. chem. and head dept., North Dakota, 10- chairman grad. dept., 21-27. Lecturer, Manitoba, 12; special water consultant, Nat. Resources Board, 34; chemist, N. Dak. Geol. Surv., 34- Mem. water conservation cmn., N. Dak. Planning Board. State del. Int. Cong. Applied Chem., 12. Teacher, S.A.T.C., U.S.A. Chem. Soc.; fel. Inst. Chem.; Cent. Asn. Sci. and Math. Teachers (pres., 10); N. Dak. Acad. (permanent sec'y., 11-); fel. Ind. Acad. (press sec'y.). Physical chemistry; biochemistry; toxicology; water purification.

Abbott, Dr. Howard (C), Olivet College, Olivet, Mich. *Botany*. Conquest, N. Y., Nov. 27, 95. B.S.A., Mich. State Col., 18; Ph.D., Illinois, 25. Instr. sch., Mich., 18-19; Del., 19-20; asst. bot., Illinois, 20-25; prof., South Dakota, 25-30; biol., Evansville Col., 30-31; asst. prof., Bessie Tift Col., 31-33; part-time instr. bot., Mich. State Col., 35-37; instr., Olivet Col. (Mich.), 37- Summers, instr., Colo. State Teachers Col., 26;

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Abercrombie, Dr. W(arren) Fulton, Howard College, Birmingham, Ala. *Zoology*. Leeds, Ala., June 8, 11. A.B., Howard Col. (Ala), 31; M.S., N. Y. Univ., 33, Ph.D., 35. Asst., N. Y. Univ., 31-35; asst. prof. biol., Howard Col. (Ala), 35-A.A.; Micros. Soc.; Ala. Acad. Effects of iodine compounds on the thyroid gland; growth and cell numbers in Japanese beetle larvae; histological changes accompanying the growth of the mid-intestine of Japanese beetle larvae.

Aberle, Dr. S(ophie) B(ledsoe) D, Pueblo Agency, Albuquerque, N. Mex. *Obstetrics, Gynecology*. Schenectady, N. Y., July 21, 99. A.B., Stanford, 23, A.M., 25, Ph.D., 27; Alexander Brown Coxe fellow, Yale, 29-30, M.D., 30. Asst. histol., Stanford, 24-25; embryol. and neur., 25-26; inst. psychol., Yale, 27-29; Sterling fellow, sch. med., 30-31; instr., 31-34; assoc. research, Carnegie Institution, 34-35; supt., *Pueblo Indians, bur. Indian affairs, U. S. Dept. Interior*, 35—A.A.; Asn. Anat.; Eugenics Soc. Vital statistics of the Pueblo Indians; growth and development of Indian children.

Ableiter, J(ames) Kenneth, 6016 Wilson Blvd., Arlington, Va. *Soils*. Fennimore, Wis., Dec. 8, 99. B.S., Wisconsin, 28, M.S., 32. Instr., publ. schs., Wis., 21-22; Minn., 22-24; asst., Wis. Geol. and Nat. Hist. Surv., 28-30; asst. soil surv., Exp. Sta., N. Dak. Col., 32-34; instr. soils and acting head dept., N. Dak. Col., 34-35; senior soil technologist, bur. chem. and soils, U. S. Dept. Agr., 35—A.A.; Soc. Agron.; Soil Sci. Soc.; Am. Geog. Soc.; Int. Soc. Soil Sci. Rural land classification.

Aborn, Dr. R(obert) H(ollenbeck), U. S. Steel Corp., Kearny, N. J. *Metallurgy*. Battle Creek, Mich., Jan. 9, 97. A.B., Grinnell Col., 18; B.S., Mass. Inst. Tech., 20, Sc.D., 25. Research, blast furnace dept., Bethlehem Steel Co., 20-21; x-ray research, metal. lab., Watertown Arsenal, 23-25; staff x-ray research, lab. applied chem., Mass. Inst. Tech., 25-28; instr., eng. sch., Harvard, 28-30; staff, *research lab., U. S. Steel Corp.*, 30—Min. and Metal. Eng.; Soc. Metals; Welding Soc.; Asn. Pulp and Paper Indust. X-ray studies on metals; austenitic steels; low alloy steels.

Abraham, Herbert, 500 Fifth Ave., New York, N. Y. *Chemistry*. New York, N. Y., July 9, 83. B.S., Columbia, 03. Chemist, *Rubberoid Co.*, 03, pres. and director. Chem. Soc.; Soc. Chem. Indust.; Soc. Test. Mat. Bitumens; oils.

Abrahams, Dr. Harold J(ustin), 1542 N. Franklin St., Philadelphia, Pa. *Chemistry*. Philadelphia, Pa., Jan. 1, 01. B.S., Pennsylvania, 26, Harrison and univ. scholars, 26-27, M.S., 28, Ph.D., 32. Instr. chem., high schs., Phila., 27—Asst., Pennsylvania, 30-31. Electrochemistry; arsenic-germanium mixtures.

Abrahamson, Dr. E(manuel) M, 201 Eastern Parkway, Brooklyn, N. Y. *Chemistry*. Brooklyn, N. Y., June 25, 97. B.S., Columbia, 17, Chem.E., 19, A.M., 21, Ph.D., 22, M.D., 26. Asst. chem., Columbia, 18-21; house staff, Jewish Hosp., Brooklyn, 26-28; asst. attending physician, 28-35; assoc. attending physician, 35—A.A.; Chem. Soc.; Am. Med. Asn. Organic and physiological chemistry.

Abramowitz, Dr. A(lexander) A(lbert), Harvard University, Cambridge, Mass. *Physiology*. Spring Valley, N. Y., March 25, 11. A.B., Columbia, 32; A.M., Harvard, 33, Ph.D., 35. Asst. biol., Columbia, 29-30; Austin teaching fellow, Harvard, 33-34; asst. zool., Harvard and Radcliffe Col., 34-35; Harvard, 35-36; instr. and tutor, 36—Physiology of chromatophores; endocrine control of chromatophores; physiology of the innervation of chromatophores.

Abrams, Dr. Allen, Wausau, Wis. *Chemistry*. Butler, Pa., Jan. 27, 89. A.B., Washington and Jefferson Col., 10, M.S., 15, Sc.D., 37; B.S., Mass. Inst. Tech., 15. Instr., Mass. Inst. Tech., 15-16; research chemist, Bemis Bros. Bag Co., 16-17, 19-20; research assoc., Mass. Inst. Tech., 20-21; research chemist, Cornell Wood Products Co., 21-25; tech. director, *Marathon Paper Mills Co.*, 25—Lieut., C.W.S., 17-19, chief develop. sect., defense div., 18-19, major, C.W.Res. Chem. Soc.; Asn. Pulp and Paper Indust. (pres., 32-34); Oil Chemists Soc.; Soc. Test. Mat. Bleaching and finishing of textile goods; pulp and paper manufacture; testing of pulp and paper; waxed papers; waxes.

Abrams, Duff A(ndrew), 11 W. 42nd St., New York, N. Y. *Civil engineering*. Grand Tower, Ill., April 25, 80. B.S., Illinois, 05, C.E., 09. Asst. eng. exp. sta., Illinois, 05-08, assoc., 08-14; prof. in charge struct. materials, research lab., Lewis Inst. (Ill.), 14-25; director research, Portland Cement

Asn., Chicago, 25-27; Int. Cement Corp., New York, 27-31; consulting engineer, 31—Wason medal, Concrete Inst., 19; Turner gold medal, 32. A.A.; Civil Eng.; Soc. Test. Mat.; Concrete Inst. (director, 25-, pres., 31-33); hon. mem. Czechoslovakian Acad.; Int. Asn. Test. Mat. Cement; concrete and reinforced concrete; methods of testing cements.

Abrams, Prof. LeRoy, Stanford University, Calif. ***Botany*. Sheffield, Iowa, Oct. 1, 74. A.B., Stanford, 99. A.M., 02; fellow, Columbia, 04-05, Ph.D., 10. Acting prof. hot., Idaho, 99-00; asst. syst. bot., Stanford, 00-02, instr., 02-04; asst. curator div. plants, U. S. Nat. Museum, 05-06; asst. prof. syst. bot., Stanford, 06-11; assoc. prof. bot., 11-20, prof., 20-, head dept., 34—director nat. hist. museum, 34—Lecturer, California, 15; field asst., U. S. Dept. Agr., 18. A.A.; Bot. Soc.; Icl. Am. Acad.; Calif. Acad. Flora of the Pacific states.

Abramson, Prof. Harold A(lexander), Columbia University, New York, N. Y. *Chemistry, Physiology*. New York, N. Y., Nov. 27, 99. A.B., Columbia, 20, M.D., 23. Asst. chem., Columbia, 18-20; intern, Mt. Sinai Hosp., New York, 23-25; Libman traveling fellow, Univ. Col., London, 25-26; nat. research fellow, Kaiser Wilhelm Inst., 26-28; instr. research med., Hopkins, 28-29; instr. and tutor biochem. sciences, Harvard, 29-31, instr. gen. physiol., 30-31; assoc. bacter. and immunol., med. col., Cornell, 34-35; asst. prof. physiol. col. physicians and surg., Columbia, 35—Summer, staff, biol. lab., Cold Spring Harbor, 34. Cmt. colloid science, Nat. Research Council, 36; sci. advisory council, biol. lab., Cold Spring Harbor. A.A.; Chem. Soc.; Am. Med. Asn.; Physiol. Soc.; Soc. Biol. Chem.; Physical Soc.; Kolloid-Gesell. Lactate utilization; viscosity; electric mobility of cells; electrokinetic properties of surfaces; allergic reactions.

Abramson, Dr. Milton, University of Minnesota, Minneapolis, Minn. *Obstetrics, Gynecology*. Floodwood, Minn., March 30, 05. B.S., Minnesota, 26, M.B., 28, M.D., 29, Ph.D., 32. *Instr. obstet. and gynec., Minnesota*, 32—assoc. physician, dept. obstet. and gynec., Minneapolis Gen. Hosp. Effects of pregnancy on the organ weights of the albino rat; ultra-violet therapy of gonococcal cervicitis; hemolytic transfusion reaction with death; technique of physical therapeutic methods in gynecology; factors affecting blood loss in the third stage of labor.

Abrilol, Dr. Rufino, 722 Nebraska St., Manila, P. I. *Medicine*. Pampanga, P. I., April 7, 90. M.D., Illinois, 13; D.T.M., Philippines, 16; C.P.H., Hopkins, 21, Dr.P.H., 22. U. S. quarantine officer, Manila, P. I., 17-36; chairman, *Insular Board Med. Examiners*, 36—Major, M.C., U.S.A., 19. Fel. Am. Med. Asn.; P. I. Med. Asn. (pres., 36); Manila Med. Soc. (pres., 35). Liver abscess among Filipinos; correlation of certain diseases and economic factors.

Abt, Prof. Isaac Arthur, 4700 S. Kenwood Ave., Chicago, Ill. *Medicine*. Wilmington, Ill., Dec. 18, 67. Hopkins, 89; M.D., Northwestern, 91; Vienna and Berlin, 92-94. Intern, Michael Reese Hosp., 91-92; instr. physiol. and histol., Northwestern, 94-97; prof. *diseases of children*, Woman's Med. Sch., 97-01; assoc. prof., Rush Med. Col., Chicago, 02-09; prof. *Northwestern*, 09—Am. Med. Asn.; Pediat. Soc. Pediatrics.

Achilles, Dr. Edith Mulhall, Barnard College, Columbia University, New York, N. Y. *Psychology*. Boston, Mass., Aug. 6, 92. B.S., Barnard Col., Columbia, 14, A.M., 15, Ph.D., 18. Asst. psychol., Barnard Col., Columbia, 13-15; Vassar Col., 16-17; instr., exten. dept., Columbia, 18-21, supervisor psychol., home study dept., 21-34. Clin. psychologist, New York; consultant psychol., Oxford Sch., 25, 30. Trustee, Barnard Col., Columbia, 33-37. A.A.; Psychol. Asn.; Asn. Applied Psychol.; N. Y. Acad. Med. Clinical and school psychology.

Achilles, Dr. Paul S(trong), Psychological Corp., 522 Fifth Ave., New York, N. Y. *Psychology*. Tacoma, Wash., Jan. 22, 90. A.B., Yale, 13; A.M., Columbia, 17, Ph.D., 23. Instr., Yale-in-China, Changsha, China, 13-14; psychol. examiner, Riverdale Sch., 19-20; lecturer psychol., Columbia, 20-22; instr., 22-23; lecturer, 27—field rep., *Personnel Research Fed.* 27, sec'y., 27—sec'y-treas., *Psychol. Corp.*, 26-31; creation, 25-27, sec'y., 27—sec'y-treas., *Psychol. Corp.*, 26-31; managing director, 31—Research worker, Am. Social Hygiene Asn., 20-21, 25-26; advertising dept., Eastman Kodak Co., 22-24. Lieut., U.S.A., 17-19. A.A.; Psychol. Asn. (sec'y., N. Y. 24; branch, 31-34.) Industrial psychology; personnel; vocational guidance.

Achinstein, Dr. A(sher), 267 W. 70th St., New York, N. Y. *Statistics*. New York, N. Y., Dec. 6, 30. B.S., Col. City of N. Y., 22; A.M., Columbia, 23, Ph.D., 27. Teacher economics.

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- Abbott, Dr. John J(acob), Johns Hopkins University School of Medicine, Baltimore, Md. "Pharmacology, Physiological chemistry." Cleveland, Ohio, May 19, 57. Ph.B. Michigan, '33; hon. A.M., '33; hon. Sc.D., '32; Hopkins, '33-'34; European univ., '34-'35; M.D. Strausburg, '38; hon. Sc.D. Pittsburgh, '15, Harvard, '25; Yale, '27; LL.D. Cambridge, '20, Aberdeen, '32; hon. M.D. Lwow, '27. Prof. high sch., Ind., '79-'80, supt. pub. schs., '80-'82; lecturer mat. med. and therapeut., Michigan, '90-'91, prof. '91-'93; pharmacol., Hopkins, '93-'32, director endocrine research lab., '32; Kober lecturer, '25. Ed., "Jour. Pharmacol. and Exp. Therapeut.", '09-'32. First medalist, Am. Research Corp., '25; Willis J. Gibbs medalist, '27; gold medal, Soc. Apothecaries, London, '28; Conné medal, Chemists' Club, '32; Kober medal, '34. Nat. Acad. A.A. (pres., '32); Soc. Pharmacol. (pres., '09, '10); Physiol. Soc.; Chem. Soc.; Soc. Biol. Chem. (v. pres., '07, pres., '08); Soc. Exp. Biol.; Federation Society for Exp. Biol. (councilor, '14); Am. Physicians; Philos. Soc.; hon. mem. Inst. Chem. Phila. Col. Pharmacy; hon. mem. Chemists' Club; hon. fel. N. Y. Acad. Med.; hon. mem. British Pharmacol. Soc.; hon. mem. Physiol. Soc. Gt. Britain; Halle Akad. der Naturforscher; hon. cor. Soc. de Therapeut. Paris; Soc. de Chim. Biol.; cor. mem. Soc. de Biol. Paris; cor. mem. Vienna Imp. Med. Soc.; Wiener Biol. Gesell; assoc. mem. Soc. Royale des Sci. Med. et Nat. Bruxelles; for. mem. Dutch Soc. Scientists; hon. fel. Royal Soc. Edinburgh; hon. mem. Soc. for Biol. Buenos Aires; hon. mem. Chinese Physical Soc. Composition of animal tissues and fluids; function and isolation of special chemical principles of the animal organism; ethyl sulphid; carbamic acid; pigment of Negro's skin; isolation of the blood pressure-raising constituent; pharmacological action of alcohol; action of phthalins and derivatives; the poisons of *Amanita phalloides*; action of antimicrobials in trypanosomes; coagulant dyes; lymph hearts of the frog; vivification and plasmaphoresis; crystalline poisons of *Bufo aqua*; albumoses in the tissues; active principles of the pituitary gland; histamin and like substances in animal tissues and hydrolytic products of proteins; isolation of the pancreatic hormone; properties of insulin in crystalline form; tetanus.
- Abbott, Dr. Ogden Davis, University of Florida, Gainesville, Fla. "Nutrition." Waukegan, Ill., March 16, '92. B.S. Missouri, '21; A.M., '22; Ph.D., '23. Head dept. chem., Flat River Col., '22-'23; asst. home econ., Florida, '23. Chem. Soc.; Home Econ. Assn.; Iron metabolism in children; anemia of children; anemia in pregnancy; vitamins A and C in citrus fruits; protein utilization; function of the thymus gland; deficiency diseases.
- Abbott, Prof. Raymond Barrington, 339 Sylvia St., West Lafayette, Ind. Physics. Newton, Mass., Dec. 25, '73. B.S. California, '08, M.S., '12; Ph.D., '19. Ass't. instr. physics, California, '07-'10; instr., '10-'20; asst. prof., State Col. Wash., '20-'21; Purdue, '21-'30; assoc. prof., '30-'34; prof., '34-'36. A.A.; Physical Soc.; Association Soc.; Eng. Educ.; Ind. Acad. Electricity, '34-'36.
- Abbott, Prof. Eliseo C. Conklin, 235 N. 23rd St., Lincoln, Neb. Chemistry. Wood River, Neb., Dec. 7, '85. B.S. Nebraska, '10; A.M., '18. Nebraska, '18-'28; assoc. prof., chem., '28-'Chem. Soc. (pres., local sec., '26). Determination of potassium; proteins; sulfur in proteins.
- Abbott, Prof. Talbot Ward, 801 S. Forest St., Carbonado, III. Chemistry. Ossweil, Ind., Aug. 21, '92. A.B. Indiana, '18; A.M. Harvard, '22; Ph.D. Illinois, '28. Ass't. chem., Harvard, '21-'22; instr., Co. Tech., '23-'25; assoc. prof., South. Ill. Teachers' Col., '25. Organic synthesis; metallic alkyls.
- Abbott, W. (alter) B. (Minoy), Insecticide Testing Laboratory, Berville, Md. Entomology. Manchester, N. H., May 21, '79. B.S. New Hampshire, '10. N. J. Exp. Sta., '10-'11; Ill. Lab. Nat. Hist., '11-'12; hon. entom., U. S. Dept. Agr., '12-'21; senior entomologist, insecticide control div., food and drug admin., '21-'A.A.; Am. Econ. Entom.; Entom. Soc. Wash. Insecticides.
- Abbott, Dr. William L. (Mount), 72 W. Adams St., Chicago, Ill. Engineering. Whitewater Col., Ill., Feb. 14, '61. M.E. Illinois, '64; M.M.E., '64; LL.D., '29. Machinist and draughtsman, '64-'67; pres., Natl. Elec. Construction Co., '67-'74; chief engineer power house, '67-'69; chief operating engineer, '79-'86; retired. Trustee, Illinois, pres. board, '67-'79, '81-'82. Pres., Utilities Research Com., Inc. Chancery medal, '66. Tel. Mech. Eng. (councilor, pres., '26); tel. Elec. Eng.; hon. mem. West. Soc. Eng. (pres., '67). Power plant engineering; construction and storage of coal.
- Abbott, Dr. William Odier, 123 S. 36th St., Philadelphia, Pa. Medicine, Pharmacology. New Bedford, Mass., July 26, '01. A.B. Pennsylvania, '26; M.D., '28. Fellow med., Pennsylvania, '26-'28; '28-'29, pharmacol., '29-, asst. ward physician and physician, gastro-intestinal sect., med. clinic, Univ. Hosp., '29. Kirby Fellow, Pennsylvania, '26. Am. Am. Med. Assn.; assoc. Commercialized Assn.; Soc. Clin. Invest.; Path. Soc. Phila.; Hospital Soc. Phila.; Col. Physicians Phila.; The diseases and functions of the gastro-intestinal tract.
- Abbott, Dr. Edward A. (John), 1228 S. Main St., Salt Lake City, Utah. Medicine, Abbott, Salt Lake City, Aug. 27, '96. D.Sc., '28; M.D., '30; M.S., '32; Ph.D., '35; Wisconsin, '36-'38; Assoc. Prof., '38-'40; Assoc. professor, '40-'42; Assoc. Prof., '42-'44; Prof., '44-'46. Dept. Agr., '28-'30; A.A.; Genetics Assn.; Assoc. Prof., '38-'40; Assoc. Prof., '40-'42; Assoc. Prof., '42-'44; Assoc. Prof., '44-'46. Diseases and functions of the gastro-intestinal tract.
- Abbott, Dr. Edward A. (John), 1228 S. Main St., Salt Lake City, Utah. Medicine, Abbott, Salt Lake City, Aug. 27, '96. D.Sc., '28; M.D., '30; M.S., '32; Ph.D., '35; Wisconsin, '36-'38; Assoc. Prof., '38-'40; Assoc. Prof., '40-'42; Assoc. Prof., '42-'44; Assoc. Prof., '44-'46. Dept. Agr., '28-'30; A.A.; Genetics Assn.; Assoc. Prof., '38-'40; Assoc. Prof., '40-'42; Assoc. Prof., '42-'44; Assoc. Prof., '44-'46. Diseases and functions of the gastro-intestinal tract.
- Abbott, Dr. John J(acob), Johns Hopkins University School of Medicine, Baltimore, Md. "Pharmacology, Physiological chemistry." Cleveland, Ohio, May 19, '57. Ph.B. Michigan, '33; hon. A.M., '33; hon. Sc.D., '32; Hopkins, '33-'34; European univ., '34-'35; M.D. Strausburg, '38; hon. Sc.D. Pittsburgh, '15, Harvard, '25; Yale, '27; LL.D. Cambridge, '20, Aberdeen, '32; hon. M.D. Lwow, '27. Prof. high sch., Ind., '79-'80, supt. pub. schs., '80-'82; lecturer mat. med. and therapeut., Michigan, '90-'91, prof. '91-'93; pharmacol., Hopkins, '93-'32, director endocrine research lab., '32; Kober lecturer, '25. Ed., "Jour. Pharmacol. and Exp. Therapeut.", '09-'32. First medalist, Am. Research Corp., '25; Willis J. Gibbs medalist, '27; gold medal, Soc. Apothecaries, London, '28; Conné medal, Chemists' Club, '32; Kober medal, '34. Nat. Acad. A.A. (pres., '32); Soc. Pharmacol. (pres., '09, '10); Physiol. Soc.; Chem. Soc.; Soc. Biol. Chem. (v. pres., '07, pres., '08); Soc. Exp. Biol.; Federation Society for Exp. Biol. (councilor, '14); Am. Physicians; Philos. Soc.; hon. mem. Inst. Chem. Phila. Col. Pharmacy; hon. mem. Chemists' Club; hon. fel. N. Y. Acad. Med.; hon. mem. British Pharmacol. Soc.; hon. mem. Physiol. Soc. Gt. Britain; Halle Akad. der Naturforscher; hon. cor. Soc. de Therapeut. Paris; Soc. de Chim. Biol.; cor. mem. Soc. de Biol. Paris; cor. mem. Vienna Imp. Med. Soc.; Wiener Biol. Gesell; assoc. mem. Soc. Royale des Sci. Med. et Nat. Bruxelles; for. mem. Dutch Soc. Scientists; hon. fel. Royal Soc. Edinburgh; hon. mem. Soc. for Biol. Buenos Aires; hon. mem. Chinese Physical Soc. Composition of animal tissues and fluids; function and isolation of special chemical principles of the animal organism; ethyl sulphid; carbamic acid; pigment of Negro's skin; isolation of the blood pressure-raising constituent; pharmacological action of alcohol; action of phthalins and derivatives; the poisons of *Amanita phalloides*; action of antimicrobials in trypanosomes; coagulant dyes; lymph hearts of the frog; vivification and plasmaphoresis; crystalline poisons of *Bufo aqua*; albumoses in the tissues; active principles of the pituitary gland; histamin and like substances in animal tissues and hydrolytic products of proteins; isolation of the pancreatic hormone; properties of insulin in crystalline form; tetanus.
- Abbott, Dr. Theodore Mead, 11 W. 11th St., New York, N. Y. Psychology. Newport, R. I., Sept. 9, '99. A.B. Vassar Col., '21; diploma, Paris, '23; A.M. Columbia, '24; Ph.D., '25. Clin. psychologist, pub. schs., N. Y., '25-'26; Chapin Sch., '24-'25; instr. psychol., Illinois, '25-'26; nat. research fellow, Cornell, '26-'27; fellow, Sarah Lawrence Col., '29-'35; Gen. Educ. Board research fellow, '35-'36; instr., Miss Chapin's Sch., New York, '30-'36; director research, trade exten. classes, Board Educ., '37-'38. A.A.; Psychol. Am. Mental testing in trade schools; national differences; tactical perception of movement; psychogalvanic reflex; cutaneous localization; individual differences in thinking processes; social facilitation at different intelligence levels.
- Abbott, Dr. Max F. (Favel), Durham, N. H. Agricultural economics. Solvay, N. Y., Oct. 18, '88. B.S. Cornell, '14; Ph.D., '24. Ass't. prof. field crops and farm management, Conn. Agr. Col., '17-'20; farm management, Mass. Col., '20-'26; asst. economist, Exp. Sta., New Hampshire, '26-'27. Farm Econ. Assn. Costs and methods of production of potatoes; hay and silage; pasture management.
- Abbott, Dr. Otto L. (eo), S. J., Loyola University, New Orleans, La. Seismology, Radio engineering. South Mound, Kans., Sept. 2, '01. A.B. St. Louis, '12; A.M. Woodstock Col. (Md.), '13; Ph.D., '21. S.T.D., '22. Prof. physics and radio, Loyola (La.), and director, Nicholas Burke Seismol. Observatory, '24-'25. Tech. advisor and faculty director, radio station WWL, New Orleans, '25-'26. Trustee, Loyola (La.). Physical Soc. Location of the epicenters through the interpretation of seismograms; broadcasting station construction.
- Abbott, Dr. Richard G. (urley), University of Pennsylvania School of Medicine, Philadelphia, Pa. Anatomy. Philadelphia, Pa., Jun. 24, '04. A.B. Swarthmore Col., '26; A.M. Pennsylvania, '30; Ph.D., '34. Instr. sool. Pennsylvania, '28-'30; fellow mem. sool. med., '30-'31. Ass't. Ass't.; Physiol. Soc. Phila. Histophysiology.
- Abbott, Fred. Tomas P. (adilla), University of the Philippines, Manila, P. I. Physics. Polaranda, Nueva Ecija, P. I., April 28, '28. B.S. Philippines, '20; A.M. Harvard, '26; Ph.D., Chicago, '32. Instr. physics, Philippines, '20-'24, asst. prof., '24-'25; assoc. prof., '25-'26. Pasionado of the Philippine Govt., U. S., '24-'25. A.A. Absorption of ultrasonic waves by various gases.

- 24-26; Social Science Research Council fellow, 27-28; investigator, Personnel Classification Board, Washington, D. C., 28; research staff, Natl. Invent. Conf. Board, 29; chair, statistics, State Board Housing, N. Y., 30- A.A.; Statist. Assn. Econ. Ass. Economics, business cycles; wages; cost of living, housing.
- Achen, Dr. Marshall Francis**, 60 Curtis Ave., Woodbury, N. J. Chemist, Plainfield, N. J., Feb. 6, '05. B.S. Cooper Union, 27; M.S. Northwestern, 29; du Pont fellow, Pa. State Col., 30-31; Ph.D. 31. Amer. chem., Pa. State Col., 27-31; research chemist, E. I. du Pont de Nemours and Co., Gibbs town, 31- Chem. Soc. X-ray and the structure of rubber.
- Ackerman, Dr. John W**(right), 72 Lakeside Drive, Nutley, N. J. Chemist, Brooklyn, N. Y., Dec. 23, '04. Ch.B. Cornell, 28; Ch.M. 29; Ph.D. 31. Research chemist, Fine Colors Co., Paterson, N. J., 31- Chem. Soc. Physical chemistry; chemistry of photography; preparation of lakes and pigments; light fastness of colors.
- Ackerman, Prof. Lloyd**, 3912 Glenwood Road, Cleveland Heights, Ohio. Hygiene, Higwood, N. J., Nov. 6, '92. A.B. Colo. State Teachers Col., 17; A.B. Colorado, 20; M.S. Michigan, 24; fellow, 24-25; Ph.D. 25. Amer. hist., Colo. State Teachers Col., 18-19; assoc. prof., West Texas Normal Col., 19-20. S. Dak. Sch. Mines, 20-24; inst., Western Reserve, 25-27; assoc. prof., 27-; assoc. dean, 26-27. A.A. Physiology of wing production in Aphids.
- Ackerson, Dr. Clinton W**(alter), 3928 Dudley St., Lincoln, Neb. Agricultural chemistry. Elbow Lake, Minn., Dec. 29, '94. B.S. Minnesota, 21; M.S. 22; Ph.D. Nebraska, 26. Amer. agr., bacter., Minnesota, 20-22; assoc. chemist, Agri Sta., Nebraska, 22- A.A. Chem. Soc. Biochemistry; animal nutrition; endogenous metabolism of bones; nitrogen requirements of poultry; cereal proteins for poultry; content of blood plasma and mineral and vitamin requirements of chicks; calcium and phosphorus requirements of growing turkeys.
- Ackerson, Dr. Luton**, Illinois Institute for Juvenile Research, 307 S. Lincoln St., Chicago, Ill. Psychology. Elbow Lake, Minn., April 19, '92. A.B. Oregon, 15; Rhodes scholar, Oxford, 16; B.Sc. 24; A.M. Columbia, 22; Ph.D. 26. Amer. prof. psychol., love, and psychology, Psychopathic Hosp., 24-26; research psychologist, 12; Inst. Juvenile Research, 26-Psychol. Ass.; Ass. Applied Psychol. Orthopsychiat. Am. Child behavior; psychometrics; statistical methods.
- Ackert, Prof. James E**(ward), Kansas State College, Manhattan, Kans. Zoolog. Wisseng. Ill., Aug. 31, '79. A.B. Illinois, 09; A.M. 11; fellow, 11-13; Ph.D. 13. Amer. zool., Illinois, 09-11; and prov. Kans. State Col., 13-16; assoc. prof., 16-18; prof., 18-, parasitologist. Exp. Sta., 13-; does dis. grad. study, 31-; fellow by courtesy, Hopkins, 21; research, Merton Inst. Parasitol., Cambridge, 20-21; Ed. board, 'Jour. Parasitol.' 22. Exper. hookworm control, int. health board, Rockefeller Foundation, Trinidad, 21. Speaker, World's Poultry Congr., Ottawa, 27, del. London, 28; Int. Zool. Congr., Padua, 30. A.A.; Soc. Nat.; Soc. Zool.; Microsc. Soc. (pres' and ed. 21-); Soc. Parasitol. (v. pres. 24); Soc. Trop. Med.; ent. mem. Helmholz Soc., Wash.; Kans. Acad. (pres. 26). Innovations of intermucosal nose organs; life histories of ectoparasites and nematodes; morphology of hookworm; resistance of animals to parasites.
- Ackley, Prof. Alton B**(ernard), 605 W. Hancock St., Detroit, Mich. Botany. Winona, Mich., Jan. 28, '98. Certificate, Mich. State Normal Col., 18; A.B. Michigan, 22; M.S. 24; Ph.D. Ohio State, 25. Instructor, pub. sch., Mich., 10-11; pris., high sch., 14-17; assistant, Bureau Col., 17-20; instr., high sch., Mich., 20-21; assistant, Col. City of Detroit, 22-23. Wayne, 24-26; certif., 26- Bot. Soc.; Microsc. Soc.; Mich. Acad. Algic., 24-26.
- Acknowledgments**, Paul, University of Akron, Akron, Ohio. Entomologist, N. Y., May 21, '08. B.S. Pa. State Col., 1922; M.S. 1924; Ph.D. 1926. Instr. bot., Brown, 24-25; Pa. State Entomologist, Newark, Newark, 26-29; assoc. prof. bot., Syracuse, 29-30; Mem. Johns Hopkins trop. bot. exped., 30-31; Soc. Ohio Acad. Plant physiology; anatomy of insect mouth parts; algae.
- Acknowledgments**, George Washington University School of Medicine, Washington, D. C. Entomology, Richmond, Va. Entomologist, 1922-23; 1924-25; 1926-27; 1928-29; field investigator, 1929-30; 1931-32; 1933-34; 1935-36; field investigator, 1937-38; 1939-40; 1941-42; 1943-44; 1945-46; 1947-48; 1949-50; 1951-52; 1953-54; 1955-56; 1957-58; 1959-60; 1961-62; 1963-64; 1965-66; 1967-68; 1969-70; 1971-72; 1973-74; 1975-76; 1977-78; 1979-80; 1981-82; 1983-84; 1985-86; 1987-88; 1989-90; 1991-92; 1993-94; 1995-96; 1997-98; 1999-2000; 2001-02; 2003-04; 2005-06; 2007-08; 2009-10; 2011-12; 2013-14; 2015-16; 2017-18; 2019-20; 2021-22; 2023-24; 2025-26; 2027-28; 2029-30; 2031-32; 2033-34; 2035-36; 2037-38; 2039-40; 2041-42; 2043-44; 2045-46; 2047-48; 2049-50; 2051-52; 2053-54; 2055-56; 2057-58; 2059-60; 2061-62; 2063-64; 2065-66; 2067-68; 2069-70; 2071-72; 2073-74; 2075-76; 2077-78; 2079-80; 2081-82; 2083-84; 2085-86; 2087-88; 2089-90; 2091-92; 2093-94; 2095-96; 2097-98; 2099-2000; 2001-02; 2003-04; 2005-06; 2007-08; 2009-10; 2011-12; 2013-14; 2015-16; 2017-18; 2019-20; 2021-22; 2023-24; 2025-26; 2027-28; 2029-30; 2031-32; 2033-34; 2035-36; 2037-38; 2039-40; 2041-42; 2043-44; 2045-46; 2047-48; 2049-50; 2051-52; 2053-54; 2055-56; 2057-58; 2059-60; 2061-62; 2063-64; 2065-66; 2067-68; 2069-70; 2071-72; 2073-74; 2075-76; 2077-78; 2079-80; 2081-82; 2083-84; 2085-86; 2087-88; 2089-90; 2091-92; 2093-94; 2095-96; 2097-98; 2099-2000; 2001-02; 2003-04; 2005-06; 2007-08; 2009-10; 2011-12; 2013-14; 2015-16; 2017-18; 2019-20; 2021-22; 2023-24; 2025-26; 2027-28; 2029-30; 2031-32; 2033-34; 2035-36; 2037-38; 2039-40; 2041-42; 2043-44; 2045-46; 2047-48; 2049-50; 2051-52; 2053-54; 2055-56; 2057-58; 2059-60; 2061-62; 2063-64; 2065-66; 2067-68; 2069-70; 2071-72; 2073-74; 2075-76; 2077-78; 2079-80; 2081-82; 2083-84; 2085-86; 2087-88; 2089-90; 2091-92; 2093-94; 2095-96; 2097-98; 2099-2000; 2001-02; 2003-04; 2005-06; 2007-08; 2009-10; 2011-12; 2013-14; 2015-16; 2017-18; 2019-20; 2021-22; 2023-24; 2025-26; 2027-28; 2029-30; 2031-32; 2033-34; 2035-36; 2037-38; 2039-40; 2041-42; 2043-44; 2045-46; 2047-48; 2049-50; 2051-52; 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2075-76; 2077-78; 2079-80; 2081-82; 2083-84; 2085-86; 2087-88; 2089-90; 2091-92; 2093-94; 2095-96; 2097-98; 2099-2000; 2001-02; 2003-04; 2005-06; 2007-08; 2009-10; 2011-12; 2013-14; 2015-16; 2017-18; 2019-20; 2021-22; 2023-24; 2025-26; 2027-28; 2029-30; 2031-32; 2033-34; 2035-36; 2037-38; 2039-40; 2041-42; 2043-44; 2045-46; 2047-48; 2049-50; 2051-52; 2053-54; 2055-56; 2057-58; 2059-60; 2061-62; 2063-64; 2065-66; 2067-68; 2069-70; 2071-72; 2073-74; 2075-76; 2077-78; 2079-80; 2081-82; 2083-84; 2085-86; 2087-88; 2089-90; 2091-92; 2093-94; 2095-96; 2097-98; 2099-2000; 2001-02; 2003-04; 2005-06; 2007-08; 2009-10; 2011-12; 2013-14; 2015-16; 2017-18; 2019-20; 2021-22; 2023-24; 2025-26; 2027-28; 2029-30; 2031-32; 2033-34; 2035-36; 2037-38; 2039-40; 2041-42; 2043-44; 2045-46; 2047-48; 2049-50; 2051-52; 2053-54; 2055-56; 2057-58; 2059-60; 2061-62; 2063-64; 2065-66; 2067-68; 2069-70; 2071-72; 2073-74; 2075-76; 2077-78; 2079-80; 2081-82; 2083-84; 2085-86; 2087-88; 2089-90; 2091-92; 2093-94; 2095-96; 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2041-42; 2043-44; 2045-46; 2047-48; 2049-50; 2051-52; 2053-54; 2055-56; 2057-58; 2059-60; 2061-62; 2063-64; 2065-66; 2067-68; 2069-70; 2071-72; 2073-74; 2075-76; 2077-78; 2079-80; 2081-82; 2083-84; 2085-86; 2087-88; 2089-90; 2091-92; 2093-94; 2095-96; 2097-98; 2099-2000; 2001-02; 2003-04; 2005-06; 2007-08; 2009-10; 2011-12; 2013-14; 2015-16; 2017-18; 2019-20; 2021-22; 2023-24; 2025-26; 2027-28; 2029-30; 2031-32; 2033-34; 2035-36; 2037-38; 2039-40; 2041-42; 2043-44; 2045-46; 2047-48; 2049-50; 2051-52; 2053-54; 2055-56; 2057-58; 2059-60; 2061-62; 2063-64; 2065-66; 2067-68; 2069-70; 2071-72; 2073-74; 2075-76; 2077-78; 2079-80; 2081-82; 2083-84; 2085-86; 2087-88; 2089-90; 2091-92; 2093-94; 2095-96; 2097-98; 2099-2000; 2001-02; 2003-04; 2005-06; 2007-08; 2009-10; 2011-12; 2013-14; 2015-16; 2017-18; 2019-20; 2021-22; 2023-24; 2025-26; 2027-28; 2029-30; 2031-32; 2033-34; 2035-36; 2037-38; 2039-40; 2041-42; 2043-44; 2045-46; 2047-48; 2049-50; 2051-52; 2053-54; 2055-56; 2057-58; 2059-60; 2061-62; 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2085-86; 2087-88; 2089-90; 2091-92; 2093-94; 2095-96; 2097-98; 2099-2000; 2001-02; 2003-04; 2005-06; 2007-08; 2009-10; 2011-12; 2013-14; 2015-16; 2017-18; 2019-20; 2021-22; 2023-24; 2025-26; 2027-28; 2029-30; 2031-32; 2033-34; 2035-36; 2037-38; 2039-40; 2041-42; 2043-44; 2045-46; 2047-48; 2049-50; 2051-52; 2053-54; 2055-56; 2057-58; 2059-60; 2061-62; 2063-64; 2065-66; 2067-68; 2069-70; 2071-72; 2073-74; 2075-76; 2077-78; 2079-80; 2081-82; 2083-84; 2085-86; 2087-88; 2089-90; 2091-92; 2093-94; 2095-96; 2097-98; 2099-2000; 2001-02; 2003-04; 2005-06; 2007-08; 2009-10; 2011-12; 2013-14; 2015-16; 2017-18; 2019-20; 2021-22; 2023-24; 2025-26; 2027-28; 2029-30; 2031-32; 2033-34; 2035-36; 2037-38; 2039-40; 2041-42; 2043-44; 2045-46; 2047-48; 2049-50; 2051-52; 2053-54; 2055-56; 2057-58; 2059-60; 2061-62; 2063-64; 2065-66; 2067-68; 2069-70; 2071-72; 2073-74; 2075-76; 2077-78; 2079-80; 2081-82; 2083-84; 2085-86; 2087-88; 2089-90; 2091-92; 2093-94; 2095-96; 2097-98; 2099-2000; 2001-02; 2003-04; 2005-06; 2007-08; 2009-10; 2011-12; 2013-14; 2015-16; 2017-18; 2019-20; 2021-22; 2023-24; 2025-26; 2027-28; 2029-30; 2031-32; 2033-34; 2035-36; 2037-38; 2039-40; 2041-42; 2043-44; 2045-46; 2047-48; 2049-50; 2051-52; 2053-54; 2055-56; 2057-58; 2059-60; 2061-62; 2063-64; 2065-66; 2067-68; 2069-70; 2071-72; 2073-74; 2075-76; 2077-78; 2079-80; 2081-82; 2083-84; 2085-86; 2087-88; 2089-90; 2091-92; 2093-94; 2095-96; 2097-98; 2099-2000; 2001-02; 2003-04; 2005-06; 2007-08; 2009-10; 2011-12; 2013-14; 2015-16; 2017-18; 2019-20; 2021-22; 2023-24; 2025-26; 2027-28; 2029-30; 2031-32; 2033-34; 2035-36; 2037-38; 2039-40; 2041-42; 2043-44; 2045-46; 2047-48; 2049-50; 2051-52; 2053-54; 2055-56; 2057-58; 2059-60; 2061-62; 2063-64; 2065-66; 2067-68; 2069-70; 2071-72; 2073-74; 2075-76; 2077-78; 2079-80; 2081-82; 2083-84; 2085-86; 2087-88; 2089-90; 2091-92; 2093-94; 2095-96; 2097-98; 2099-2000; 2001-02; 2003-04; 2005-06; 2007-08; 2009-10; 2011-12; 2013-14; 2015-16; 2017-18; 2019-20; 2021-22; 2023-24; 2025-26; 2027-28; 2029-30; 2031-32; 2033-34; 2035-36; 2037-38; 2039-40; 2041-42; 2043-44; 2045-46; 2047-48; 2049-50; 2051-52; 2053-54; 2055-56; 2057-58; 2059-60; 2061-62; 2063-64; 2065-66; 2067-68; 2069-70; 2071-72; 2073-74; 2075-76; 2077-78; 2079-80; 2081-82; 2083-84; 2085-86; 2087-88; 2089-90; 2091-92; 2093-94; 2095-96; 2097-98; 2099-2000; 2001-02; 2003-04; 2005-06; 2007-08; 2009-10; 2011-12; 2013-14; 2015-16; 2017-18; 2019-20; 2021-22; 2023-24; 2025-26; 2027-28; 2029-30; 2031-32; 2033-34; 2035-36; 2037-38; 2039-40; 2041-42; 2043-44; 2045-46; 2047-48; 2049-50; 2051-52; 2053-54; 2055-56; 2057-58; 2059-60; 2061-62; 2063-

ACKEN — ADAIR

24-26; Social Science Research Council fellow, 27-28; investigator, Personnel Classification Board, Washington, D. C., 28; research staff, Nat. Indust. Conf. Board, 29; chief statistician, State Board Housing, N. Y., 30- A.A.; Statist. Asn; Econ. Asn. Economics; business cycles; wages; cost of living; housing.

Acken, Dr. Marshall F(rancis), 60 Curtis Ave, Woodbury, N. J. Chemistry. Plainfield, N. J., Feb. 6, 05. B.S., Cooper Union, 27; M.S., Northwestern, 29; du Pont fellow, Pa. State Col, 30-31; Ph.D. 31. Asst. chem., Pa. State Col, 27-31; research chemist, E. I. du Pont de Nemours and Co., Gibbstown, 31- Chem. Soc. X-ray and the structure of rubber.

Ackerman, Dr. John W(right), 72 Lakeside Drive, Nutley, N. J. Chemistry. Brooklyn, N. Y., Dec. 23, 04. Ch.B., Cornell, 28, Ch.M., 29, Ph.D. 31. Research chemist, Fine Colors Co., Paterson, N. J., 31- Chem. Soc. Physical chemistry; chemistry of photography; preparation of lakes and pigments; light fastness of colors.

Ackerman, Prof. Lloyd, 3912 Glenwood Road, Cleveland Heights, Ohio. Hygiene. Ridgewood, N. J., Nov. 6, 92. A.B., Colo. State Teachers Col, 17; A.B., Colorado, 20; M.S., Michigan, 24, fellow, 24-25; Ph.D. 25. Asst. biol., Colo. State Teachers Col, 18-19; assoc. prof., West Texas Nor. Col, 19-20; S. Dak. Sch. Mines, 20-24; instr., Western Reserve, 25-27, asst. prof., 27-; asst. dean, 26-27. A.A. Physiology of wing production in Aphids.

Ackerson, Dr. C(lifton) W(alter), 3928 Dudley St, Lincoln, Nebr. Agricultural chemistry. Elbow Lake, Minn., Dec. 29, 96. B.S., Minnesota, 21, M.S., 22; Ph.D., Nebraska, 26. Asst. agr. biochem., Minnesota, 20-22; asst. chemist, Exp. Sta., Nebraska, 22- A.A.; Chem. Soc. Biochemistry; animal nutrition; endogenous metabolism of hens; nitrogen requirements of poultry; cereal proteins for poultry; content of blood plasma and mineral and vitamin requirements of chicks; calcium and phosphorus requirements of growing turkeys.

Ackerson, Dr. Luton, Illinois Institute for Juvenile Research, 907 S. Lincoln St, Chicago, Ill. Psychology. Elbow Lake, Minn., April 19, 92. A.B., Oregon, 15; Rhodes scholar, Oxford, 16, B.Sc., 24; A.M., Columbia, 22, Ph.D. 26. Asst. prof. psychol., Iowa, and psychologist, Psychopathic Hosp, 24-26; research psychologist, Ill. Inst. Juvenile Research, 26-Psychol. Asn; Asn. Applied Psychol.; Orthopsychiat. Asn. Child behavior; psychometrics; statistical methods.

Ackert, Prof. James E(dward), Kansas State College, Manhattan, Kans. Zoology. Woosung, Ill., Aug. 31, 79. A.B., Illinois, 09, A.M., 11, fellow, 11-13, Ph.D. 13. Asst. zool., Illinois, 09-11; asst. prof., Kans. State Col, 13-16, assoc. prof., 16-18, prof., 18-, parasitologist, Exp. Sta., 13-, deaf div. grad. study, 31-. Fellow by courtesy, Hopkins, 21; research, Molteno Inst. Parasitol., Cambridge, 30-31. Ed. board, 'Jour. Parasitol.', 32. Exped., hookworm control, int. health board, Rockefeller Foundation, Trinidad, 21. Speaker, World's Poultry Cong., Ottawa, 27, del., London, 30; Int. Zool. Cong., Padua, 30. A.A.; Soc. Nat.; Soc. Zool.; Micros. Soc. (sec'y and ed., 31-); Soc. Parasitol. (v. pres., 34); Soc. Trop. Med.; cor. mem. Helminth. Soc. Wash.; Kans. Acad. (pres., 25). Innervation of integumentary sense organs; life histories of cestodes and nematodes; morphology of hookworm; resistance of animals to parasitism.

Ackley, Prof. Alma B(ernice), 665 W. Hancock St, Detroit, Mich. Botany. Waterloo, Mich., Jan. 23, 93. Certificate, Mich. State Nor. Col, 13; A.B., Michigan, 22, M.S., 24; Ph.D., Ohio State, 30. Teacher, pub. schs., Mich., 10-11, prin., high sch., 14-17; asst. prof., Berea Col, 17-20; instr., high sch., Mich., 20-21, 22-25; bot., Col. City of Detroit, 25-33, Wayne, 33-34, asst. prof., 34- Bot. Soc.; Micros. Soc.; Mich. Acad. Algae; Monilia.

Acquarone, Prof. Paul, University of Akron, Akron, Ohio. Botany. Buffalo, N. Y., May 31, 00. B.S., Pa. State Col, 24; Ph.D., Hopkins, 28. Instr. bot., Brown, 24-25; Pa. State Col, 25-26; bacter., Hopkins, 26-29; asst. prof. bot., Syracuse, 29-31; Akron, 31- Mem., Johns Hopkins trop. hot. exped., 26. A.A.; Bot. Soc.; Ohio Acad. Plant physiology; anatomy of Musaceae; brown algae.

Acree, Ellen Gray, George Washington University School of Medicine, Washington, D. C. Bacteriology. Richmond, Va., April 13, 05. A.B., Richmond, 26. Sci. asst., div. insecticides, bur. entom., U. S. Dept. Agr., 29-31; microscopist, field investi-

gations malarial nat. inst. health, U. S. Pub. Health Service, 31-35; research assoc. bacter., sch. med., George Washington, 35- A.A.; So. Bact.; Pub. Health Asn; Soc. Parasitol. Parasitology; virus.

Acree, Ruby Jarvis (Tiller), 1841 Summit Place, N. W., Washington, D. C. Plant pathology. Richmond, Va., Jan. 18, 86. Wash. Leg. Col. Sci. asst., bur. plant indust., U. S. Dept. Agr., 07-25; junior pathologist, 25-36, asst. pathologist, 36- A.A. Endothia parasitica and related species; white pine blister rust; hydrogen ion and culture media; disinfecting power of colloidal wood preservatives; differential staining; hydrogen-ion dues; cataphoretic mobility of spores.

Acree, Dr. S(olomon) F(arley), National Bureau of Standards, Washington, D. C. *Chemistry. McGregor, Texas, Dec. 18, 75. A.S., Texas, 96, M.S., 97; fellow, Chicago, 98-01, Ph.D., 02; Berlin, 03-04. Asst. chem., Texas, 96-97; instr., high sch., Texas, 97-98; asst., Chicago, 00-01; assoc. prof. chem., Utah, 01-04; Johnston scholar, Hopkins, 05-06, assoc. 06-07, assoc. prof., 07-14; chief chemist, Forest Products Lab., and prof. forst. chem., Wisconsin, 14-17; Syracuse, 17-19; chemist, Hahnemann Hosp., Rochester, 19-20; tech. director and v. pres., Gahame Chem. Co. and Int. Chem. Products Co., 20-24; research prof. chem., George Washington, 24-26; senior chemist, Bur. Standards, 27-28, chief sect. fiber structure, 28- Chem. Soc. (chairman, sect. org. chem., 09, councilor); Asn. Lipid and Paper Indust. (mem. sect. raw products); Texas Acad.; fel. London Chem. Soc.; Deuts. Chem. Gesell. Enzymes; tautomerism; catalysis; color changes in indicators and dye stuffs; alkyl halides; pinacone and pinacoline rearrangements; ions and molecules of electrolytes; influence of hydrogen ions on the growth of wood-destroying fungi; cataphoresis measurements; electrical conductivity of solutions; dilatometry; oxidation-reduction reactions; hydrogen and calomel electrodes; beechwood creosote; reclaimed clay scrap and mucic acid; industrial utilization of farm and wood wastes; organic acids and indicators.

Adair, Dr. Frank E(arl), 70 E. 77th St, New York, N. Y. Surgery. Beverly, Ohio, April 9, 87. A.B., Marietta Col, 10, hon. Sc.D., 34 M.D., Hopkins, 15. Asst. surgeon, Ruptured and Crippled Hosp., 19-30; Mem. Hosp., 20-26, assoc. surgeon, 26-28, attending surgeon, 28-, exec. officer, 35-; asst. prof. clin. surg., med. col., Cornell, 34- Consultant surgeon, N. Y. Infirmary for Women and Children, 33-; Caledonian Hosp., Brooklyn; St. Joseph's Hosp., Far Rockaway; U. S. Veterans Hosp. No. 81; St. Luke's Hosp., Newburgh, N. Y.; Home for Incurables, New York, 34- Mem. Cancer Council, 37-; mem., Am. Board Radiol. Staff surgeon, Base Hosp. No. 9 and No. 2, U.S.A., 17-19. Fel. Col. Surg. (cmt. treatment malignant diseases); Soc. Control Cancer (director, sec'y, exec. cmt); Am. Med. Asn. Clin. Research Soc. (pres., 25); Radium Soc.; N. Y. Clin. Soc.; N. Y. Acad. Med. Traumatic fat necrosis; breast cancer; dosage and therapeutic use of unfiltered radon; aponeurosis of external oblique as a source of living sutures for inguinal hemiotomy; treatment of cancer by radiation.

Adair, Dr. Fred L(yman), 5841 Maryland Ave, Chicago, Ill. Obstetrics, Gynecology. Anamosa, Iowa, July 28, 77. B.S., Minnesota, 98, A.M., 12; M.D., Rush, Chicago, 01. Frem. asst. to assoc. prof. obstet. and gynec., Minnesota, 03-26, prof., 26-29; Chicago, 29-, chairman dept., 31- chief of service, Chicago Lying-Hosp., 31- Past chief obstet. and gynec. service, Gen. Albury Methodist and Swedish Hosps., Minneapolis. Ed. cmt. 'Am. Jour. Obstet. and Gynec.' V. pres., Am. Board Obstet. and Gynec.; chairman, Am. Cmt. on Maternal Welfare; chairman, nt. on prenatal maternal care, White House Conf., 30. Red Cross, U. S. A., 18. Asn. Obstet., Gynec. and Abdom. Surg. Gynec. Soc. (past treas); Col. Surg.; Am. Med. Asn. (past sec'y and chairman, sect. on obstet. gynec. and abdom. surg); Gynec. Club (pres); Minn. Acad. Med.; Hennepin Co. Med. Soc. (past pres, sec'y, sect. on obstet., gynec. and abdom. surg., 29-31); Chicago Gynec. Soc. (past pres). Fetal anatomy and pathology; maternal welfare.

Adair, H(enry) S(tephen), Adair's Insect Control Service, Montgomery, Ala. Entomology. Dumas, Miss., Nov. 7, 99. B.S., Miss. Agr. and Mech. Col, 23. Field asst., bur. entom., U. S. Dept. Agr., 23, junior entomologist, 23-29, asst. entomologist, 29-33; entomologist, Adair's Insect Control Service, 33- Asn. Econ. Entom. Black pit of pecan; pecan insect control; pecan pit control in Tennessee.

- Adams, Prof. A(rthur) E(rnest)**, 926 W. Woolman St., Butte, Mont. *Mining engineering*. Helena, Mont, May 2, 86. E.M., Montana, 07. Instr. math, surv., metal. and mining. *Mont. Sch. Mines*, 08-11; asst. prof. *mining eng.*, 11-19; assoc. prof., 19-26; prof., 26-, v. pres., 28- Min. and Metal. Eng.; Mont. Soc. Eng. (trustee). Location, representation and patenting of mineral lands in Montana.
- Adams, Prof. A(my) Elizabeth**, Mt. Holyoke College, South Hadley, Mass. *Zoology*. Delaware, N. J. March 28, 92. A.B. Mt. Holyoke Col., 14; A.M., Columbia, 18; Ph.D., Yale, 23. Asst. zool. Mt. Holyoke Col., 14-15; instr., 15-17, 18-19; assoc. prof., 19-28; prof., 28-, acting head dept., 20-21, 29, 37; acting dean, 26-27. Investigator, Edinburgh, 30. A.A.; Soc. Zool.; Soc. Exp. Biol.; Am. Anat. Experimental embryology; endocrinology.
- Adams, Arthur H(erman)**, 420 Lexington Ave., New York, N. Y. *Physics*. Nordhoff, Calif., Aug. 8, 79. A.B. Princeton, 01. West. Elec. Co., 01-05, engineer methods, Chicago, 09-11; printing telegraph develop., New York, 11-12; European automatic telephone rep., Chicago, 15-16; asst. supt. develop. and research mfg. problems, 24-27; shop supt., Bell Tel. Mfg. Co., Belgium, 05-09; European automatic telephone develop., 12-14; telephony, Bell Tel. Labs., 14-15; printing telegraph design and research, 16-18; chief engineer and supt., North Elec. Mfg. Co., 18-21; consultant electro-mechanics, New York, 21-24; tech. adviser to pres., Manhattan Elec. Supply Co., N. Y., 27-28; consulting inventor, 28-A.A.; Mech. Eng.; fel. Royal Soc. Arts. Patents; dyeing methods; oil exploration; anti-vibration; communication; manufacture; automatic train control; railway signaling for safety; the application of the sciences to life and industry.
- Adams, Prof. Arthur S(tanton)**, 1215 16th St., Golden, Colo. *Mechanics*. Winchester, Mass., July 1, 96. Grad. U.S. Naval Acad., 18; U. S. Submarine Sch.; A.M., California, 26; Sc.D., Colo. Sch. Mines, 27. Ensign and lieut., U.S.N., 18-21; teacher, pub. and private high schs., Colo., 21-25; Colo. Sch. Mines, 26-; prof. mech., 31- Visiting prof., California, 29. Mem. sci. advisory cmt., child research council, med. sch., Colorado. A.A.; Physical Soc.; Eng. Educ. Adsorption of gases on solids; flotation of minerals.
- Adams, Dr. Charles C(hristopher)**, New York State Museum, Albany, N. Y. *Zoology*. Clinton, Ill., July 23, 73. B.S., Ill. Wesleyan, 95; hon. Sc.D., 20; M.S., Harvard, 99; fellow, Chicago, 00-03; Ph.D., 08. Asst. biol., Ill. Wesleyan, 95-96; asst. entomologist, state lab. nat. hist., Illinois, 96-98; curator univ. museum, Michigan, 03-06; director, Cincinnati Soc. Nat. Hist., 06-07; assoc. animal ecol., Illinois, 08-14; asst. prof. forest zool., N. Y. State Col. Forestry, Syracuse, 14-16, prof., 16-26; director, Roosevelt Wild Life Forest Exp. Sta., 19-26; N. Y. State Museum, Albany, 26- Summer, asst., Chicago, 02; curator museum, Cincinnati, 06-07. A.A.; Soc. Nat.; Ecol. Soc. (pres., 23); Soc. Mammal.; Fisheries Soc.; Hist. Sci. Soc.; Am. Geog. (v. pres.); Am. Mus.; British Ecol. Soc. Habitats, faunas and associations dynamically and genetically considered; general animal ecology; ecology of inland environments, prairies, lakes and forests; migration and evolution; geographical distribution; forestry and the food supply; relation of animal ecology to state and national parks; relation of ecological research to economics and sociology.
- Adams, Dr. C(harles) F(rederick)**, State Board of Health, Jefferson City, Mo. *Entomology, Pathology*. Atherton, Mo., April 4, 77. B.S.A., Missouri, 97; M.D., Kansas City Med. Col., 02; A.M., Kansas, 03; Chicago, 26-27. Instr., Kansas City Med. Col. and Kansas City Dental Col., 99-03; asst. zool., Chicago, 04-05; prof. entom., Arkansas, 05-08; dean col. agr. and director, Exp. Sta., 08-13; farmer and dairyman, Atherton, Mo., 13-25; director state lab., State Board Health, Ind., 27-34; dir. labs., Mo., 34- Univ. Kans. expds., Southwest, 03-05. Nat. Malaria Cmt. A.A.; fel. Am. Med. Assn.; fel. Entom. Soc. Amer.; fel. Pub. Health Assn.; Mo. Pub. Health Assn.; fel. Ind. Acad.; Mo. Acad.; St. Louis Acad.; Can. Pub. Health Assn. Diptera; Chironomidae of the world; clinical pathology.
- Adams, Prof. C(larence) Raymond**, 260 Doyle Ave., Providence, R. I. *Mathematics*. Cranston, R. I., April 10, 98. A.B., Brown, 18. G.A.R. fellow, 18-19. M.S., 20; A.M., Harvard, 22. Instr. math., Brown, 18-20, 23-25; asst. prof., 25-28; assoc. prof., 28-36; prof., 36- Sheldon traveling fellow, Name and Göttingen, 22-23. Del. Int. Cong. Math., Zurich, 32. Math. Soc. (councilor, 32-34); Math. Assn.; fel. Am. Acad.; Circolo Mat. di Palermo. Analytic theory of difference equations; multiple series; real function theory.
- Adams, Prof. C(lyde) S(tewart)**, Antioch College, Yellow Springs, Ohio. *Chemistry*. Newark, Ohio, Oct. 1, 93. B.S., Denison, 16; A.M., Ohio State 18, Ph.D., 22; Columbia, 19; Toronto. Asst. prof. chem., Denison, 16-17; junior chemist, U. S. Bur. Mines, 17; instr., Ohio State, 17-18; research chemist, Cent. Dyestuff and Chem. Co., 19-20; lecturer chem., Toronto, 20-22; prof. and head dept., Antioch Col., 22-, director indust. research inst., 29-33. Lieut. C.W.S., 18-19. Chem. Soc. (pres., Columbus sect, 27, councilor, Dayton sect, 31-35); Soc. Metals; Ohio Acad. (v. pres., 34). Absorption spectra in visible and ultra-violet of organic compounds; chemical education.
- Adams, Prof. C(comfort) A(very)**, Harvard University, Cambridge, Mass. *Electrical engineering*. Cleveland, Ohio, Nov. 1, 68. B.S. Case, 90, E.E., 05, hon. D.E., 25. Elec. engineer, Brush Elec. Co., 90-91; instr. elec. eng., Harvard, 91-96; asst. prof., 96-06, prof., 06-, dean eng. sch., 19-20. Consulting engineer, Stone and Webster, 01-04; Am. Tool and Machine Co., 04-; Okonite Co., 16-; Okonite-Callender Co., 24-; Babcock and Wilcox Co., 25-; Gen. Elec. Co.; Edward G. Budd Mfg. Co., Phila., 33-; director, Am. Bur. Welding, 19-Chairman div. eng., Nat. Research Council, 19-21. Jury awards, St. Louis, 04; chairman board award, Edison medal, 21; pres. board award, Fritz medal, 22-23. Chairman gen. eng. cmt., Council Nat. Defence; welding cmt., Emergency Fleet Corp. Nat. Acad.; A.A.; Elec. Eng. (pres., 18); Mech. Eng.; Civil Eng.; Eng. Educ.; Welding Soc. (pres., 19); Physical Soc.; Am. Acad.; Inst. Elec. Eng. Gt. Britain; Electrotech. Verein; Soc. française des Elec. Induction motors; alternator regulation; synchronous motors; dynamo design schedules; commutation; welding.
- Adams, Prof. Donald K(eith)**, Duke University, Durham, N. C. *Psychology*. Millersburg, Pa., March 6, 02. A.B. Pa. State Col., 23; A.M., Harvard, 25; Ph.D., Yale, 27. Asst. inst. psychol., Yale, 25-28; instr. psychol., Wesleyan, 28-29; nat. research fellow, Berlin, 29-31; asst. prof., Duke, 31- Sterling fellow, Yale, 27-28; Guggenheim Mem. Foundation fellow, 37-38. Psychol. Asn. Comparative, theoretical and child psychology.
- Adams, Dr. E(dgar) M.**, Dow Chemical Co., Midland, Mich. *Toxicology, Biochemistry*. Clinton, Ind., Dec. 29, 08. A.B. De Pauw, 30; M.S., Cincinnati, 32, Ph.D., 34. Research biochemist, Dow Chem. Co., 34- Chemotherapy of pneumonia.
- Adams, Prof. Edwin P(limpton)**, Princeton University, Princeton, N. J. *Physics*. Prague, Bohemia, Jan. 23, 78. B.S., Beloit Col., 99, Sc.D., 31; M.S., Harvard, 01, Ph.D., 04. Instr. physics, Princeton, 03-06; asst. prof., 06-09, prof., 09-A.A.; Physical Soc.; Math. Soc.; Philos. Soc. Metallic conduction; Corbino effect in iron; theory of magnetism; relativity; the quantum theory.
- Adams, Dr. Elliot Q(uincy)**, General Electric Co., Nela Park, Cleveland, Ohio. *Physical and organic chemistry*. Medford, Mass., Sept. 13, 88. B.S., Mass. Inst. Tech., 09; fellow, Calif., 12-13, Ph.D., 14. Asst. research lab., Gen. Elec. Co., Schenectady, 09-12; teaching fellow, California, 13-14; asst., 14-16, instr., 16-17; org. and physical chemist, color lab., bur. chem., U. S. Dept. Agr., 17-21; physical chemist, Nela research lab., Gen. Elec. Co., 21-28, lamp develop. lab., 29- A.A.; Chem. Soc.; Physical Soc.; Optical Soc.; Miner. Soc.; Wash. Acad. Color and ionization of organic chromogens; transference in amalgams; ultimate rational units; absorption of chlorine by charcoal; photosensitizing dyes; color vision; residual rays; chemiluminescence; photo-erythema; spread in physical measurements.
- Adams, Dr. Elliott T(orrey)**, 744 Dudley St., Boston, Mass. *Biochemistry*. Boston, Mass., July 19, 99. B.S., Mass. Inst. Tech., 21; Ph.D., Harvard, 26. Asst., Wistar Inst., 22; instr. chem., dental sch., Harvard, 23-24; teaching fellow, Harvard Med. Sch., 24-26; asst. prof. physiol. chem., med. sch., Georgia, 26-32; instr. biochem., med. sch., Tufts Col., 35- Chem. Soc. Energy metabolism; analytical methods; physical chemistry of hemoglobin.
- Adams, Dr. Elmer W(adie)**, 7443 Olcott Ave., Hammond, Ind. *Organic chemistry*. Deer Park, Texas, Oct. 7, 97. A.B., West. Ill. State Teachers Col., 18; B.S., Illinois, 19, M.S., 20; Iowa State Col., 21-22; Ph.D., Wisconsin, 24. Head dept. chem., Mo. Mil. Acad., 20-21; asst. prof., Kans. State Teachers

Col, 24-25; research chemist, Standard Oil Co. of Ind, 25-Summers, prof, West. Ill. State Teachers Col, 22, 24. Chem. Soc. Catalysis in the formation of acetals; the relation of structure, affinity and reactivity in acetals; development and utilization of by-products of petroleum industry.

Adams, Prof. Francis J(oseph), 125 Salisbury St, Worcester, Mass. Electrical engineering. Maynard, Mass, Dec. 18, 80. B.S. Worcester Polytech, 04, E.E. 06. Asst. engineer, Westinghouse Elec. and Mfg. Co, 06-07; instr. elec. eng, Worcester Polytech, 07-13; asst. engineer, Worcester Elec. Light Co, 13-15; instr. elec. eng, Worcester Polytech, 15-17, asst. prof, 17-29, 30-31, prof, 31-. Asst. engineer, New England Power Construction Co, 29-30. Elec. Eng. (chairman, Worcester sect, 22-); Eng. Educ. Electric power transmission and distribution engineering; tension and sag in spans; capacity of cables.

Adams, Prof. Frank, 1831 San Juan Ave, Berkeley, Calif. Irrigation. Chicago, Ill, Sept. 19, 75. A.B, Stanford, 01; A.M, Nebraska, 06. Irrig. investigator, U. S. Dept. Agr, 00-06, 10-30; prof. irrig. investigations and practise, California, 16-, head div, 16-36. Consulting engineer, U. S. Bur. Reclamation, 26- Mem, Cmn. Agr. Colonization, Palestine, 27; consultant, Int. Water Cmn, U. S. and Mex, 28-30; chairman, Calif. Econ. Research Council, 30-32; mem. exec. council, Inst. Irrig. Agr, 33-37; consulting board, Rio Grande Joint Investigation, Nat. Resources Cmt, 33- Army Educ. Corps, France, 19. A.A; Agr. Eng. (chairman, Pacific Coast sect, 24, chairman, cmt. on land settlement, 31). Irrigation with special reference to institutions.

Adams, Dr. Frank D(awson), McGill University, Montreal, Que, Can. Geology. Montreal, Que, Sept. 17, 59. B.S, McGill, 78, M.S, 84, hon. D.Sc, 02; Sc.D, Tufts Col, 14; Ph.D, Heidelberg, 92; LL.D, Toronto, 16, Queen's (Can), 19, Mt. Allison, 23. Asst. chemist and petrographer, Geol. Surv. Can, 80-89; lecturer geol, McGill, 89-94, Logan prof, 94-31, dean faculty applied science, 08-31, emer. v. prin, 31-, acting prin, 19-20. Ed, 'Can. Record of Science,' 93-98. Advisory Council for Sci. and Indust. Research; Can. Conservation Cmn. Lyell medal, Geol. Soc. London, 06; Flavelle medal, Royal Soc. Can, 37. Pres, Int. Geol. Cong, 13. For. assoc. Nat. Acad; A.A; Geol. Soc. (v. pres, 09, pres, 16); Seismol. Soc; hon. mem. Min. Eng; Min. and Metal. Eng; Philos. Soc; hon. mem. Am. Acad; cor. mem. N. Y. Acad; Wash. Acad; cor. mem. Acad. Nat. Sci. Phila; fel. Royal Soc. Can, (pres); Can. Min. Inst. (pres, 10); fel. Geol. Soc. London; fel. Royal Soc; hon. mem. Inst. Min. and Metal. Gt. Britain; hon. fel. Edinburgh Geol. Soc; hon. mem. Soc. géol. de Belg; for. mem. Royal Acad. Sweden; hon. mem. Stockholm Geol. Soc; hon. mem. Russian Geol. Soc; hon. mem. Ekaterinburg Nat. Hist. Soc. Igneous rocks and crystalline schists; experimental geology; movements set up in rocks by pressure; geology of the Laurentian of Canada; geology of the Montereian Hills; conservation.

Adams, Dr. Frederic H(enry), Union Ave, Somerville, N. J. Chemistry. Beirut, Syria, Sept. 23, 02. A.B, Wesleyan, 24, A.M, 28; A.M, Princeton, 31, fellow, 31-33, Ph.D, 33. Instr. chem, American Univ. Beirut, 25-27; asst, Wesleyan, 27-28; instr, Amherst Col, 28-30; asst, Princeton, 31-32; research chemist, Calco Chem. Co, Bound Brook, N. J, 33-Chem. Soc; fel. Inst. Chem. Optical activity of organic compounds; azo dyes; diazo compounds.

Adams, Prof. Frederick W(hildes), Mellon Institute, Pittsburgh, Pa. Chemical engineering. Canton, Mass, March 3, 01. B.S. Mass. Inst. Tech, 21, M.S, 22, Sc.D, 28. Dept. chem. eng, Mass. Inst. Tech, 22-36, director, Bangor field sta, sch. chem. eng. practice, 24-28, Boston field sta, 28-36, asst. prof. chem. eng, 26-36; senior indust. fellow, Mellon Inst, 36- Consulting chem. engineer. Chem. Soc; Chem. Eng; Electrochem. Soc; Ceramic Soc; Asn. Pulp and Paper Indust. Lime; pulp and paper; drying and ventilating; heavy chemicals; glass; paint and varnish.

Adams, Dean George Edward, Rhode Island State College, Kingston, R. I. Agriculture. North Kingston, R. I, May 12, 74. B.S, R. I. State Col, 94, M.Agr, 16; Cornell, 97, 99-00. Asst. horticulturist, Exp. Sta, R. I. State Col, 94-01, assoc. agron, 01-08, director, 33-, prof. agron, col, 07-, dean dept. agr, 17-33, sch. agr. and home econ, 33-, director exten. service, 35- R. I. statist. agent, U. S. Dept. Agr, 01-14. A.A; Soc. Agron; Genetic Asn; Mass. Hort. Soc. Soil fertility.

Adams, Dr. Georgian, 2900 Haverford Road, Windsor Hills, Baltimore, Md. Chemistry. Lead, S. Dak, Nov. 26, 97. B.S, Nebraska, 18, A.M, 19; Iowa State Col, 23-25; E. R. Squibb and Sons fellow, Hopkins, 25-28, Sc.D, 28. Head dept. chem, York Col, 19-23; asst, Iowa State Col, 23-24, instr, 24-25; research fellow, Hopkins, 28-29; assoc. specialist foods and nutrition, bur. home econ, U. S. Dept. Agr, 29- A.A; Chem. Soc. Chemistry of foods and nutrition.

Adams, Dr. Harold S(tanard), The Upjohn Co, Kalamazoo, Mich. Chemistry. Pittsfield, Mass, May 20, 83. A.B, Williams Col, 11; Ph.D, Chicago, 15. Asst. chem, Mass. Col, 11-12; instr. physiol. chem, Chicago, 14-16; physiol. chemist, E. R. Squibb and Sons, 16-17, asst. supt, 17-19, production manager, 19-20; director research, Naugatuck Chem. Co, 20-25, sales develop, 25-26; supt, The Upjohn Co, 26-, board directors, 33- Chem. Eng. Biochemistry; pharmaceutical and chemical manufacturing; respiration of nerve tissue; physiological standardization; internal secretion; chemical process patents.

Adams, Dr. Helen S(chlanch) (Mrs. L. P. Adams), 219 Division Ave, Hasbrouck Heights, N. J. Mathematics. Bronx, N. Y, July 20, 07. A.B, N. Y. Univ, 28; A.M, Cornell, 29, Ph.D, 33. Tutor, Hunter Col, 29-31, instr. math, 31- Math. Soc; Math. Asn. Systems of inequalities; the normal rational N-ic curve.

Adams, Prof. Henry F(oster), 2000 Day St, Ann Arbor, Mich. Psychology. Oak Park, Ill, Nov. 11, 82. Ph.B, Wesleyan, 05; Ph.D, Chicago, 10. Asst. prof. psychol, Kansas, 10; asst, Chicago, 10-11; instr, Michigan, 11-18, asst. prof, 18-20, assoc. prof, 20-27, prof, 27- A.A; Psychol. Asn; Mich. Acad. Visual perception; memory; esthetics; advertising; personality and character; statistics; tests and measurements, discrimination; special skills.

Adams, Henry R(ichard), U. S. Department of Agriculture, Ithaca, N. Y. Soils. Mason, Mich, Jan. 29, 96. B.S, Mich. State Col, 21, M.S, 24; Nat. Fertilizer Asn. fellow, Rutgers, 26-27. Teacher, high sch, Mich, 21-22; asst. soils, Mich. State Col, 22-24; soil surv, Exp. Sta, Purdue, 24-26; instr. and asst. prof. agron, Syracuse, 27-34; soil expert, soil conservation service, U. S. Dept. Agr, 34-35, soil scientist, 35-Summers, Exp. Sta, Cornell, 30, soil surv, 31-33. Soil erosion and chemistry; soil survey.

Adams, Dr. J(ames) Alfred, Iowa State College, Ames, Iowa. Zoology, Entomology. Ventnor, Ont, Can, Sept. 2, 06. B.S.A, Ont. Agr. Col, 31; M.S, Iowa State Col, 33, Ph.D, 35. Instr. biol, Iowa State Col, 35- Asn. Econ, Entom; Soc. Parasitol; Iowa Acad; Entom. Soc. Out. Biology of the thysanuran insects; rearing methods for insects; gregarine parasites of insects; insect protozoology.

Adams, Dr. James E(dward), Soil Fertility Station, Austin, Texas. Soils. Lee's Summit, Mo, July 5, 98. A.B, William Jewell Col, 20; M.S, Purdue, 22; Ph.D, Iowa State Col, 36. Instr. chem, N. Dak. Col, 23-25; Iowa State Col, 25-28; assoc. soil technologist, bur. plant indust, U. S. Dept. Agr, 28- Soc. Agron; Chem. Soc. Availability of phosphates as plant food; determination of carbon in soils; fertilizers and the composition of the soybean plant; green manure in, and lysimeter measurements of sandy soils; fertilizer placement; nitrogen fertilizers on cotton soils; cotton root-rot.

Adams, Dr. J(ames) F(owler), P. O. Box 425, Newark, Del. Botany. Charlestown, Mass, March 5, 88. B.S, Mass. Col, 11; M.S, Pa. State Col, 14; fellow, Columbia, 17-18, Ph.D, 18. Asst. plant path, Mass. Col, 11; Pa. State Col, 12, asst. prot. bot, 14-18, assoc. prof. plant path, 18-20; Exp. Sta, Delaware, 20-; plant pathologist, State Board Agr, Del, 25-Chairman, Nat. Plant Board, 36- U. S. Army Med. Sch, 18-19. A.A; Crop Protection Inst. (v. chairman, board governors, 27-); Peninsula Hort. Soc. (sec'y, 25-). Plant pathology; cytology of Uredinales; rusts.

Adams, J(ames) Richard, 3600 Connecticut Ave, Washington, D. C. Chemistry. Troy, N. Y, April 11, 98. Ch.B, Cornell, 21, 21-22; fellow, Carnegie Inst. Tech, 22-23. Junior chemist, bur. soils, U. S. Dept. Agr, 23-24, asst. chemist and physicist, 24-29, assoc. chemist, bur. chem. and soils, 29-Chem. Foundation grant, 21. Chem. Soc. Physical chemistry; adsorption phenomena of dyes; corrosion of metals; physical and chemical properties of soils and fertilizers; preparation and improvement of fertilizers and fertilizer mixtures.

- Adams, J(ohn),** 68 Fairmont Ave, Ottawa, Ont, Can. *Botany.* Austria, Ireland, Jan. 20, 72. Queen's (Ireland); B.A., Cambridge, 00; M.A., 03. Asst. prof. bot., Royal Col. Science, Dublin, 02-14; prof., Royal Vet. Col., 07-14; asst. Dom. *Scienze, Can.*, 14- Plant morphology; taxonomy.
- Adams, John Emery,** Standard Oil Co. of California, Midland, Texas. *Geology.* Solon, Iowa, June 5, 99. A.B., Iowa, 22; M.S., 23; Chicago; Wisconsin; Texas. Instr. biol. and Mech. Col. Texas, 25-26; *subsurface geologist, Standard Oil Co. of Calif.*, 27- Aan. Petrol. Geol.; Soc. Econ. Paleont. and Miner. Subsurface geology; sedimentation; geology of petroleum.
- Adams, Prof. John Mead,** University of California at Los Angeles, Los Angeles, Calif. *Physics.* Reading, Mass., June 6, 02. A.B., Harvard, 03, A.M., 05; Ph.D., 07. Asst. physics, Harvard, 04-08; instr., Simmons Col., 07-08; prof., Occidental Col., 09-12; asst. prof., Queen's (Can.), 12-16; Saskatchewan, 16-19; assoc. prof., California at Los Angeles, 19- John Tyndall scholar, Harvard, 08-09. A.A.; Physical Soc. Roentgen rays; ice crystals.
- Adams, Prof. John Q(uincy),** University of Missouri, Columbia, Mo. *Geography.* Bunceton, Mo., March 11, 00. A.B., Missouri, 23; A.M., 25; Ph.D., 30; Chicago; Wisconsin. Instr. geol. and geog., Missouri, 24-29; asst. prof. geog., 29- Summers, asst. prof. Mo. Sch. Mines, 29- A.A.; fel. Royal Geog. Soc., London. Regional, economic and urban geography.
- Adams, Prof. Joseph E(dison),** University of North Carolina, Chapel Hill. N. C. *Botany.* Middletown, N. Y., Nov. 23, 03. Ph.G., Columbia, 25; Ph.C., 27, A.M., 32; B.S. Columbia, 29; Ph.D., California, 35. Instr. mat. med. and bot., Columbia, 25-32; teaching fellow, California, 33-35; instr. bot., North Carolina, 35-36; asst. prof., 36- Torrey Bot. Club; Elias Mitchell Sci. Soc.; Calif. Bot. Soc.; N. C. Acad. Systematic botany; plant anatomy.
- Adams, Dr. Kenneth H(oward),** 5207 Kimbark Ave., Chicago, Ill. *Chemistry.* Elgin, Ill., July 7, 06. B.S., Chicago, 20; Ph.D., 32. Instr. and curator chem., Chicago, 30- Chem. Soc. Molecular rearrangements.
- Adams, L(eason) H(eberling),** Geophysical Laboratory, Washington, D. C. *"Chemistry."* Cherryvale, Kans. Jan. 16, 31. B.S., Illinois, 06. Tech. branch, U. S. Geol. Surv., 08-10; physical chemist, geophys. lab., Carnegie Institution, 10- Research on optical glass, W. I. B., 17-18; nitrate div., Ordinance Dept., 18. Chem. Soc.; Physical Soc.; Geol. Soc.; Geophys. Union; Philos. Soc. Wash.; Wash. Acad. (pres., 32). Electrical and chemical constants of substances under high pressure; temperature measurements; gaseous equilibria and rate of reaction; optical glass; internal constitution of the earth.
- Adams, Prof. L(everett) A(llen),** University of Illinois, Urbana, Ill. *Anatomy.* Lawrence, Kans., Sept. 23, 77. A.B., Kansas, 03; A.M., 06; Ph.D., Columbia, 15. Museum instr., Kansas, 04-05; asst. prof. biol., Colo. State Teachers Col., 05-12; head dept., 15-20; asst. prof. zool., Illinois, 20-35; assoc. prof., 35- Frick scholar, Am. Museum Nat. Hist., 14. Univ. Kansas; biol. exped., 06. A.A.; Ann. Anat.; Soc. Zool.; Soc. Ichthyol. and Herp.; Ill. Acad. Vertebrate anatomy; comparative osteology; phylogeny of muscles; otoliths of fishes.
- Adams, Prof. Maxwell,** 29 W. Ninth St., Reno, Nev. *Chem.* St. George, W. Va., Feb. 28, 69. West Virginia, 90-91; A.B., Stanford, 95; A.M., 96; Ph.D., Chicago, 04. Lecture asst. stanford, 95-97; prof., Calif. State Nor. Sch., 97-06, v. pres., 02-06; prof., Nevada, 06-, dean col. arts and sciences, 17- & pres., 22- Instr. exten. dept., Chicago, 00-01; director, State Soils Lab., Nev., 14-16. A.A.; Ann. Anat.; Soc. Zool.; Ann. Chem. Gesell. Salts of tin; hydroxylamin; molecular weight of lactimid; action of hydroxylamin on salts of copper; wood distillation; composition of wood turpentine; flotation and essential oils; essential oils from desert plants.
- Adams, Dr. Mildred,** National Institute of Health, U. S. Public Health Service, Washington, D. C. *Chemistry.* Manchester, N. H., July 21, 99. A.B., Smith Col., 21; A.M., Columbia, 23; Ph.D., 27. Carnegie asst., Columbia, 23-29; instr. chem., Centenary Collegiate Inst., 29-30; consultant, metabolism unit, Mayo Clinic, 30-36; biochemist, nat. inst. health, U. S. Public Health Service, 36- Chem. Soc.; Soc. Biol. Chem. Metabolism; inorganic and fat metabolism; purification and properties of malt and pancreatic amylases; determination of citric acid by means of citric acid dehydrogenase, and its occurrence in biological fluids; oxygen dissociation curves for pathological conditions.
- Adams, Prof. Norman I(lsley), Jr.,** Yale University, New Haven, Conn. *Physics.* Winthrop, Mass., Sept. 20, 95. A.B., Yale, 17; Ph.D., 23. Research engineer, Am. Tel. and Tel. Co., 23-24; instr. physics, Yale, 25-27; asst. prof., 27-37; assoc. prof., 37- Physical Soc. Thermodynamics; high frequency and radio communication.
- Adams, Dr. Numa P(ompilius) G(arfield),** 341 Bryant St., N. W., Washington, D. C. *Medicine.* Delaplane, Va., Feb. 26, 85. A.B., Howard, 11; A.M., Columbia, 12; M.D., Rush, Chicago, 24. Teacher, pub. sch., Pa., 06-07; instr. chem., Howard, 12-14; asst. prof., 14-19; assoc. prof., 19; asst. med. director, Victory Life Ins. Co., 27-29; dean col. med., Howard, 29-, prof. med., 30- A.A.; Nat. Med. Asn. Medical education and hospitals, with special reference to the Negro.
- Adams, Dr. Oscar S(herman),** 727 Massachusetts Ave., N. E., Washington, D. C. *Applied mathematics.* Near Mt. Vernon, Ohio, Jan. 9, 74. B.S., Kenyon Col., 96, A.M., 15, Sc.D., 22. Supt. and prin. high schs., Ohio, 99-10; geod. computer, U. S. Coast and Geod. Surv., 10-24; geod. mathematician, 24-28; senior mathematician, 28- A.A.; Math. Soc.; Math. Asn. (sec'y-treas., Md.-Va.-D.C. sect., 19, pres., 21); Philos. Soc. Wash. (recording sec'y, 29, v. pres., 31, pres., 33); Wash. Acad. (recording sec'y, 37). Least squares and the adjustment of triangulation; theory of projections; elliptic functions applied to conformal world maps; computations by plane coordinates.
- Adams, Dr. Phillip D(elmar),** Woodbury-Jergen Co., Cincinnati, Ohio. *Biochemistry.* Wilkinsburg, Pa., 01. B.S., Pa. State Col., 25, M.S., 30; fellow, Cincinnati, 32-35; Ph.D., 35. Instr. chem., American Univ. Beirut, 25-28; Pa. State Col., 28-30; research biochemist, Skin and Cancer Hosp., Phila., 30-32; research chemist, Woodbury-Jergen Co., 35- Chem. Soc. Chemistry of fungi, dermatology and cosmetics; biochemistry of skin.
- Adams, Dr. Rachel B(lodgett),** 260 Doyle Ave., Providence, R. I. *Mathematics.* Woburn, Mass., Oct. 13, 94. A.B., Wellesley Col., 16; A.M., Radcliffe Col., 19, Mary E. Horton fellow, 20-21; Ph.D., 21; Rome and Göttingen, 22-23. Instr. math., Wellesley Col., 21-22; tutor, Radcliffe Col., 26- Math. Soc. Approximate solution of integral equations.
- Adams, Prof. R(ichard) L(aban),** University of California, Berkeley, Calif. *Agriculture.* Dorchester, Mass., Aug. 27, 83. B.S., Mass. Col., 05; Boston, 05; M.S., California, 10. Plant pathologist, California, 06-07; director exp. sta., Spreckels Sugar Co., 07-12; asst. gen. manager, Miller and Lux, 12-14; prof. farm management, California, 14- Director 11th dist. Farm Credit Admin. A.A. Economics of farming.
- Adams, Prof. Roger,** University of Illinois, Urbana, Ill. *"Chemistry."* Boston, Mass., Jan. 2, 89. A.B., Harvard, 09; A.M., 10; Ph.D., 12; Berlin and Kaiser Wilhelm Inst., 12-13; hon. Sc.D., Polytech. Inst. Brooklyn, 35. Instr. org. chem., Harvard, 13-16; asst. prof., Illinois, 16-19, prof., 19-, head dept., 26- Science Advisory Board, U. S. Govt., 34-35. Nichols medal, 27; Willard Gibbs medal, 36. Major, C.W.S., 18. Nat. Acad. (councilor, 30-36); A.A. (chairman, C. 27); Chem. Soc. (assoc. ed., 'Jour,' 22-32, councilor, 23-29; director, 32- pres., 35); fel. Am. Acad.; Philos. Soc.; Deuts. Chem. Gesell. Alkali insoluble phenols; platinum oxide and platinum black as a catalyst; effect of promoters and poisons on catalysts; polyhydroxy and polyhydroxymethylanthraquinones; organic arsenic compounds; local anesthetics; chaulmoogric acid and derivatives; fatty acids bactericidal to acid-fast bacteria; stereochemistry of biphenyl derivatives, diphenyl benzenes, phenyl pyrrols, bipyrrolyl and organic deuterium compounds.
- Adams, Dr. Sidney,** 2362 E. Fifth, Knoxville, Tenn. *Psychology.* Mt. Vernon, Minn., May 1, 06. B.S., Washington (Seattle), 28; M.S., 30; Ph.D., California, 33. Asst. inst. child welfare, California, 32-33; dept. child develop., Wisconsin, 33-34; junior statistician, State Bur. Personnel, Wis., 34-35; specification writer, U. S. Occupational Research Program, 35-37; personnel research asst., Tenn. Valley Authority, 37- Assoc. Psychol. Asn.; Elementary English Asn. Child and vocational psychology; psychology of language; industrial occupations.
- Adams, Prof. Thomas C(aldwell),** 242 S. 12th East St., Salt Lake City, Utah. *Hydrology.* Salt Lake City, Utah, May, 01. B.S., Utah, 22; Ph.D., Cornell, 27. Consulting en-

gineer, 25-; assoc. prof. civil eng., Utah, 28- State rep., U. S. Coast and Geod. Surv., 34; v. chairman, Gt. Basin Authority, 35- A.A.; Civil Eng.; Econ. Asn.; Meteorol. Soc.; Utah Soc. Eng. (pres., 34); Utah Acad. Engineering productivity; hydrology and water supply of arid lands of the United States; hydrology of Great Salt Lake.

Adams, Waldo L(awrence), Kingston, R. I. Chemistry. Greenville, N. H., Aug. 12, 85. B.S., New Hampshire, 08; M.S., R. I. State Col., 29. Asst. chemist, Exp. Sta., New Hampshire, 08-10; lab. hygiene, State Board Health, N. H., 10-17; Conn. Exp. Sta., 17-18; chemist, Lowell Fertilizer Co., Mass., 18-23; asst. chemist, Exp. Sta., R. I. State Col., 23-28; assoc. chemist, 28- Food and water analysis; feeds; fertilizers.

Adams, Lieut. Col. Walter H(olbrook), 1633 Ard Eevin Ave., Glendale, Calif. Mechanical engineering. Worcester, Mass., April 17, 82. B.S., Mass. Inst. Tech., 03; M.S., Southern California, 36. Asst. mech. eng., Mass. Inst. Tech., 03-05; instr., Polytech. Inst., Brooklyn, 05-08; prof., Pei Yang Univ., Tientsin, 08-13; Calif. Inst. Tech., 13-19; consulting civil and mech. engineer, 22- Capt., C.Eng., 18-20, C.A.C. 20-21, Ordnance Dept., 21-22, major, Ordnance R.C., 22-30, lieut. col., 30-Mech. Eng. Heat power and sanitary engineering.

Adams, Dr. Walter S(ydney), Mt. Wilson Observatory, Pasadena, Calif. *^aAstronomy. Antioch, N. Syria, Dec. 20, 76. A.B., Dartmouth Col., 98, Sc.D., 13; A.M., Chicago, 00; Munich, 00-01; Sc.D., Columbia, 26; LL.D., Pomona Col., 26. Asst., Yerkes Observatory, Chicago, 01-03; instr. astrophys., 03-04; asst. astronomer, Mt. Wilson Observatory, Carnegie Institution, 04-09, astronomer and asst. director, 09-23, director, 23- Gold medal, Royal Astron. Soc., 17; Draper medal, Nat. Acad., 18; Janssen medal, Soc. astron. de France, 26; Bruce medal, Astron. Soc. Pacific, 28; Janssen medal, Nat. Acad. Sci., Paris, 35. Nat. Acad. (chairman, astron. sect., 26-29); A.A. (pres., Pacific div., 29); Astron. Soc. (pres., 31); Philos. Soc.; Am. Acad.; Astron. Soc. Pacific (pres., 23); assoc. Royal Astron. Soc.; Astron. Soc. London; for. assoc. Paris Acad.; for. assoc. Upsala Acad.; Int. Astron. Union (v. pres., 35; pres., cmt. on stellar radial velocities). Stellar motions in the line of sight; stellar spectroscopy; spectroscopic parallaxes.

Adams, Dr. W(illiam) Lloyd, Emory University, Ga. Pharmacology. White Oak, Ohio, Aug. 25, 06. B.S., Col. of Wooster, 30; A.M., Western Reserve, 31, Ph.D., 33. Teaching fellow biochem., Western Reserve, 31-33; instr. pharmacol., Emory, 33- Salivary digestion; colloidal aluminum hydroxide as an antacid.

Adams, Prof. W(illiam) R(itchie), Jr., 162 Loomis St., Burlington, Vt. Forestry, Botany. Philadelphia, Pa., Feb. 17, 02. B.S., Syracuse, 26; M.S., Vermont, 28; Ph.D., Yale, 35. Instr. forestry and bot., Vermont, 26-28; asst. prof., 28- A.A.; Soc. Foresters; Ecol. Soc.; Soc. Plant Physiol. Forest ecology; thinning in pine plantations; tree growth and soil temperature; ring growth and water distribution in the soil; root growth.

Adamson, Dr. W(illiam) A(ugustus), 706 Hawthorne Ave., South Milwaukee, Wis. Organic chemistry. Jonesboro, Ga., Jan. 3, 83. A.B., Mercer, 07; Ph.D., Cornell, 17. Asst. org. chem., Cornell, 15-17; research chemist, E. I. du Pont de Nemours and Co., 17- Chem. Soc. Benzoic and carboxylic acid; anthracene dyes.

Adamstone, Prof. F(rank) B(olton), 1113 W. Charles St., Champaign, Ill. Biology. Listowel, Ont., Can., Dec. 10, 96. B.A., Toronto, 21, M.A., 22, fellow, 23-24, Ph.D., 24. Asst., Toronto, 21; assoc. zool., Illinois, 24-35, asst. prof., 35- Lake Nipigon biol. exped., 21-23. A.A.; Soc. Zool. Limnology; fauna of Lake Nipigon; embryology; histology in relation to vitamin deficiency; vitamin deficiency in the chick.

Addicks, Lawrence, Bel Air, Md. Metallurgy. Philadelphia, Pa., March 3, 78. Pennsylvania; B.S., Mass. Inst. Tech., 99. Draftsman, N. Mex., 99-00; in charge testing lab. and asst. to supt., Raritan Copper Works, 00; chief engineer and supt., U. S. Metals Ref. Co., 05-14; consulting engineer, 14- Naval Consulting Board. Min. and Metal. Eng.; Min. and Metal. Soc.; Electrochem. Soc. (pres., 15); fel. Elec. Eng.; Mech. Eng.; Soc. Test. Mat.; Inst. Min. and Metal. Gt. Britain. Non-ferrous metallurgy.

Addinall, Dr. Carl R(upert), 746 Belvidere Ave., Westfield, N. J. Organic chemistry. Dewsbury, Eng., Dec. 1, 90. B.S., Harvard, 25, A.M., 26, Ph.D., 30. Asst. chem., Radcliffe Col., 26-27; instr., Harvard, 28-30; research chemist, 30-34; direc-

tor library services, Merck and Co., Rahway, N. J., 34- Chem. Soc.; Deuts. Chem. Gesell. Nitrogen ring compounds; alkaloids; chemical literature.

Addington, Prof. Arch R(ombough), Fresno State College, Fresno, Calif. Geology. Randolph Co., Ind., Feb. 23, 94. A.B., Indiana, 22, A.M., 25. Instr. geol., Indiana, 23-28; asst. prof. geol. and geog., Fresno State Col., 28-33; assoc. prof., 33- Ind. Acad. Subterranean drainage features of Indiana; glacial terraces of the San Joaquin and Kings River Valleys.

Addis, Prof. T(homas), Lane Hospital, San Francisco, Calif. *^aPathology, Medicine. Edinburgh, Scotland, July 27, 81. M.B., Edinburgh, 05, M.D., 08; Carnegie scholar, Edinburgh Royal Infirmary, 08-09, fellow, 09-11. Clin. asst., outpatient dept., Edinburgh Royal Infirmary, 10-11; asst. prof. med., Stanford, 11-13; assoc. prof., 13-20, prof., 20- Registrar, Leith Hosp., 11. Am. Physicians; Physiol. Soc.; Soc. Exp. Biol.; Asn. Path. and Bact.; Soc. Clin. Invest.; Edinburgh Royal Col. Physicians. Coagulation of blood; hereditary hemophilia; plasma; urobilin; hemoglobin pigment; glycosuria; urea excretion; regulation of renal activity.

Addison, Dr. William H(enry) F(itzgerald), University of Pennsylvania, Philadelphia, Pa. Anatomy. Whitby, Ont., Can., April 23, 80. B.A., Toronto, 02, M.B., 05, M.D., 17. Asst. biol., Toronto, 02-04; demonstrator histol. and embryol., Pennsylvania, 05-12, asst. prof., 12-19, prof., 19- A.A.; Soc. Nat.; Asn. Anat.; Physiol. Soc.; Path. Soc. Phila.; Col. Physicians Phila.; Acad. Nat. Sci. Phila. Regeneration and transplantation of tissues; histogenesis of cerebellar cortex, of eyelids, of incisor and molar teeth in rat; prenatal and neonatal lung; phagocytosis in spleen and peritoneal cavity; vomeronasal organ; rhinencephalon of dolphin; histology of standard albino rat; cerebellum of teleosts and mammals; measurements of cerebral cortex in man; basal ganglia.

Addlestone, Prof. J(acob) A., Virginia Polytechnic Institute, Blacksburg, Va. Chemistry. Leeds, Eng., Dec. 10, 02. B.S., Col. of Charleston, 24; M.S., North Carolina, 26, Ph.D., 33. Asst. chem., Col. of Charleston, 23-24; teaching fellow, North Carolina, 25-27; instr., Va. Polytech., 27-29, asst. prof., 29- Chem. Soc. Coal; water; solubilities; heterogeneous equilibria.

Addoms, Prof. Ruth M(argery), Duke University, Durham, N. C. Botany. Haworth, N. J., May 23, 96. A.B., Wellesley Col., 18, A.M., 21; Alice Freeman Palmer fellow, Wisconsin, 23-24, Ph.D., 26. Asst. bot., Wellesley Col., 18-21; instr., high sch., Ind., 21-23; asst. bot., Wisconsin, 24-25, instr., 25-30; Duke, 30-31, asst. prof., 31- A.A.; Bot. Soc.; Soc. Plant Physiol.; N. C. Acad. Plant physiology and anatomy; microchemistry.

Adel, Dr. Arthur, Lowell Observatory, Flagstaff, Ariz. Astrophysics. Brooklyn, N. Y., Nov. 22, 08. A.B., Michigan, 31, fellow, 31-33, Ph.D., 33. Research assoc., Lowell Observatory, 33-35; instr. astron., Hopkins, 35-36; mem. staff, Lowell Observatory, 36- Molecular spectra; planetary atmospheres.

Adelmann, Prof. Howard B(ernhardt), Cornell University, Ithaca, N. Y. Embryology, Histology. Buffalo, N. Y., May 8, 98. A.B., Cornell, 20, A.M., 22, Ph.D., 24. Asst. histol. and embryol., Cornell, 19-21, instr., 21-25, asst. prof., 25-37, prof., 37- Nat. research fellow, 27-28. Asn. Anat.; Soc. Zool.; Hist. Sci. Soc.; English Biblio. Soc. Development of the pre-chordal plate and of the eye; morphology of the vertebrate head; neural tube and cranial ganglia of the rat.

Adelson, Dr. David E., Columbia University, New York, N. Y. Chemistry. Chicago, Ill., March 21, 12. B.S., Florida, 32, Sparks mem. fellow, 32-33, M.S., 33, Ph.D., 35. Asst. chem., Florida, 30-32, 33-34, instr., 34-35; Fritzsché fellow org. chem., Columbia, 35-36, nat. research fellow chem., 36- Chem. Soc. Derivatives of piperazine; retene.

Adkins, Prof. Homer (Burton), University of Wisconsin, Madison, Wis. *^aChemistry. Newport, Ohio, Jan. 16, 92. B.S., Denison, 15; A.M., Ohio State, 16, Ph.D., 18. Instr. org. chem., Ohio State, 18-19; asst. prof., Wisconsin, 19-24, assoc. prof., 24-28, prof., 28- Research chemist, E. I. du Pont de Nemours and Co.; Bakelite Corp.; U. S. War Dept. A.A.; Chem. Soc. (chairman, org. div., 32); London Chem. Soc. Causation of organic chemical reactions; relations of catalysis, affinity, reactivity and structure of organic compounds; reactions of hydrogen with organic compounds.

- Adkisson, Charles N(oble)**, 1112 Bell Ave, Denton, Texas. *Physics*. Shelbina, Mo, Nov. 16, 66. A.B., Cent. Col. (Mo), 83; A.M., South. Methodist, 27. Head dept. physical science, Polytech. Col. (Ft. Worth), 91-98; Granbury Col. (Texas), 98-99; director, Randolph Col., 99-01; Terrell Univ. Sch. (Texas), 01-03; *Texas State Col. for Women*, 03-. A.A.; Asn. Physics Teachers; Texas Acad. (v. pres., 28). Applied physics.
- Adkisson, Prof. V(irgil) W(illiam)**, 523 Storer St, Fayetteville, Ark. *Mathematics*. Santa Rosa, Mo, Sept 5, 01. A.B., Drury Col., 25; Ph.D., Pennsylvania, 30. Instr. math, Drury Col., 25-26; Pennsylvania, 26-30; asst. prof., Arkansas, 30-35, assoc. prof., 35-. A.A.; Math. Soc.; Math. Asn. Analysis situs.
- Adler, Dr. Alphonse A(ndrew)**, 35 Stewart Ave, Arlington, N. J. *Engineering*. Mewe, Germany, Nov. 27, 81. B.S., Cooper Union, 05; M.E., Polytech. Inst. Brooklyn, 09; Sc.D., N. Y. Univ., 15; Columbia. Various positions with Westinghouse, Church, Kerr and Co., W. S. Barstow and Co. and Pa. R.R., 95-10; asst. prof. mech. eng., Polytech. Inst. Brooklyn, 10-20; consulting engineer, 20-. Lecturer, N. Y. Univ.; prof., Polytech. Inst. Brooklyn. Mech. Eng. (chairman, Metropolitan sect., 29); Heat. and Vent. Eng. (pres., N. Y. chap., 25). Power and industrial plant design; applications of science to technical processes.
- Adler, Dr. Cyrus**, 2041 N. Broad St, Philadelphia, Pa. *Archaeology, Oriental history*. Van Buren, Ark., Sept. 13, 63. A.B., Pennsylvania, 83; A.M., 86; Litt.D., 30; Ph.D., Hopkins, 87; D.H.L., Hebrew Union Col., 25. Instr. Semitic languages, Hopkins, 87-90, assoc., 90-93; librarian, Smithsonian Institution, 92-05, asst. secy., 05-08; pres., *Dropsey Col. for Hebrew and Cognate Learning*, 08-; acting pres., *Jewish Theol. Sem.*, 16-24, pres., 24-. Curator hist. religions and hist. archael., U. S. Nat. Museum, 89-98. Columbian Expos. rep., Turkey, Egypt and Morocco. Chairman board editors, Jewish Translation of Bible; Jewish Classics Cmt.; mem., Board Publ. Educ., Phila., 21-25. Pres. board trustees, Free Library of Phila. U. S. del. Conf. on Int. Catalogue of Sci. Lit., London, 98. A.A.; Archeol. Inst.; Am. Jewish Hist. Soc. (past pres.); Anthropol. Assn.; Philos. Assn.; Oriental Soc. (pres., 23); Philos. Soc.; Anthropol. Soc. Wash.; Philos. Soc. Wash.; Wash. Acad. (non-res. v. pres., 31). Assyriology; Jewish antiquities and history; history of the Jews on the American continent.
- Adler, Dr. Francis Heed**, 313 S. 17th St, Philadelphia, Pa. *Ophthalmology*. Philadelphia, Pa, Feb., 95. A.B., Pennsylvania, 16; A.M., 18; M.D., 19. Assoc. physiol. and instr. ophthal. sch. med. and prof. ophthal. grad. sch. med., Pennsylvania; consulting surgeon, Wills Eye Hosp. Ophthal. Soc.; Acad. Ophthal. and Otolaryngol.; fel. Col. Surg.; Col. Physicians Phila. Physiology of the eye.
- Adler, Dr. Howard**, Victor Chemical Works, Chicago Heights, Ill. *Chemistry*. New York, N. Y., Jan. 9, 96. B.S., Col. City of N. Y., 16; A.M., Columbia, 17; Ph.D., 21. Instr. chem., Chicago, 16-19, 21-23; research chemist, *Victor Chem. Works*, 23-25, chief chemist, 25-. Chem. Soc.; Chem. Eng. (chairman, Chicago sect., 35-37); Asn. Cereal Chemists. Theory of solutes; formates; phosphates; phosphorus compounds.
- Adler, Dr. Joseph L(eopold)**, 2011 Esperson Bldg, Houston, Texas. *Geology, Geophysics*. Chicago, Ill., Nov. 27, 96. B.S., Chicago, 17; Ph.D., 30. Petrol. geologist, 19-27; asst. prof. petrog. and geol., Mich. Col. Min. and Tech., 27-34; pres., Path-finder Prospecting Corp., 35-. Geologist, Mich. Geol. Surv., 29, 30. A.A.; Asn. Petrol. Geol.; Geophys. Union; Soc. Explor. Geophys.; Min. and Metal. Eng. Geology of iron ores; petroleum geology; Precambrian stratigraphy; magnetic and seismic prospecting.
- Adolph, Dr. Edward F(rederick)**, University of Rochester, Rochester, N. Y. ^{**}Zoology, Physiology. Philadelphia, Pa., July 5, 95. A.B., Harvard, 16; Ph.D., 20, traveling fellow at Oxford, 20-21; Yale, 16-18. Instr. zool., Pittsburgh, 21-24; nat. research fellow, Hopkins, 24-25; asst. prof. physiol. sch. med., Rochester, 25-28; assoc. prof., 28-. Guggenheim Mem. Foundation fellow, Kaiser Wilhelm Inst., Berlin, 27. Summers, instr. Marine Biol. Lab., Woods Hole, 21-24; consulting physiologist, U. S. Bur. Mines, 22-24. A.A.; Soc. Nat. Physiol. Soc.; Soc. Exp. Biol.; Soc. Zool. Physical chemistry of oxyhemoglobin; regulation of body volume and water through membranes; regulation in size; growth in bulk; water balance; body fluids; kidney function.
- Adolph, Prof. W(illiam) H(enry)**, Yenching University, Peiping, China. *Biochemistry*. Philadelphia, Pa., Sept. 1, 90. A.B., Pennsylvania, 12; Ph.D., 15. Asst. chem., Pennsylvania, 13-14; from instr. to prof., Cheeloo Univ., 15-26; assoc. prof., Nebraska, 27-29; prof. biochem., Yenching Univ., 29-. Instr. Illinois, 20-21; lecturer, science inst., Tsinghua Univ., 24, 26; fellow, Yale, 27, 35-36. A.A.; Chem. Soc.; Soc. Exp. Biol.; Inst. Nutrition; Chinese Physiol. Soc.; Chinese Sci. Soc.; Chem. Soc. China. Nutritive value of Chinese food materials; metabolism on vegetarian diets in China; calcium and iodine in nutrition.
- Adrlance, Prof. Guy W(ebb)**, College Station, Texas. *Horticulture*. Bryan, Texas, June 19, 95. B.S., Agr. and Mech. Col. Texas, 15; M.S., California, 17; Ph.D., Mich. State Col., 29. Horticulturist, United Fruit Co., 20-21; from asst. prof. to prof. hort., Agr. and Mech. Col. Texas, 21-. Nat. research fellow, Cornell, 31-32. Soc. Hort. Sci.; Soc. Plant Physiol. Pollination, blossoming, fruit setting, bearing and propagation in pecan production.
- Adriano, Dr. F(elope) T**, 660 Echague, Manila, P. I. *Chemistry*. Hagonoy, Bulacan, P. I., May 1, 99. B. Agr., Philippines, 19; M.S., Wisconsin, 20; traveling fellow from Univ. Philippines, U. S. A. and Europe, 25-27; Ph.D., Cornell, 27. Asst. chem., Philippines, 18; planters chemist and rep., Calamba Sugar Estate, Canlubang, 21; analyst, Philippines, 24, asst. prof. chem., 24-28, senior asst. prof., 28-31, assoc. prof., 31-32; tobacco chemist and chief agr. chem. and soil technol., Bur. Plant Indust., P. I., 32-34, chief div., 34; tech. director, San Miguel Brewery, 34-. Nat. Research Council, Philippines; Nutrition Board, Manila, 34-. Hon. mem., Philippine Soc. Adv. Research; P. I. Sci. Soc.; Philippine Econ. Assn.; Los Baños Biol. Club, Philippines. Analytical, agricultural and industrial chemistry; food preservation; tobacco.
- Adson, Dr. Alfred W**, Mayo Foundation, Rochester, Minn. *Neurosurgery*. Terrill, Iowa, March 13, 87. B.S., Nebraska, 12; A.M., 18; M.D., Pennsylvania, 14; M.S., Minnesota, 18. Prof. neurosurg. and chief dept., Mayo Foundation, 20-. Lieut. col., M.R.C. Fel. Col. Surg.; Am. Med. Assn.; Soc. Neur. Surg. (pres., 32); Neuro. Assn.; Am. Surg. Assn.; Assn. Research Nervous and Mental Disease; Minn. State Neur. Assn.; Minn. Med. Soc. (pres., 36-37); West. Surg. Assn.; Cent. Neuropsychiat. Assn.; Pan-Am. Med. Assn.; hon. mem. Soc. Radioneurochirurg. Ital.; Soc. int. de Chirurg.; Int. Neur. Assn. Anatomy, physiology, pathology and surgery of the peripheral nerves and the sympathetic nervous system; indication for and the results of sympathectomy in vascular diseases.
- Affel, H(erman) A(ndrew)**, 827 Morningside Road, Ridgewood, N. J. *Engineering*. Brooklyn, N. Y., Aug. 4, 93. B.S., Mass. Inst. Tech., 14. Asst. elec. eng., Mass. Inst. Tech., 14-16; eng. dept., Am. Tel. and Tel. Co., 16-19, dept. develop. and research, 19-34; Bell Tel. Labs., 34-, asst. director transmission develop. A.A.; Elec. Eng.; Radio Eng.; fel. Acoustical Soc. Telephone receivers; high frequency transmission on wires; multiplex carrier current communication systems; long distance telephone transmission.
- Africa, Dr. Candido M**, University of the Philippines, Manila, P. I. *Parasitology*. Lipa, Batangas, P. I., Oct. 3, 95. M.D., Philippines, 20; D.T.M., London Sch. Trop. Med., 29; fellow, Harvard, 29-30; fellow, Tropen Inst., Germany, 29; Hopkins, 30-31. Instr. parasitol., Philippines, 20-25, asst. prof., 25-32; assoc. prof. and head dept., 32-. P. I. Nat. Research Council. Soc. Trop. Med.; Soc. Parasitol.; P. I. Sci. Soc.; P. I. Med. Assn. Ascaris lumbricoides; Nippostrongylus muris; Gnathostoma spinigerum; heterophyidiasis.
- Agar, Dr. William M(acionough)**, Newman School, Lakewood, N. J. *Geology*. New York, N. Y., Feb. 14, 94. B.S., Princeton, 16; Ph.D., 22. Geol. dept., Anaconda Copper Mining Co., 22-23; instr. geol., Yale, 23-27, asst. prof., 27-28; Columbia, 28-35; headmaster, Newman Sch., 35-. Geologist, Conn. Geol. and Nat. Hist. Surv., 25-33. Fel. Geol. Soc.; Soc. Econ. Geol. (treas., 30-35); fel. Miner. Soc.; assoc. Min. and Metal. Eng. Economic and metamorphic geology; petrology.
- Agard, Prof. H(arry) L(eslie)**, Williamstown, Mass. *Mathematics*. Waterbury, Conn., March 19, 63. A.B., Wesleyan, 04; A.M., Yale, 08; Ph.D., 11. Instr. math., Wesleyan Acad., 04-05; Phillips Andover Acad., 05-07; Hopkins Grammar, 07-10; Yale, 10-11; Williams Col., 11-15, asst. prof., 15-30, assoc. prof., 30-33; prof., 33-, asst. dean, 22-30, acting dean, 23-24, 26-27, dean, 30-35. A.A.; Math. Soc.; Math. Assn.
- Agree, H(amilton) P(ope)**, P. O. Box 2990, Honolulu, Hawaii. *Agriculture*. Memphis, Tenn., Dec. 9, 84. B.S., Louisi-

ana, 04. Various positions, sugar indust, Cuba, P. R. and La, 04-09; asst. director in charge, La. Sugar Exp. Sta, New Orleans, 09-11; agriculturist, Exp. Sta, Hawaiian Sugar Planters' Asn, 11-13; director, 13-35; research and consultation agr, *Castle and Cooke, Ltd., and Hawaiian Pineapple Co, Ltd.*, 35-Mem, Board Agr. and Forestry, Hawaii, 25-35. A.A.; Int. Soc. Sugar Cane Technol. (gen. chairman, 24-27). Sugar cane agriculture.

Agersborg, Dr. H(elmer) P(arell von Wold) Kjerschow, Concord, N. H. *Biology*. Norway, Oct. 26, 81. B.S., M.S., Washington (Seattle), 16; Royal Fredericks Univ, Oslo, 17; A.M., Columbia, 20; Ph.D., Illinois, 23. Asst. prof. zool, Wyoming, 20-21; asst, Illinois, 21-22; instr, Nebraska, 22-23; biol, Williams Col, 23-24; Wheeler prof. and head dept, James Millikin, 24-28; aquatic biologist, State Dept. Conservation, Ill, 28-29; teacher, Shepherd Col, State Nor. Sch, W. Va, 29-30; prof. biol. and head dept, Atlantic, 30-32; biologist, State Dept. Fisheries and Game, N. H. and N. H. Planning Board, 32-34; chief biologist, state park div, Nat. Park Service, 34-37; consulting biologist, 37- A.A.; Soc. Zool; Micros. Soc.; Soc. Mammal; Soc. Parasitol; Eugenics Soc; Genetic Asn; Biol. Soc. Wash; Va. Acad; Ill. Acad; Royal Soc. Trondhjem. Echinoderms; opistobranchs; prosobranchs; nudibranchs; ecology of Hippa; sand-dunes; parasitism; stream pollution; pond ecology; trout culture; game protection; wildlife management.

Agg, Dean T(homas) R(adford), 707 Hodge Ave, Ames, Iowa. *Engineering*. Fairfield, Iowa, May 17, 78. B.S., Iowa State Col, 05, C.E., 14. Instr. drawing, Illinois, 05-06, mech, 06-08; road engineer, State Highway Dept, Ill, 08-13; prof. highway eng, *Iowa State Col*, 13-30, asst. dean eng, 30-32, dean, 32-, director eng. exp. sta, 32- In charge highway investigations, Iowa, 13-30. Nat. Research Council; Highway Research Board. George S. Bartlett award, 36. Civil Eng; Soc. Test. Mat; Eng. Educ; Iowa Eng. Soc. Load distribution on highway bridge floors; gravel surfacing; concrete road failures; weight of traffic; proportioning unscreened gravel; tractive resistance; economics of highway grades; highway transportation and vehicle operating costs; coefficients of friction rubber tires; economic cost of highways; engineering valuation.

Agnew, Dr. James H(oward), 1625 Main St, Houston, Texas. *Internal medicine*. Pittsburgh, Pa, July 31, 84. A.B., Michigan, 07, A.M., 08, M.D., 10. Asst. hygiene, Michigan, 07-08, med, 10-12; instr. clin. micros, 12-13, physical diagnosis, 13-14; prof. med, sch. med, Alabama, 14-17; internist, 19- Visiting physician, St. Joseph's and City-County Hosps. Major, M.C., 17-19. Am. Med. Asn; Col. Physicians. Pulse wave; incoagulable blood nitrogen.

Agnew, Dr. P(aul) G(ough), 29 W. 39th St, New York, N. Y. **Physics*. Hillsdale, Mich, July 3, 81. B.L., Hillsdale Col, 01; A.M., Michigan, 02; Ph.D., Hopkins, 11. Instr, high sch, Mich, 02-05; lab. asst, Bur. Standards, 06-07, from asst. physicist to physicist, 08-19; sec'y, *Am. Standards Asn*, 19-A.A.; Elec. Eng; Wash. Acad. Electrical measurements; transformers; industrial standardization.

Agnew, Prof. Ralph P(almer), Cornell University, Ithaca, N. Y. *Mathematics*. Poland, Ohio, Dec. 29, 00. A.B., Allegheny Col, 23; M.S., Iowa State Col, 25; Ph.D., Cornell, 30. Asst, Iowa State Col, 23-25; instr. math, Cornell, 25-31, asst. prof, 31-. Nat. research fellow, Cincinnati, Princeton and Brown, 30-32. A.A; Math. Soc; Math. Asn. Infinite series and summability.

Agrellus, Prof. Frank U(lysses) G(rant), Kansas State Teachers College, Emporia, Kans. *Botany*. Spring Green, Wis, July 30, 69. A.B., Kansas, 07, fellow, 07, A.M., 08. Asst. bot, Missouri, 08; asst. instr. and instr, Kansas, 08-11; instr. and assoc. prof. biol, Kans. State Teachers Col, Emporia, 11- Summers, in charge expeds, investigation of native plants, Kansas, 11-14. A.A.; Ecol. Soc. (Kans. rep, cmt. on preservation of nat. conditions); Kans. Audubon Soc. (local v. pres, 25); Kans. Acad. (past pres, councilor, 30). Anatomy of spermatophytes; seasonal activities of plants; Kansas trees.

Agruss, Dr. M(eyer) S, 7508 N. Hoyne Ave, Chicago, Ill. *Chemistry*. St. Louis, Mo, Oct. 29, 06. B.S., Washington (St. Louis), 29; Ph.D., Chicago, 35. Titanium Pigment Co, 29-30; A. O. Smith Corp, 30-32; research dept, *Pure Oil Co, Chicago*, 35- Chem. Soc. Isolation of protactinium; radioactivity; artificial radioactivity produced by neutron bombardment; analytical methods.

Ahalt, Prof. H(enry) C(arlton), Virginia Polytechnic Institute, Blacksburg, Va. *Mathematics*. Luckett, Va, Nov. 9, 01. B.S., Va. Polytech, 23, E.E., 25; A.M., Illinois, 31. Asst. prof. math, Va. Polytech, 26- Elec. Eng. Interpretation of the growth curve of the human heart.

Ahearn, Dr. Arthur J(ohn), Bell Telephone Laboratories, 463 West St, New York, N. Y. *Physics*. New London, Wis, June 20, 02. A.B., Ripon Col, 23; Ph.D., Minnesota, 31. Teacher, high sch, Wis, 23-24; teaching fellow, Minnesota, 24-29; mem. tech. staff, research dept, *Bell Tel. Labs*, 29-A.A.; fel. Physical Soc. Secondary electrons from metals; field currents; thermionics and adsorption.

Ahern, Lieut. Col. George, U.S.A. (retired), 2227 20th St, N. W, Washington, D. C. *Forestry, Geography*. New York, N. Y, Dec. 29, 59. Grad, U. S. Mil. Acad; LL.B., Yale, 95. Officer, U.S.Army, 82- Prof, Mont. State Col, 97-98; director forestry, P. I, 00-14. Fel. Soc. Foresters. Tropical forestry; American forestry.

Ahern, Prof. M(ichael) J(oseph), S.J., Weston College, Weston, Mass. *Geology*. New York, N. Y, May 25, 77. A.B., St. Francis Xavier (N. Y), 96; A.M., Woodstock Col, 02; Innsbruck, Austria, 07-11. Instr. chem. and geol, Boston Col, 02-06; geol. and math, Woodstock Col, 06-07; prof. and director dept. science, Canisius Col, 11-14; prof. chem. and head dept. chem. and geol, Boston Col, 15-19; pres. and director chem. labs, Canisius Col, 19-23; prof. chem. and head dept, Col. of Holy Cross, 23-25; St. Joseph's Col, 25-26; chem. and geol, *Weston Col*, 26-31, emer. prof. chem, 31- A.A; Chem. Soc. (chairman, northeast sect, 37-); Am. Acad; Boston Soc. Nat. Hist; Buffalo Soc. Nat. Sci. (v. pres, 20-23). Prehistoric archaeology.

Ahlberg, Dr. J. E(lston), Universal Oil Products Co, Chicago, Ill. *Chemistry*. Philadelphia, Pa. B.S., California, 28, Ph.D., 31. Assoc. chem, California, 31-32; research assoc, Hopkins, 32-35; research chemist, U. S. Naval Research Lab, 35-36; *Universal Oil Products Co*, 36- Physical chemistry; entropies of aqueous ions; thermal excitation of electrons; low temperature calorimetry; hydrogen and helium liquefaction; electrode potentials; air rectification; adsorption; catalysis; pyrolysis of hydrocarbons.

Ahlfors, Prof. Lars V(alerian), 46 Shepard St, Cambridge, Mass. **Mathematics*. Helsingfors, Finland, April 18, 07. Ph.D., Helsingfors, 30. Adjunct math, Helsingfors, 33-36; asst. prof, Harvard, 36- Field's medal, 36. Soc. Sci. Fennica. Meromorphic functions and conformal mapping.

Ahlgren, Dr. Henry Lawrence, University of Wisconsin, Madison, Wis. *Agronomy*. Wyoming, Minn, Oct. 3, 08. B.S., Wisconsin, 31, M.S., 33, Ph.D., 35. Asst. agron. and soils, Wisconsin, 29-35, instr. agron, 35- Traveling fellow, Europe, 36. Pasture improvement, particularly the fertilization, management and ecological aspects.

Ahrens, Dr. Theodor G, Hardenbergstrasse 2, Berlin-Charlottenburg 2, Germany. *Biology*. Baltimore, Md, March 9, 70. A.B., Hopkins, 90; Ph.D., Halle, 11. Collaborator, Reichsstelle für Natursehutz, 20- A.A.; Ornith. Union; Soc. Mammal; Deuts. Dendrol. Gesell; Bot. Verein der Provinz Brandenburg. Nature protection and conservation.

Ahrens, W(alter) E, 77 Burnham Road, Morristown, N. J. *Forest pathology*. Huntingburg, Ind, Aug. 28, 10. B.S.A., Purdue, 32. Asst, Ohio Exp. Sta, 32; junior forest pathologist, Dutch elm disease lab, bur. plant indust, U. S. Dept. Agr, 33-35, asst. forest pathologist, 35- Dutch elm disease.

Aicher, L(ouis) C(ornelius), Ft. Hayes Experiment Station, Hayes, Kans. *Agronomy*. Meeker, Colo, Jan. 16, 87. B.S.A., Kans. State Col, 10. Supt, Idaho Substa, Caldwell, 10-11; from agent to agronomist, cereal investigations, U. S. Dept. Agr. and supt, Aberdeen Exp. Sta, Idaho, 11-21, Ft. Hayes Exp. Sta, Kans. State Col, 21- Soc. Agron, Kans. Acad. Growing grain on southern Idaho dry farms; production of clover seed, alfalfa seed, potatoes and grain under irrigation; feeding experiments; grain sorghums.

Alken, Prof. Charles B(ayne Philemon), Purdue University, Lafayette, Ind. *Engineering*. New Orleans, La, Oct. 6, 02. B.S., Tulane, 23; M.S., Harvard, 24, A.M., 25, Ph.D., 33. Engineer, Mason, Slichter and Hay, Madison, Wis, 26-28; mem. tech. staff, Bell Tel. Labs, New York, 28-35; assoc. prof. elec. eng. in charge dept. communication eng, Purdue, 35-Lecturer, Columbia, 33-35. Elec. Eng; Radio Eng. Com-

modulation engineering; high frequency measurements; common frequency broadcasting; effects of background noise in radio reception; tuned coupled circuit filters.

Albin, Prof. H(erbert) Austin, 2611 Edgehill Road, Cleveland, Ohio. *Clinical psychology*. Toronto, Ont., Can., March 1-67. B.A., Toronto, 87; Ph.D., Yale, 91. Instr., Southern California, 88; lecturer, Yale, 90-91; prof. philos. and logic, Trinity Col. (N. C.), 91-92; *philos., Western Reserve*, 93-95; fello., Clark, 92-93. A.A.; Psychol. Asn.; Philos. Asn.; Am. Univ. Prof. (v. pres., 19). Mental tensions and mental hygiene; stammering.

Albright, Prof. J(ohn) M(ulvaney), Iowa State College, Ames, Iowa. *Botany*. Mason City, Nebr., March 21, 93. A.B., Nebr. Wesleyan, 17, A.M., 21; Ph.D., Nebraska, 28. Asst. prof. bot., Nebr. Wesleyan, 21-23; assoc. prof., 23-25; biol., 25-27; asst. prof. bot., Iowa State Col., 27-30; assoc. prof., 30-39; Summa; asst. prof., Colo. State Teachers Col., 23, 26, 32; senior unit director, Shelterbelt Project, 34-35. A.A.; Bot. Soc.; Ecol. Soc.; Soc. Plant Physiol.; Soc. Agron.; Iowa Acad. Ecology of native and crop plants; interactions of forest communities within the grassland formation; effect of plant cover on soil erosion; plant succession.

Alcock, Dr. (William) E(dward) P(ercy), 40 Rector St., New York, N. Y. *Physics*. Montreal, Que., Can., Jan. 24, 11. B.Sc., McGill, 32, M.Sc., 33; Nat. Research Council Can., bursar, 33-34; student, 34-35; Ph.D., 35. Research physicist, Gen. Chem. Co., 35- Raman effect; Stark effects.

Alfille, Charles N(icolas), 5009 Orleans Ave., Sioux City, Iowa. *Entomology*. Amsterdam, N. Y., Oct. 13, 56. A.B., Bobit Col., 77, A.M., 80. Banker, Rochester, Minn., 81-06; field agent, bur. entom. and plant quarantine, U. S. Dept. Agr., 06-12; asst. entom. in charge entom. lab., Sioux City, 12-30; research and collaborator, 30- A.A.; Entom. Soc.; Asn. Econ. Entom.; Wilson Ornith. Club; Entom. Soc. Wash. Hymenoptera.

Alfille, Prof. D(onald) S(tuart), 133 Balmoral Ave., Toronto, Ont., Can. *Physics*. Comber, Ont., April 23, 93. B.A., Toronto, 15, M.A., 16. Nat. Research Council Can., scholar, 22-23; fellow, 23-24; Ph.D., 25. Demonstrator, Toronto, 15-18; physicist, dept. exp. and research, British Admiralty, 18-22; demonstrator, Toronto, 21-22; research worker, 22-24; lecturer, Saskatchewan, 24-25; lecturer and later asst. prof. physics, Western Ontario, 25-30; Toronto, 30- Asn. Physics Teachers; Royal Astron. Soc. Can. (gen. councilor, 29-). Ultra-violet spectroscopy; short range firing unit; recovery of helium from natural gas; fine structure of spectral lines; fluorescent emission and absorption spectra; electromagnetic balance; exploring coil method for magnetic field measurements.

Alston, Prof. Margaret, 319 S. Reno St., Los Angeles, Calif. *Chemistry*. Auckland, New Zealand. Ph.G., Southern California, 20, B.S., 22, M.S., 27. Asst. prof. pharmaceut. chem., Southern California, 22- Chem. Soc.; Pharmaceut. Asn. Chemical assays of the United States Pharmacopoeia; preservative action of violet rays on fruit juices; alkaloidal color tests.

Alvison, Dr. Beatrice, 1929 S St., N. W., Washington, D. C. *Mathematics*. Portland, Oregon, July 18, 08. A.B., Goucher Col., 28; A.M., Hopkins, 31, Ph.D., 33. Acting assoc. math., Richmond, 33-34; lecturer statis., American Univ., 34. Dept. econ., Oregon, 35-37. Math. Soc.; Math. Asn.; Statist. Asn. Accessibility and mapping of point set theory; mathematical basis of freight rates.

Alvarez, Prof. Robert G(rant), 1109 Spruce St., Berkeley, Calif. *Astronomy*. Jackson, Calif., Dec. 31, 64. A.B., Williams Col., 87, A.M., 92, Sc.D., 17; Pacific (Calif.), 03; Lick, 23; LL.D., California, 35. Instr. math., Livermore, 60-91; prof. math. and astron., Pacific (Calif.), 91-95; asst. astronomer, Lick Observatory, California, 95-07; astronomer, 07-26; assoc. director, 23-30; director, 30-35; emer. astronomer and emer. director, 35- Prin. acad., Pacific (Calif.), 93-95. Marvin lecturer, Royal Astron. Soc., 32. Lalande gold medal, French Acad., 06; Bruce gold medal, Astron. Soc. Pacific, 26; gold medal, Royal Astron. Soc., 32. Nat. Acad.; A.A. (pres., Pacific div., 25, v. pres., D., 26); Astron. Soc. (pres., 37-); Astron. Soc.; Astron. Soc. Pacific (ed., 97-08, 11-, pres., 98, 99); Calif. Acad.; assoc. Royal Astron. Soc. Double stars; minor satellites; comets; photometry; rapid binary stars; statistical studies relating to binary stars; orbits of binary stars.

Akeley, Dr. Lewis E(lsworth), Vermilion, S. Dak. *Physics*. Clarendon, N. Y., Feb. 22, 61. A.B., Rochester, 86, A.M., 88, LL.D., 12; Sc.D., South Dakota, 27. Prof. nat. and physical science, South Dakota, 87-88; physics and chem., 88-04; physics, 04-33; dean col. eng., 08-33; emer. dean, 33-; lecturer philos., 33- A.A. Engineering education; the spacious present and physical time; wholes and comprehensive unities for physics and philosophy; methodology in physics and psychology; the symbolization and meanings of the problematic situation.

Akerlof, Dr. Gosta Carl, Yale University, New Haven, Conn. *Physical chemistry*. Stockholm, Sweden, June 11, 97. Ph.D., Pennsylvania, 26. Instr. chem., Sterling chem. lab., Yale, 29-32; asst. prof., 32- Chem. Soc. Thermodynamic properties of strong electrolytes in aqueous and non-aqueous solutions; reaction rates in alkaline solutions; dielectric properties of mixtures of solvents.

Akerman, Prof. Alfred, University of Virginia, Charlottesville, Va. *Forestry*. Bartow Co., Ga., July 3, 76. A.B., Georgia, 98; M.F., Yale, 02. Instr. forest sci., Yale, 02-04; state forester, Mass., 04-06; prof. forestry, Georgia, 06-14; dist. forester, Va., 21-26; research director, Ga. Forest Service, 26-28; assoc. prof. forestry, Virginia, 28- Biltmore lecturer, 07-09. Soc. Foresters. Forest thinning; forest policy.

Akerman, Prof. J(ohn) D., University of Minnesota, Minneapolis, Minn. *Aeronautical engineering*. Jelgava, Latvia, April 24, 97. Aeronaut. Sch., Moscow, Russia, 16; B.S., Michigan, 25. Special designer, aerodynamical lab., Michigan, 27-28; chief engineer, Hamilton Metalplane Co., Milwaukee, 28; assoc. prof. aeronaut. eng., Minnesota, 29-30; prof. and head dept., 30- Chief engineer, Mohawk Aircraft Corp., Minneapolis, 29-30. Mem. State Aeronaut. Cmn., Minn., 34- Scout pilot, Russian Aviation Mission, France and Italy, 16-18. Inst. Aeronaut. Sci.; Asn. State Aviation Officials (v. pres., n. cent. region, 34); Eng. Educ. (mem., aviation cmt., 35); Minn. Acad. Aircraft design; visualization of airflow; design of rotors for Madaras rotor-wind-power plants.

Akers, John F(red), 123 W. Cypress, Compton, Calif. *Engineering*. Los Angeles, Calif., Feb. 16, 06. B.S., Calif. Inst. Tech., 27. Maintenance dept., Am. Potash and Chem. Corp., 27; chemist, Celite Co., 27; chief analyst, Pacific Goodrich Co., 28-30; research engineer, Carbon Products Co., 30-31; chief inspector, U. S. Tire Co., 31-32; chief chemist, Xylos Rubber Co., 32; research chemist, Electroblacks, 32-33; plant supt., Gen. Carbon Co., 33-36; chemist, Shell Chem. Co., 36- Physical testing of rubber; carbon from fuel oil; alcohols; ketones.

Akers, Prof. O(lscar) P(erry), Allegheny College, Meadville, Pa. *Mathematics*. Trenton, Mo., June 16, 72. A.B., Colorado, 00, A.M., 02; Ph.D., Cornell, 05. Asst. math., Cornell, 04-05; asst. prof., Allegheny Col., 05-07; prof., 07- Math. Soc.; Math. Asn.; Circolo Mat. di Palermo. Line geometry.

Albee, Dr. Fred H(oudlett), 57 W. 57th St., New York, N. Y. *Surgery*. Alna, Maine, April 13, 76. A.B., Bowdoin Col., 99, hon. Sc.D., 17; M.D., Harvard, 03; hon. Sc.D., Vermont, 16; LL.D., Colby Col., 30. Prof. and director orthop. surg., N. Y. Post-Grad. Med. Sch., Columbia, 10-35. Visiting orthop. surgeon, N. Y. Post-Grad. Hosp., 04-33; Reconstruction Hosp., New York, 29-; consulting surgeon, hosp., N. Y., N. J., Conn., Vt., Fla., France; Pa. R.R.; Seaboard Airline Ry.; New York Police Dept. Commissioner, rehabilitation, N. J., 18-; founder and director, Med. Center, Venice, Fla. Commendator de Isabel la Catolica; grand officer, Crown of Roumania; commander, Order of Merit, Hungary; cavaliere, Order of the Crown, Italy; commander, Order of Carlos P. Finlay, Cuba; chevalier, Legion d'honneur, France. Surgeon-in-chief, Gen. Hosp. No. 3, U.S.A., 18-19; mem. advisory council to surgeon gen. Fel. Col. Surg.; Am. Med. Asn.; Orthop. Asn. (pres., 29); N. Y. Acad. Med.; Pan-Am. Med. Asn. (pres., 29); Pan-Pacific Med. Asn. (chairman, 30-); hon. fel. Royal Med. and Chirurg. Soc.; hon. fel. Belgian Orthop. Soc.; Brazilian Soc. Orthop. Surg. and Traumatology (hon. pres., 36); Int. Soc. Orthop. Surg. (founder); Int. Med. Club (pres., 30). Bone-graft surgery; orthopedic and reconstruction surgery; bacteriophage.

Alben, Dr. A(rthur) O(tto), 606 Courthouse, Shreveport, La. *Soils*. Vancouver, Wash., June 24, 95. B.S., Oregon State Col., 26; M.S., Iowa State Col., 27; Ph.D., 29. Asst. soil technologist, bur. chem. and soils and bur. plant indust., U. S. Dept. Agr., 28-36; assoc. soil technologist, 36- Soc. Agron.;

Chem. Soc. Soil fertility; electrodialysis of soils; pecan fertilizers; pecan rosette.

Alber, Dr. H(erbert) K(arl), Franklin Institute, Philadelphia, Pa. *Chemistry*. Klagenfurt, Austria, April 4, 04. Ing.Ch., Tech. Hochschule, Graz, Austria, 26, Dr.Tech.Sc. 28. Asst. chem., Tech. Hochschule, Graz, Austria, 26-28, 29-31, inorg. and anal. chem., 28-29; fellow and teaching fellow, Wash. Sq. Col. N. Y. Univ., 34, asst. anal. and org. microanal., 34-36, instr., 36; chief microanalyst, Biochem. Research Foundation, Franklin Inst., 36- Lecturer, Bern, Switzerland, 32, 33, Stockholm, 32. Chem. Soc.; Microchem. Soc.; Deuts. Chem. Gesell. General, analytical and applied microchemistry; inorganic and organic microanalysis.

Albers, Prof. C(arl) Clarence, 4715 Ave. G, Austin, Texas. *Pharmacy*. Lincoln, Texas, Jan. 4, 98. Ph.G., Texas, 23, B.S., A.B., 30; fellow, Wisconsin, 35-36, Ph.D., 36. Instr. *pharmacy*, Texas, 23-28, asst. prof., 28- A.A.; Pharmaceut. Asn.; Texas Acad. Plant chemistry; pharmacognosy; taxonomy; history of pharmacy.

Albers, Prof. Vernon M(artin), 705 Xenia Ave., Yellow Springs, Ohio. *Biophysics*. Northfield, Minn., May 6, 02. A.B., Carleton Col., 23; A.M., Illinois, 25, Ph.D., 28. Asst. *physics*, Illinois, 23-28; head dept., East Ky. State Teachers Col., 28-29; nat. research fellow, Princeton, 29-30; asst. prof., Antioch Col., 30-34, assoc. prof., 34- Physical Soc. Photoelectricity; spectroscopy; photosynthesis.

Albert, Dr. A(braham) Adrian, University of Chicago, Chicago, Ill. ^{*5}*Mathematics*. Chicago, Ill., Nov. 9, 05. B.S., Chicago, 26, M.S., 27, Ph.D., 28. Nat. research fellow, Princeton and Chicago, 28-29; instr. *math*, Columbia, 29-31; asst. prof., Chicago, 31- Research worker, Inst. Advanced Study, 33-34. Math. Soc.; Math. Asn.; Circolo Mat. di Palermo. Linear associative algebras; Riemann matrices; number theory.

Albert, Prof. A(rthur) R(obert), Hancock, Wis. *Soils*. Burnett Junction, Wis., Sept. 24, 91. B.S., Wisconsin, 15; Minnesota, 29-30. Asst. soils, Wisconsin, 15-17; fertilizer salesman, 19-21; instr. and asst. prof. *soils*, Wisconsin, 21-U.S.A., 17-19. A.A.; Soc. Agron.; Soil Sci. Soc. Fertilizers; crops on sand and peat soils; wind erosion control; soil organic matter; potato scab.

Albert, Prof. C(alvin) D(odge), Cornell University, Ithaca, N. Y. *Machine design*. White Haven, Pa., Nov. 17, 76. M.E., Cornell, 02. Designer machinery, Columbia Iron Works, Mich., 02-03; design work, Great Lakes Eng. Works, Detroit, 03-04; instr. exp. eng., Cornell, 04-06, *machine design*, 06-08, asst. prof., 08-16, prof., 16-17, in charge dept., Sibley col., 19- Exec. asst., Middle Atlantic dist., U. S. Shipping Board, Emergency Fleet Corp., Baltimore, 17-19. Mech. Eng. Machine design drawing room problems; kinematics of machinery.

Albert, Pres. Charles E(lwood), Davis and Elkins College, Elkins, W. Va. *Physics, Civil engineering*. Pen Argyl, Pa., Jan. 10, 83. C.E., Lafayette Col., 08. Prof. math. and physics, Davis and Elkins Col., 11-13; instr. mech. and materials, Pa. State Col., 13-16; civil engineer, Camden Iron Works, 16-20; prof. physics and civil eng. and dean, Davis and Elkins Col., 22-35, acting pres., 35-36, pres., 36- W. Va. Acad. (treas., 31-34, pres., 34). Calculus; applied mechanics; cooperative industrial education.

Albert, Dr. C(harles) G(erald), Edgar Brothers Co., Metuchen, N. J. *Chemistry*. Piper City, Ill., April 3, 11. Mary Carroll Garvan fellow, Hopkins, 31-35, Ph.D., 35. *Research chemist*, Edgar Brothers Co., 35- Chem. Soc. Contact catalysis; loading of paper; processing of kaolin.

Albert, Prof. J(ohn) Paul, 230 E. Church St., Oxford, Ohio. *Mathematics*. Mishawaka, Ind., April 17, 01. A.B., Miami (Ohio), 24; A.M., Ohio State, 29; Chicago. Instr. *math*, Miami (Ohio), 24-28, asst. prof., 29- Tetrahedrons, circumspheres and inspheres.

Albert, Prof. O(rin) W(ilson), 629 Buena Vista St., Redlands, Calif. *Mathematics*. Mt. Pleasant, Pa., March 24, 89. A.B., Otterbein Col., 09; A.M., Columbia, 11; Chicago, 16-17, summers, 21, 22, 25; Ph.D., Washington (Seattle), 31. Instr., high sch., Pa., 09-10; *math*, Pittsburgh, 11-14; Purdue, 14-16; Grinnell Col., 17-19, asst. prof., 19-23; prof., Redlands, 23-A.A.; Math. Soc.; Math. Asn. (chairman, South. Calif. sect., 33). Geometry; relations between the projective and metric differential geometries of surfaces.

Albert, Dr. W(illard) B(enjamin), Box 63, Florence, S. C. *Plant physiology*. Horicon, Wis., Oct. 4, 99. B.S.A., Wisconsin, 23; M.S., 24, Ph.D., 26. Asst. plant physiologist, *div. boll weevil control*, *Pee Dee Exp. Sta.*, *Clemson Col.*, 26-28, assoc. plant physiologist, 28- A.A.; Soc. Agron. Root reserves of alfalfa and grasses; cotton fruiting, mineral deficiencies and toxicity in soils.

Alberts, Dr. Arnold A., Ohio State University, Columbus, Ohio. *Chemistry*. Davis, S. Dak., May 28, 06. A.B., South Dakota, 28; M.S., Oklahoma, 30; Ph.D., Ohio State, 34. Instr. chem., *Ohio State*, 35-36, research asst. metal, eng. exp. sta., 35-, investigator *indust. problems*, 36- Chem. Soc. Dehalogenation of alpha and beta di-bromo acids of the quinoline and pyridine series; condensations of the barbituric acid type; chemistry of heparin.

Alberts, Dr. H(ugo) W(illiam), Soil Conservation Service, Adjuntas, P. R. *Plant physiology, Plant pathology*. Watertown, Wis., March 29, 89. B.S., Wisconsin, 18, M.S., 20, Ph.D., 26; Ph.D., Illinois, 26; Harvard, 26. Instr., Wisconsin, 18-24; asst. sec'y, Agr. Exp. Asn., Wis., 18-19; agent, div. cereal investigations, U. S. Dept. Agr., 19-21; director, Alaska Exp. Stations, 26-32; consulting specialist north. agr., Lenin Acad. Agr. Science, Leningrad, Russia, 33; asst. crop and live-stock estimator, div. crop and live-stock estimates, U. S. Dept. Agr., 34, agr. economist, land policy sect., div. program planning, agr. adjust. admin., 34-35, regional director *soil conservation service*, Ky., 35-36, assoc. agronomist, Ill., 36-37, agronomist, P. R., 37- A.A.; Soc. Agron.; Agr. Hist. Soc. Genetics; agricultural botany; linkage value in genetics; moisture content of corn in relation to humidity and temperature of the atmosphere.

Albertson, Dr. Walter E(dward), Massachusetts Institute of Technology, Cambridge, Mass. *Physics*. Healdsburg, Calif., Oct. 5, 07. A.B., Stanford, 30; M.S., Mass. Inst. Tech., 33, Ph.D., 35. Asst. *physics*, Mass. Inst. Tech., 30-35; nat. research fellow, Mt. Wilson Observatory, Carnegie Institution, 35-36; instr., *Mass. Inst. Tech.*, 36-37, research assoc., 37- Physical Soc.; Optical Soc. Spectroscopy; atomic structure.

Albrecht, C(larence) J(ohn), Field Museum of Natural History, Chicago, Ill. *Zoology*. Waverly, Iowa, Sept. 28, 91. A.B., Iowa, 13. Curator zool., state museum, Washington (Seattle), 18; *dept. preparation*, *Field Museum Nat. Hist. Hawaiian Bird Reservation* exped., Laysan Island, 11; Carnegie Alaska-Siberia exped., 13; collector for Wash. game exhibit, Panama-Pacific Expos., 15; director, Field Museum exped., Olympic Mountains, 15, northwest coast, 26; Calif. Acad. exped.; director, Iowa exped., northwest coast, 19; Am. Museum exped., 24; White-Coats Field Museum exped., Africa, 28-29; leader, Field Museum exped., Pribilof Islands, 37. Asn. Mus. Birds and mammals; mountain beavers.

Albrecht, Prof. Sebastian, Dudley Observatory, Albany, N. Y. *Astrophysics*. Milwaukee, Wis., Aug. 22, 76. B.S., Wisconsin, 00; Lick Observatory fellow, California, 03-06, Ph.D., 06. Teacher, high sch., Wis., 00-02; asst., Lick Observatory, California, 06-08, asst. astronomer, 08-10; first astronomer, Cordoba Observatory, 10-12; acting junior prof. astron., Michigan, 12-13; astronomer, *Dudley Observatory, Union (N. Y.)*, 13-32; research assoc., *Carnegie Institution*, 32-Crocker eclipse exped., Flini Island, 08; Mt. Whitney, 09. A.A.; Astron. Soc.; Soc. Astron. de Mex. Comets; satellites; Mars; variable stars; stellar spectral types and the intensities of lines in the spectra; distortions of photographic films; personal scale; anomalous dispersion in the sun; fundamental radial velocities; stellar wave-lengths.

Albrecht, Prof. W(illiam) A(lbert), University of Missouri, Columbia, Mo. *Soils*. Flanagan, Ill., Sept. 12, 88. A.B., Illinois, 11, B.S., 14, M.S., 15, Ph.D., 19. Instr. *soils*, Missouri, 16-19, asst. prof., 19-20, assoc. prof., 20-30, prof., 30-Soc. Agron.; Soc. Bact.; Soil Sci. Soc. (sec'y, 37); Int. Soc. Soil Sci. Soil bacteriology and fertility; nitrogen fixation; inoculation of legumes.

Albright, Dr. Alan R., 5669 Guilford Ave., Indianapolis, Ind. *Chemistry*. Boston, Mass., 85. Fellow, A.B., Ohio State, 09; Ph.D., Göttingen, 12. Bur. chem., U. S. Dept. Agr., 10-17; Dayton Metal Products Co., 17-18; E. I. du Pont de Nemours and Co., 18-23; S. Gumpert Co., 23-26; Koppers Research Corp., 26-32; coal research lab., Carnegie Inst. Tech., 32-36; shoe polish div., Hecker Products Corp., 36- Chem. Soc. Essential oils; foods; motor fuels; dyes; pharmaceuticals; coal; leather finishes.

Albright, Prof. C(harles) Leonard, University of Richmond, Richmond, Va. *Physics*. Cedar Rapids, Iowa, March 21, 01. B.S., Coe Col., 26; M.S., Iowa, 27, Ph.D., 29. Asst., Iowa, 27-29; assoc. prof. physics, Richmond, 29- A.A.; Physical Soc.; Va. Acad.; Iowa Acad. Spectroscopy; hyperfine structure of spectral lines; thermoelectric properties of single crystal bismuth alloys.

Albright, Dr. Fuller, Massachusetts General Hospital, Boston, Mass. *Internal medicine*. Buffalo, N. Y., Jan. 00. A.B., Harvard, 21, M.D., 24. House officer, Mass. Gen. Hosp., 24-26; asst. med. res., Hopkins Hosp., 27-28; Moseley traveling fellow, Harvard, 28-29; instr. and assoc. med., 31- Asst. physician, Mass. Gen. Hosp., 29-37; assoc. physician, 37-; consulting physician, Mass. Eye and Ear Infirmary, 31-; Henry Pickering Walcott fellow, Harvard, 31-34. Soc. Clin. Invest.; Asn. Physicians; Asn. Study Int. Secretions. Parathyroid disease; endocrinology.

Albright, Prof. Guy H(arry), 1120 N. Tejon St., Colorado Springs, Colo. *Mathematics*. Lamar, Mo., Dec. 17, 76. Ph.B., Michigan, 99; A.B., Harvard, 00, A.M., 13; Polytech. Inst., Brooklyn; Sc.D., Colo. Col., 32. Prof. math., Colo. Col., 07- Exchange lecturer, Harvard, 13. Correspondent, W. Cent. Mil. Dist., War Personnel Staff, Y.M.C.A., 18-19. Math. Asn. Methods of distributing grades.

Albright, Prof. John G(rover), 1906 E. 105th St., Cleveland, Ohio. *Physics*. Ashville, Ohio, Oct. 3, 87. A.B., Ohio (Athens), 16; M.S., Ohio State, 24; Ph.D., Chicago, 33. Austin teaching fellow, Harvard, 24-25; assoc. prof. physics, Sweet Briar Col., 25-27; asst. prof., Case, 27- Lecturer, Western Reserve, 28-33. A.A.; Physical Soc.; Optical Soc.; Meteorol. Soc. X-rays; crystal structure; meteorology; electric circuit controls; electric-driven pendulum.

Albright, Prof. Penrose S(trong), 1511 E. Fourth St., Winfield, Kans. *Physical chemistry*. Winfield, Kans., Dec. 14, 96. B.S., Rensselaer Polytech., 22; M.S., Wisconsin, 29, Ph.D., 36. Asst. prof. and assoc. prof. physics and chem., Southwestern Col., 25-26; prof. physics and chairman nat. science div., 26- Chem. Soc.; Physical Soc.; Eng. Educ.; Asn. Physics Teachers; Kans. Acad. Potentiometric titration of calcium and magnesium in a mixture of their chlorides; dielectric constants of solutions of non-electrolytes; the salting-out effect.

Albritton, Dr. Claude C(arrol), Jr., 3443 Ashbury St., Dallas, Texas. *Geology*. Corsicana, Texas, April 7, 13. A.B., B.S., South. Methodist, 33; A.M., Harvard, 34, univ. fellow, 34-35. J. B. Woodworth fellow, 35-36, Ph.D., 36. Lecturer anthropogeog., South. Methodist, 33; instr. geol., 36- A.A.; Paleont Soc. Upper Jurassic and Eo-Cretaceous stratigraphy and paleontology of Texas; Sierra Madre Oriental structural province in Hudspeth County, Texas; Texas Cretaceous foraminifera; ammonites.

Albritton, Dr. Errett C(yrill), 1335 H St., Washington, D. C. *Physiology*. Mayfield, Ky., Dec. 14, 90. A.B., Missouri, 16; M.D., Hopkins, 21. Nat. research fellow physiol., Ohio State, 22-24; asst. sch. med., Buffalo, 24-26; prof. physiol. and biochem., Govt. Med. Sch., Bangkok, Siam, 26-32; physiol. med. sch., George Washington, 32- Instr., Tulane, 17-18; sch. med., Missouri, 18-19. Summers, field work, U. S. Pub. Health Service, 19; int. health board, Rockefeller Foundation, 20-22. A.A.; Physiol. Soc.; Asn. Study Int. Secretions; Wash. Acad.; Wash. Acad. Med. (sec'y, 38). Carbohydrate, pituitary and water metabolism; statistical methods in physiology.

Albro, Dr. Helen T(ucker), Spelman College, Atlanta, Ga. *Zoology*. South Kingston, R. I., March 10, 98. A.B., Brown, 19, A.M., 23, Morgan Edwards fellow, 26-27, Ph.D., 27. Asst. biol., Simmons Col. (Mass.), 19-22; instr. zool., Mt. Holyoke Col., 23-25; biol., Brown, 25-26; asst. prof. zool. and physiol., Hood Col., 28-31; head dept. biol., Spelman Col., 31- A.A.; Nat. Asn. Audubon Societies; R. I. Audubon Soc.; L. I. Biol. Soc. Cytology.

Alburger, Dr. H(enry) R(lhl), 3836 Washington Blvd., Indianapolis, Ind. *Pathology*. Germantown, Pa., April 16, 74. M.D., Pennsylvania, 02. Demonstrator path., Pennsylvania, 05-07; junior prof., Indiana, 08, prof., 08-14; pathologist, Methodist Hosp., 13-19, consulting pathologist, consultant internal med. and medico-legal expert, 19- Pathologist, Indianapolis City Hosp., 11-16, 22-26. Am. Med. Asn.; Path. Soc. Phila. Focal infections; vaccine therapy; diseases of the blood; serology.

Alcock, Dr. Frederick James, Geological Survey, Ottawa, Ont., Can. *Geology*. Griersville, Ont., Nov. 16, 88. B.A., Toronto, 12; Ph.D., Yale, 15; Wisconsin, 15-16. *Geol. Surv. Can.*, 11- Lecturer, Queen's (Can), 20-21. Fel. Geol. Soc.; fel. Royal Soc. Can.; Can. Min. Inst. The Precambrian of northern Canada; geology of the Gaspé Peninsula and of New Brunswick; zinc and lead deposits of Canada.

Alcorn, Prof. Gordon D(ee), University of Idaho, Moscow, Idaho. *Botany*. Olympia, Wash., April 6, 07. B.S. Col. of Puget Sound, 30; M.S., Washington (Seattle), 33, Ph.D., 35. Asst. prof. biol. Col. of Puget Sound, 32-33; asst. bot., Washington (Seattle), 34-35; asst. prof., Idaho, 35- Limnol. Soc.; Pacific Northwest Bird and Mammal Soc. (chairman, membership cmt., 32-); assoc. ed., 'The Murle' (32-). Ornithology; algae; histology.

Alden, Dr. A(rthur) M(axwell), 520 Frisco Bldg., St. Louis, Mo. *Otolaryngology*. Kans., June 15, 85. A.B., Oklahoma, 07, A.M., 09; M.D., St. Louis, 15. Asst. prof. otolaryngol., sch. med., Washington (St. Louis), 28- Asst. otolaryngologist, Barnes and St. Louis Children's Hosps.; otolaryngologist, St. Louis Jewish Hosp.; visiting otolaryngologist, St. Louis City Hosp. Acad. Ophthal. and Otolaryngol.; Laryngol., Rhinol. and Otol. Soc.; Laryngol. Asn.; Otol. Soc.; Col. Surg.; Am. Med. Asn. Diagnosis and treatment of conditions affecting the nose, throat and ear.

Alden, Prof. Harold L(ee), Yale University Observatory, Southern Station, University of Witwatersrand, Johannesburg, S. Africa. *³*Astronomy*. Chicago, Ill., Jan. 10, 90. A.B., Wheaton Col. (Ill.), 12; M.S., Chicago, 13; fellow, Virginia, 14-17, Ph.D., 17. Asst. photog. photom., Yerkes Observatory, Chicago, 12-14; instr. astron., Virginia, 14-17, asst. prof., 18-24, assoc. prof., 24-25; asst. prof., Yale, and astronomer in charge south. sta., Yale Univ. Observatory, Witwatersrand, 25- Asst. McCormick Observatory, Virginia, 14-25. Instr. navig., U. S. Shipping Board, 18-19. A.A.; Astron. Soc.; Optical Soc.; fel. Royal Astron. Soc.; Soc. astron. de France; S. African A.A.S. (v. pres., A, 30, pres., 31); Astron. Soc. S. Africa (pres., 32). Stellar parallaxes and proper motions; visual and photographic photometry; variable stars; mass ratios; orbits of double stars.

Alden, Dr. H(oward) H(olston), New Mexico Military Institute, Roswell, N. Mex. *Mathematics*. Massillon, Ohio, June 5, 08. B.S., Carnegie Inst. Tech., 30; A.M., Ohio State, 31, fellow, 32-33, Ph.D., 33. Asst., Carnegie Inst. Tech., 28-30; Ohio State, 30-32; head dept. math., N. Mex. Mil. Inst., 34- Math. Soc. Differential equations; analysis.

Alden, Dr. Marjorie L(effler), New Mexico Military Institute, Roswell, N. Mex. *Mathematics*. Kyle, Ohio, Aug. 29, 09. A.B., Miami (Ohio), 30; A.M., Ohio State, 32, Ph.D., 34. Tutor math., Mills Col., 34-35; instr., N. Mex. Mil. Inst., 36- Analysis.

Alden, Dr. W(illiam) C(linton), U. S. Geological Survey, Washington, D. C. *³*Geology*. Mitchell, Iowa, Sept. 27, 71. A.B., Cornell Col. (Iowa), 93; fellow, Chicago, 97-98. A.M., 98, Ph.D., 03. Asst. prin., high sch., S. Dak., 93-94, prin., schs., 94-95; special field asst., U. S. Geol. Surv., 96-01, asst. geologist, 01-10, geologist, 10-12, in charge sect. glacial geol., 12- Non-res. docent, Chicago, 03-11. Geol. Soc.; Geol. Soc. Wash. Glacial geology of Wisconsin, Pennsylvania, Iowa, Montana, Wyoming, Idaho, Washington and New England; geomorphology of the United States.

Alderman, Dr. A(lton) L(ovell), 1329 E. 19th St., Eugene, Oregon. *Zoology*. Santa Clara, Calif., Jan. 21, 07. A.B., California, 30, univ. fellow, 34, Ph.D., 34. Teaching fellow, California, 31-33; instr. zool., Oregon, 34- Experimental zoology; development of amphibian eye and sense organs; taxonomy of Pacific Coast Amphipoda.

Alderman, Prof. W(illiam) H(orace), 1380 Raymond Ave., St. Paul, Minn. *Horticulture*. Holley, N. Y., April 6, 85. B.S., Cornell, 08. Field agent, dept. pomol., Cornell, 08; asst. and assoc. horticulturist, N. Y. Exp. Sta., Geneva, 08-11; prof. hort., West Virginia, 11-19; acting dean col. agr. and director, Exp. Sta., 18-19; prof. hort. and chief div., Minnesota, 19- Mediterranean fruit fly cmm., U. S. Dept. Agr., 29. A.A.; Soc. Hort. Sci. (pres., 20, pres., Great Plains sect., 23, sec'y, 34); Pomol. Soc. (exec. cmt.); Minn. Hort. Soc. (pres., 24, 25). Breeding and production of hardy fruits; propagation of fruit plants; orchard culture.

Alderson, Dr. Victor C(lifton), La Jolla, Calif. *Mathematics, Technical education.* Plymouth, Mass, June 4, 62. A.B., Harvard, 85; hon. Sc.D., Beloit Col. and Armour Inst. Tech., 03. Sch. supt., Ind., 85-87; instr., high sch., Ill., 87-93; prof. math., Armour Inst. Tech., 93-99, dean tech. col., 99-03; pres., Colo. Sch. Mines, 03-13, 17-24; consulting engineer, 13-17, 24—Advisory cmt., Carnegie Tech. Schs., Pittsburgh, 01. Eng. Educ.; Min. and Metal. Eng.; Min. Cong.; Inst. Petrol. Technol. London. Mining; metallurgy; oil shale.

Aldous, Prof. Alfred Evan, 200 N. 16th St., Manhattan, Kans. *Agronomy.* Ogden, Utah, Nov. 18, 85. B.S.A., Utah State Col., 10; Ph.D., Nebraska, 34. Grazing examiner, U. S. Forest Service, 11-17; land classifier, U. S. Geol. Surv., 17-26; prof. pasture management, Kans. State Col., 26—Food reserves, nutritive content and palatability of pasture plants; increasing the grazing capacity of pastures; eradication of worthless plants from pastures; plant succession and grazing; effect of burning on prairie grass; selection and hybridization of grasses.

Aldous, Clarence Moroni, University of Maine, Orono, Maine. *Biology.* Huntsville, Utah, Nov. 2, 89. B.S., Utah Col., 17; M.S., University, 23. County agr. agent, Piute County, Utah, 19-21; instr., high sch., Idaho, 24-25; Utah, 25-29; asst. state leader, N. Mex., 29-31; junior biologist and asst. biologist, div. wildlife research, bur. biol. surv., U. S. Dept. Agr., 31-35; assoc. biologist, 35-36; project leader wildlife cooperative research sta., Univ. Maine, 36—Private, Inf., 17-19. Soc. Mammal; Soc. Foresters; Wildlife Soc. Forest wildlife; economic relation of snowshoe rabbits to forest production.

Aldous, Shaler E(gene), Lake States Forest Experiment Station, St. Paul, Minn. *Biology.* Huntsville, Utah, April 19, 00. A.B., Utah, 24; A.M., California, 27. Instr. zool., Utah, 24-26; dist. investigator control methods research, bur. biol. surv., U. S. Dept. Agr., 28-31; econ., ornith. and mammal, 31-36; forest wildlife research, Lake States Forest Exp. Sta., U. S. Forest Service, 36—Summer, range naturalist, Yosemite Nat. Park, 27. Soc. Mammal. Food habits of birds and mammals; forest bio-ecology.

Aldred, Dr. J(acob) W(illiam) H(uber), Wilson Dam, Ala. *Organic chemistry.* Perkinsville, Ind., April 23, 95. A.B., Indiana, 17, A.M., 20; Ph.D., 29. Analyst, Eli Lilly and Co., Indianapolis, 17-18; foreman nitrogen lab, Air Nitrates Corp., Muscle Shoals, 18-19; chemist, Roessler and Hasslacher Chem. Co., W. Va., 20-23; asst. prof. chem., Antioch Col., 29-33; research chemist, indust. research inst., 30-33; assoc. chemist, fertilizer works, Tenn. Valley Authority, 33—A.A.; Chem. Soc.; Ind. Acad. Action of heat on perchlorates; pyridine homologs; constituents of desert plants.

Aldrich, Dr. H(enry) R(ay), Geological Society of America, 419 W. 117th St., New York, N. Y. *Geology.* Boston, Mass., June 8, 91. B.S., Mass. Inst. Tech., 14; M.S., Minnesota, 17; Ph.D., Wisconsin, 31. Instr. mining and metal, Northwestern, 14-16; asst., Minnesota, 16-17; chief field parties, Wis. Geol. Surv., 19-25; asst. state geologist, 25-34; asst. sec'y., Geol. Soc. Amer., 34—Instr., Mass. Inst. Tech., 20. Summers, geologist, Wis. Geol. Surv., 16, 17. Statistician, W. I.B., lieut., 18-19. Geol. Soc.; Soc. Econ. Geol.; Geophys. Union; Min. and Metal. Eng.; Wis. Acad.; Lake Superior Min. Inst. Precambrian of Wisconsin; magnetic survey; structural geology.

Aldrich, Prof. John A., Oglethorpe University, Oglethorpe, Ga. *Physics, Astronomy.* Clifford, Ont., Can., March 3, 78. A.B., Albion Col., 14; M.S., Michigan, 15; Ph.D., 23. Prof. physics and astron., Olivet Col. (Mich.), 16-18; Washburn Col., 18-25; *Oglethorpe*, 25—Astron. Soc. Astrophysics; Cepheid variables.

Aldrich, L(oyal) B(laine), Smithsonian Institution, Washington, D. C. *Astrophysics.* Milwaukee, Wis., Nov. 20, 84. A.B., Wisconsin, 07, A.M., 09. Asst., *astrophys. observatory, Smithsonian Institution*, 09-30; asst. director, 30—Director, Smithsonian Institution Sta., Montezuma, Chile, 23-25. Smithsonian Institution expds. to Mt. Wilson; director eclipse exped. to Kansas, 18. A.A.; Optical Soc.; Philos. Soc. Wash. Solar radiation; cloud reflection; instruments for solar constant work.

Aldrich, Dr. W(illard) W(alker), Box 1081, Medford, Oregon. *Horticulture.* Port Deposit, Md., Nov. 9, 01. B.S., Hopkins, 23; fellow, Maryland, 25-26; M.S., 26; Ph.D., 30. Orchard manager, Am. Fruit Growers, Inc., 26-29; asst. horti-

culturist, bur. plant indust., U. S. Dept. Agr., 29—A.A.; Soc. Hort. Sci. Apple and pear production; effects of irrigation, pruning and nitrogen upon set and growth of fruit.

Aldrich, W(illiam) S(leeper), 137 Buckingham Ave., Syracuse, N. Y. *Mechanical engineering.* Philadelphia, Pa., March 3, 63. Grad., U. S. Naval Acad., 83; M.E., Stevens Inst. Tech., 84. Teacher, high sch., Pa., 85-87; Phila. Manual Training Sch., 87-89; instr. drawing, Hopkins, 89-91; assoc. mech. eng., 91-92; prof. mech. eng. and head dept., West Virginia, 93-99; elec. eng. and head dept., Illinois, 99-01; director, Clarkson Tech., 01-11; U. S. Reclamation Service, 11-13; acting prof. mech. and elec. eng., Arizona, 13-14; assoc. prof. elec. eng., Colo. Agr. Col., 14-18; Am. Bridge Co., Gary, 18-31; retired. Past asst. engineer and lieut., U.S.N., Spanish-Am. war. Mech. Eng.; Elec. Eng.; Eng. Educ. Engineering education.

Alexander, Dr. A(lexandre) E(mil), Electric Auto-Lite Co., Fostoria, Ohio. *Mineralogy, Petrography.* Leipzig, Germany, Feb. 8, 05. B.S., Cornell, 29; Ph.D., 33; univ. scholar, Harvard, 31-32. Mineralogist, North Carolina, 30-31; petrographer, Spencer Lens Co., 34-35; ceramic petrographer, Elec. Auto-Lite Co., 36—Asst., Oceanog. Inst., Woods Hole, 32. A.A.; Miner. Soc. Petrography of ocean sediments, dustfalls and spark plug porcelains.

Alexander, Dr. C(harles) I(van), Magnolia Petroleum Co., Lake Charles, La. *Paleontology.* Manor, Texas, Aug. 28, 02. B.S., Texas Christian, 24; fellow, 24-26, M.S., 26; fellow, Princeton, 27-28; Ph.D., 28. Asst. geologist, Trinity River Water Surv., 25-26; asst. prof. geol., Texas Christian, 28-33; paleontologist, Magnolia Petrol. Co., 33—A.A.; Paleont. Soc.; Soc. Econ. Paleont. and Miner.; Asn. Petrol. Geol.; Geol. Soc. Micropaleontology and stratigraphy of the Texas Cretaceous; fossil Ostracoda and Foraminifera.

Alexander, Prof. Charles P(aul), Massachusetts State College, Amherst, Mass. *Entomology.* Gloversville, N. Y., Sept. 25, 89. B.S., Cornell, 13; Ph.D., 18. Asst. biol., Cornell, 11-14; instr. nat. hist., 15-17; curator Snow collection, Kansas, 17-19; syst. entomologist, Nat. Hist. Surv., Ill., 19-22; asst. prof. entom., Mass. Col., 22-30; prof., 30-31, Mass. State Col., 31—Summer, special syst. entomologist, Exp. Sta., Maine, 13. A.A.; Entom. Soc. Biology, phylogeny and taxonomy of craneflies; the crane-flies of Baltic amber.

Alexander, D(anie)l Basil W(illiam), Shelter Harbor, R.F.D. 1, Westerly, R. I. *Chemistry.* Ipswich, Eng., Feb. 24, 62. Victoria (Eng), 82. Alcatraz Asphalt Co., 98-01; Barber Asphalt Paving Co., 01-13; chief chemist, Gen. Petrol. Co., 13-16; Barber Asphalt Co., 16-20, for, traveling engineer, 20-25; chem. engineer and proprietor, private lab., 25-27; retired. A.A.; Chem. Eng. Asphalt; road building.

Alexander, Prof. (Edward) Gordon, University of Colorado, Boulder, Colo. *Biology.* Rich Hill, Mo., Aug. 18, 01. A.B., Cent. Col. (Mo.), 23; A.M., Princeton, 25; Ph.D., 31. Asst. prof. biol., Cent. Col. (Mo.), 26-28; visiting prof., Chulalongkorn Univ., Siam, 28-30; assoc. prof., Colorado, 31—Summer, asst. prof., Colorado, 27. A.A.; Soc. Zool.; Entom. Soc. Amer.; Ecol. Soc.; Soc. Ichthyol. and Herp. General ecology; ecology of Protozoa, Orthoptera, birds; fauna and flora of Siam; vertical distribution of life in mountains.

Alexander, E(dward) J(ohnston), New York Botanical Garden, Bronx Park, N. Y. *Botany.* Asheville, N. C., July 31, 01. North Carolina, 19-23. Asst. curator, N. Y. Bot. Garden, 26—South, Appalachian exped., N. Y. Bot. Garden; Rocky Mountain exped. Bot. Soc.; Soc. Plant Taxon; Torrey Bot. Club; South, Appalachian Bot. Club. Taxonomy of flowering plants; phytogeography.

Alexander, Dr. Franz, Institute for Psychoanalysis, 43 E. Ohio St., Chicago, Ill. *Psychoanalysis.* Budapest, Hungary, Jan. 22, 91. B.A., M.D., Budapest, 12. Asst., hygiene inst., Budapest, 13; psychiat. clinic, 18-19; asst. and lecturer, Psychoanalytic Inst., Berlin, 20-29; visiting prof. psychoanalysis, Chicago, 30-31; research project criminal psychol., Judge Baker Foundation, Boston, 31-32; director, Chicago Inst. Psychoanalysis, 32—Sigmund Freud prize, 21. Head bacter, field lab., 18. A.A.; fel. Orthopsychiat. Asn.; Psychiat. Asn.; Cent. Neuropsychiat. Asn.; assoc. Nat. Cmt. Mental Hygiene; fel. Chicago Acad. Criminol.; fel. Inst. Med. Chicago; Soc. Med. Hist. Chicago. Theory and technique of psychoanalysis; psychosomatic interrelations; psychology of criminals.

Alexander, Prof. Harry L(ouis), Washington University School of Medicine, St. Louis, Mo. *Internal medicine*. New York, N. Y., Feb. 16, 87. A.B., Williams Col, 10; M.D., Columbia, 14. *Instr. med.*, med. col., Cornell, 19-24; *assoc. prof.*, sch. med., Washington (St. Louis), 24—Ed., 'Jour. Allergy.' Fel. Am. Med. Ass.; Soc. Clin. Invest.; Soc. Exp. Biol.; Soc. Study Asthma (pres., 29); Am. Physicians. Immunology; bacteriology; anaphylaxis.

Alexander, Prof. H(artley) B(urr), Scripps College, Claremont, Calif. *Philosophy*. Lincoln, Nebr., April 9, 73. A.B., Nebraska, 97; Harrison fellow, Pennsylvania, 98-00; fellow, Columbia, 00-01. Ph.D., 01. *Asst. ed.*, 'New Int. Encyclop.', 'Webster's Dictionaries,' G. and C. Merriam Co., 03-08; *prof. philos.*, Nebraska, 08-27; *Scripps and Claremont Cols.*, 27—Leopold Zunz mem. lecturer, 19; lecturer, Sorbonne, Paris, 25; Sch. Am. Research, Santa Fe, 27—Butler silver medal, 17. *Philos. Asn.* (pres., 19, pres., Pacific div., 29); *Anthrop. Asn.*; hon. mem. Inst. Archit.; West. Philos. Asn. (pres., 17); Southwest. Archeol. Federation (pres., 28-30); Soc. des Américanistes de Paris. Metaphysics; American Indian anthropology.

Alexander, Prof. H(ugh) S(tuart), Macalester College, St. Paul, Minn. *Geology*. Sheldon, Iowa, Dec. 31, 75. A.B., Macalester Col., 90; A.M., Minnesota, 05, Ph.D., 32. *Prof. geol.*, Macalester Col., 06—A.A.; Minn. Acad. Erosion; temperature changes on mantle-rock; impact effect of precipitation.

Alexander, Dr. J(ames) W(adell), 29 Cleveland Lane, Princeton, N. J. **Mathematics*. Seabright, N. J., Sept. 19, 38. B.S., Princeton, 10, A.M., 11, Ph.D., 15; Paris; Bologna. Instr. math., Princeton, 11-12, 15-16; asst. prof., 20-26; assoc. prof., 26-28; *prof.*, 28-33; *Inst. Advanced Study*, 33—Rouse Ball lecturer, Cambridge, 36. Bôcher prize, Am. Math. Soc., 29. Capt., Ordnance Dept., 17-18. Nat. Acad.; A.A.; Math. Soc.; Math. Asn. (v. pres., 34); Philos. Soc. Analysis situs.

Alexander, Jerome, 50 E. 41st St., New York, N. Y. **Chemistry*. New York, N. Y., Dec. 21, 76. B.S., Col. City of N. Y., 96, M.S., 99. Treas. and chief chemist, companies, 96-21; *consulting chemist and engineer*, 21—Chairman colloid cmt, Nat. Research Council, 17-19. Officier de l'Instruction pub. France; chevalier, Légion d'honneur. A.A.; Chem. Soc. (past councilor); Soc. Chem. Indust. (chairman, N. Y. sect., 16-18); Chem. Eng.; Inst. Chem.; Min. and Metal. Eng.; Chemists' Club (past asst. treas., chairman, library cmt); N. Y. Micros. Soc.; Soc. Med. Jurisprudence; Soc. de Chim. indust. (sec'y, Am. sect.). Colloid chemistry; ultramicroscopy; glue; gelatin; starch products; adhesives.

Alexander, Dr. John, University Hospital, Ann Arbor, Mich. *Surgery*. Philadelphia, Pa., Feb. 24, 91. B.S., Pennsylvania, 12, A.M., 13, M.D., 16; certificate, Lyons, 19. *Asst. instr. surg.*, sch. med., Pennsylvania, 19-20; *instr. med.*, Michigan, 20-22, asst. prof., 23-30; *assoc. prof.*, 30-32; *prof.*, 32—Chief surgeon, Mich. State Sanatorium. *Ed. board*, 'Jour. Thoracic Surg.'; 'Int. Abstract of Surg.'; Am. collaborator, 'Archives médico-chirurg. de l'appareil respiratoire,' Paris; 'Revista española de Tuber.' Madrid. Samuel D. Gross prize, Phila. Acad. Surg., 25; Henry Russell award, Michigan, 28. M.C., 17-19; capt., Fel. Col. Surg.; Asn. Thoracic Surg. (pres., 35); Am. Med. Asn.; Tuber. Asn.; Surg. Asn.; Soc. Clin. Surg.; Mich. Med. Soc. (chairman, surg. sect., 32); Mich. Tuber. Ass.; Mich. Trudeau Soc.; hon. mem. Detroit Acad. Surg. Surgery of the chest.

Alexander, Dr. Lee L(inzley), E. I. du Pont de Nemours and Co., Wilmington, Del. *Chemistry*. Bloomington, Ill., Dec. 10, 10. B.S., Ill. Wesleyan, 32; A.M., Illinois, 33, Ph.D., 36. *Research chemist*, Jackson lab, E. I. du Pont de Nemours and Co., 36—*Chem. Soc.* Friedel-Craft reaction.

Alexander, Dr. Leonard J(ay), 830 Quinby Ave., Wooster, Ohio. *Plant pathology*. Council Bluffs, Iowa, April 3, 03. B.S., Louisiana, 26; M.S., Wisconsin, 28; fellow, 29-30, Ph.D., 31. *Asst. plant path.*, Wisconsin, 26-29; *asst. plant pathologist*, Ohio Exp. Sta., 30—A.A. Resistance to leaf-mold and other diseases in the tomato.

Alexander, Prof. L(loyd) E(phraim), Fisk University, Nashville, Tenn. *Embryology*. Salem, Va., Aug. 17, 02. A.B., Michigan, 27, A.M., 28; Ph.D., Rochester, 36. *Instr. biol.*, 36; 30-35; *assoc. prof.*, 36—Production of lenses in chick embryos; capacities of optic tissues of *Gallus domesticus* for induction and regeneration.

Alexander, Prof. L(owell) M(elville), University of Cincinnati, Cincinnati, Ohio. *Physics*. Sparta, Ill., Sept. 25, 91. E.E., Cincinnati, 15, A.M., 17, Ph.D., 25. *Asst. manager*, Royer Wheel Works, 17-20; *instr. physics*, Cincinnati, 20-22, asst. prof., 22-25, *assoc. prof.*, 25—Physical Soc. Magnetic rays; x-ray crystal analysis.

Alexander, Lucy M(aclay), 2801 Adams Mill Road, Washington, D. C. *Food chemistry*. Kishacoquillas Valley, Pa., March 5, 88. A.B., Vassar Col., 12; B.S., Illinois, 24. Teacher, private schs., 13-18; junior chemist, bur. chem. and later bur. agr. econ., U. S. Dept. Agr., 19-22, asst. specialist in foods, food and nutrition div., bur. home econ., 25-28, *assoc. specialist*, 28-29. A.A.; Chem. Soc. Food preparation; experimental cookery of meat.

Alexander, Dr. Lyle T(homas), U. S. Department of Agriculture, Washington, D. C. *Chemistry*. Athens, Texas, Dec. 3, 03. B.S., Arkansas, 28; Ph.D., Maryland, 35. Junior physicist, bur. chem. and soils, U. S. Dept. Agr., 28-30, asst. chemist, 30-36, *assoc. chemist*, 36—Mechanical analysis of soils; soil-forming minerals; soil colloids; organic matter in soils.

Alexander, Prof. M(ajor), 244 Sherbrooke St., Montreal, Que., Can. *Biology*. Quebec, Que., Feb. 2, 92. Licencié, Montreal, 29. *Prof. biol.*, Mt-St-Louis Col., 28—A.A.; Can. Soc. Nat. Hist. Technical botany drawings and illustrations; natural sciences.

Alexander, Dr. P(eter) P(opow), 79 Rockaway Ave., Marblehead, Mass. *Metallurgy*. Russia, Nov. 21, 86. E.E., Liège; Sc.D., Mass. Inst. Tech., 33. Engineer, Thomson research lab, Gen. Elec. Co., Lynn, Mass., 19-34; *consulting research engineer*, Ventures, Ltd. (Can.), 34—Soc. Metals; Min. and Metal. Eng. Electrical engineering and metallurgy; nature of the welding arc; electric welding in hydrogen atmosphere; dissociation of ammonia; preparation of pure chromium; the hydride process.

Alexander, Prof. R(alph) S(amuel), Columbia University, New York, N. Y. *Economics*. Kingman, Kans., Feb. 17, 93. Ph.B., Col. of Wooster, 16; Ph.D., Chicago, 25. Asst. econ., Chicago, 20; *assoc. prof.*, Carnegie Inst. Tech., 20-22; *marketing*, Columbia, 22—Asn. Teachers of Marketing and Advertising. Marketing.

Alexander, Prof. Thomas R(ush), Carnegie Institute of Technology, Pittsburgh, Pa. *Chemistry*. Washington Co., Pa., Feb. 3, 85. A.B., Washington and Jefferson Col., 05, A.M., 06; Ph.D., Pennsylvania, 15. Chemist, Westinghouse Machine Co., 06-07; *instr. chem.*, Pennsylvania, 09-16; *Carnegie Inst. Tech.*, 16-18, asst. prof., 18-25, *assoc. prof.*, 25—A.A.; Chem. Soc. Inorganic chemistry; reaction kinetics.

Alexander, William H(enry), U. S. Weather Bureau, Columbus, Ohio. *Meteorology, Climatology*. Near Cumby, Texas, Jan. 10, 67. A.B., A.M., Virginia, 92; Columbia. Prof. Latin, Decatur Col., 93-95; physics, Henry Col., 95-98; meteorologist and senior meteorologist, U. S. Weather Bur., 98—meteorologist, Md., 10-12; climatologist, Ohio, 20—A.A.; fel. Meteorol. Soc.; fel. Ohio Acad. (pres., 21, sec'y, 23-). Climatological history of Ohio; West Indian hurricanes; thunderstorms in the United States.

Alexander-Jackson, Dr. Eleanor (Gertrude), 44 Morningside Drive, New York, N. Y. *Bacteriology*. New York, N. Y., July 1, 04. A.B., Wellesley Col., 25; A.M., Columbia, 28; Ph.D., N. Y. Univ., 34. *Asst. Mt. Sinai Hosp.*, New York, 26-27, univ. hosp., Michigan, 28-30; *instr. med. bacter.* and immunol. col. med., N. Y. Univ., 34-36; *special research bacteriologist*, State Dept. Health, N. Y., 36—A.A.; Soc. Bact.; Pub. Health Asn. Tuberculosis; developmental morphology and dissociation of tubercle bacilli; improved stain techniques for tubercle bacilli; non-acid-fast forms of tubercle bacilli.

Alexanderson, E(rnst) F(redrik) W(erner), General Electric Co., Schenectady, N. Y. *Electrical engineering*. Uppsala, Sweden, Jan. 25, 78. Lund, Sweden, 96-97; grad., Stockholm Polytech., 00; Tech. Hochschule, Berlin, 00-01. *Consulting engineer*, Gen. Elec. Co. Gold medal, Radio Eng., 19; John Ericsson medal, 28; Order Polonia Restituta, Order of North Star, Sweden. A.A.; Elec. Eng.; Radio Eng. (pres., 21); Royal Acad. Sweden. Electric motors; alternators; physiological tolerance of alternating current strengths; dielectric hysteresis at radio frequencies; magnetic properties of iron; magnetic amplifier; multiple tuned antennae; barrage receiver; simultaneous sending and receiving; transoceanic radio

communication and wave propagation; radio-photography; television; the thyratron motor; eclipse of 1932 observed by radio facsimile.

Alexopoulos, Dr. Constantine J(ohn), Kent State University, Kent, Ohio. *Plant pathology*. Chicago, Ill., March 17, 07. B.S. Illinois, 27, scholar, 27-28, M.S., 28, fellow, 31-32, Ph.D., 32. Asst. bot., Illinois, 29-30, 32-34, instr., 34-35; Kent, 35-36, asst. prof., 36—Phytopath. Soc.; Mycol. Soc.; Ill. Acad.; Ohio Acad. Mycology.

Alford, Samuel, 5915 Gates Ave, St. Louis, Mo. *Food chemistry*. St. Louis, Mo., Sept. 6, 02. B.S. Washington (St. Louis), 23. *Food and drug chemist, food and drug lab, St. Louis sta, food and drug admin, U. S. Dept. Agr.* 23-, in charge food and drug lab, 27—A.A.; Chem. Soc.; Agr. Chem. (assoc.) referee, cereal products, 25-30, egg products, 27-32, gen. referee, eggs and egg products, 29—). Methods of analysis, flour, spices, alimentary pastes, butter, feeds, peanut butter and eggs; chemical composition of cloves, pepper, paprika and eggs.

Alfonsus, Dr. Erwin C(arl), 634 Dayton Ave, St. Paul, Minn. *Apiculture*. Vienna, Austria, May 31, 00. M.V.C. Vienna, 23; B.S. Minnesota, 30; M.S. Wisconsin, 32, Ph.D., 35. Asst. beekeeping, Minnesota, 28-31; instr. entom., Wisconsin, 31-36; *apiculturist, Tanquary Honey Farms*, 36—Bee behavior; dysentery and nutrition of honey-bees; honey chemistry; water metabolism; commercial honey production; stock improvements.

Alford, Prof. L(eon) P(ratt), 9 N. Mountain Ave, Montclair, N. J. *Mechanical engineering*. Simsbury, Conn., Jan. 3, 77. B.S. Worcester Polytech, 96, M.E., 05, D.E., 32. Shop foreman, McKay Metallic Fastening Asn., 96-97; McKay Bigelow Heeling Asn., 97-99; production supt., McKay Shoe Machinery Co., 99-02; mech. engineer, United Shoe Machinery Co., Boston, 02-07; eng. ed., 'Am. Machinist,' 07-11, ed. in chief, 11-17; ed., 'Indust. Management,' 17-20; 'Management Eng., 21-23; 'Mfg. Industries,' 23-28; v. pres., The Ronald Press Co., New York, 28-33; chief engineer, Silk Textile Work Assignment Board, 33-35; asst. engineer in charge tel. investigation, Fed. Communications Cmn., 35-37; prof. admin. eng. and chairman dept. indust. eng., N. Y. Univ., 37—Melville gold medal, 27; Gantt gold medal, 31. Mech. Eng. (v. pres., 20-22); Management Asn. (councilor, 22, 29); Inst. Management (v. pres., 27-29, pres., 29-30); Am. Eng. Council (v. pres., 28-30); Indust. Eng.; Inst. Sci. d'Organisation et de Gestion. Management of manufacturing enterprises; codification of laws of manufacturing management.

Alger, Phillip L(angdon), 1758 Wendell Ave, Schenectady, N. Y. *Electrical engineering*. Washington, D. C., Jan. 27, 94. B.S. St. John's Col. (Md.), 12, A.M., 16; B.S. Mass. Inst. Tech., 15; M.S. Union (N. Y.), 20. Asst. instr. and asst., Mass. Inst. Tech., 16-17; engineer, induction motor and alternating currents, eng. depts., Gen. Elec. Co., 19-29, gen. eng. dept., 29-Lieut. Ordnance Dept., 17-19; capt. O.R.C., 19-31, major, 31-A.A.; fel. Elec. Eng.; Mech. Eng.; Eng. Educ.; Math. Soc. Rotating electrical machinery; ordnance; city manager government.

Algren, Prof. Axel B(ernhardt), 5109 17th Ave, S., Minneapolis, Minn. *Engineering*. Minneapolis, Minn., Oct. 14, 93. B.S. Minnesota, 25; M.S. Research engineer, 27-28; instr. mech. eng., Minnesota, 28-35, asst. prof., 35—, asst. director exp. eng. labs, 28—Eng. Educ.; Heat. and Vent. Eng. (tech. advisory cmt. on heat transmission, 30, sec'y-treas., Minn. chap., 31). Thermal transmission of wall constructions; thermal resistance of air spaces; surface conductances as affected by air velocity, temperature and surface characteristics.

Alicante, Dr. Marcos Mondejar, Bureau of Science, Manila, P. I. *Soils*. Maasin, P. I., April 25, 95. B.S. Oregon State Col., 20, M.S., 21; Ph.D., Illinois, 23. Soil biologist, substa., Moro, Oregon, 20; soil analyst, dept. agron., Illinois, 22-23; *soil biologist, Bur. Science, P. I.*, 24—, *soil technologist*, 34-Chemist, Philippine Sugar Asn., 29—Philippine Tech. Agr. Soc.; Philippine Sci. Soc. (director, 26—). Viability of legume organisms outside of the plant; microbiological properties of the Philippine soil; specific bacteria concerned in the fermentation of Philippine tobacco.

Allicata, Dr. Joseph E(verett), University of Hawaii, Honolulu, Hawaii. *Parasitology*. Italy, Nov. 5, 04. A.B. Grand Island Col., 27; A.M., Northwestern, 28; Ph.D., George Washington, 34. Junior zoologist, zool. div., bur. animal indust,

U. S. Dept. Agr., 28-35, instr. parasit., grad. sch., 35; *parasitologist, Exp. Sta., Hawaii*, 35—Mem., Board Health, Hawaii, 35—Soc. Parasitol.; Helminth. Soc. Wash. Life history of helminths; morphology; taxonomy; parasitic protozoa and spirochaetes; immunity in metazoan parasites.

Allan, Prof. D(enison) Maurice, Hampden-Sydney, Va. *Psychology*. Hull, Eng., Sept. 15, 97. A.B., Hampden-Sydney Col., 16, A.M., 16, Harvard, 22, Ph.D., 26. *Prof. psychol. and philos., Hampden-Sydney Col.*, 22—S. Soc. Philos. and Psychol.; Va. Acad. (chairman, psychol. and educ. sect., 28-30, councilor, 33—, pres., 37). Mind and body; hypnosis.

Allan, Dr. Frank N(athaniel), 605 Commonwealth Ave., Boston, Mass. *Medicine*. Proton, Ont., Can., Dec., 26, 99. M.B., Toronto, 22, fellow, 22-24; B.Sc., 24, fellow, 24-25; M.D., 28; fellow, Minnesota, 25. Demonstrator physiol., Toronto, 23-24; intern, Toronto Gen. Hosp., 24-25; instr., Mayo Foundation, Minnesota, 27-32; assoc., Mayo Clinic, 29-32; *physician, dept. med., Lahey Clinic*, 32—A.A.; Am. Med. Asn.; Col. Physicians; Soc. Clin. Invest.; Soc. Exp. Path.; Am. Study Int. Secretaries; Cent. Soc. Clin. Research. Endocrinology; carbohydrate metabolism; insulin; diabetes; hyperinsulinism.

Allan, Prof. John A(ndrew), University of Alberta, Edmonton, Alta., Can. *Geology*. Aubrey, Que., July 31, 84. B.A., McGill, 07, M.S., 08; Ph.D., Mass. Inst. Tech., 12. Asst. geol., Mass. Inst. Tech., 08-11; *prof. geol. and miner. and head dept., Alberta*, 12—, in charge dept. mining eng., 14-20. Field geologist, Geol. Surv. Can., 06-18; provincial geologist, Alta., 19—Research Council of Alta. Geol. Soc.; fel. Royal Soc. Can.; Can. Inst. Min. and Metal. Mineralogy; petrography; structural geology and physiography of the Canadian Rocky Mountains and foothills belt; oil; gas; coal; experimental ceramics; stratigraphy and sedimentation; the mineral resources of Alberta.

Allanson, H(enry) E(mil), U. S. Department of Agriculture, Washington, D. C. *Agriculture*. Carpenter, Iowa, Sept. 8, 88. George Washington; B.S., Cornell, 17. Asst. plant introducer, office for plant introd., U. S. Dept. Agr., 21, sci. asst., bur. plant indust., 17-21, asst. to chief, 21-27, asst. chief, 27-34, business manager, 34—Genus *Lilium* and *Rhododendron*; bureau administration.

Allard, H(arry) A(rdell), U. S. Department of Agriculture, Washington, D. C. **Botany*. Oxford, Mass., Jan. 28, 80. B.S., North Carolina, 05. *Scientist, bur. plant indust., U. S. Dept. Agr.*, 06—Entom. Soc. Wash. Plant breeding and nutrition; cotton; the distribution of Fowler's toad; musical Orthoptera; mosaic diseases of tobacco; day length and plant growth.

Allard, Dr. Romeo P(anl), Loyola University of Los Angeles, Los Angeles, Calif. *Chemistry*. Franklin, N. H., Nov. 13, 06. B.S., Notre Dame, 31, M.S., 32, Ph.D., 34. *Instr. chem., Loyola (Calif.)*, 35—Chem. Soc. Dipole moments.

Allardyce, Prof. (William) John, King Edward High School, Vancouver, B. C., Can. *Biochemistry*. Winnipeg, Man., Dec. 1, 97. B.A., British Columbia, 19, M.A., 21; Nat. Research Council Can. scholar, McGill, 29-30, Ph.D., 31. Demonstrator chem., British Columbia, 19-21, instr., 21-29; biochem., McGill, 30-31; asst. prof. chem., British Columbia, 31-32, *special lecturer to nurses*, 34—; teacher science, King Edward High Sch., 32—Ultra-violet and visible light and rate of oxine formation; catalytic dehydration of isopropyl alcohol; blood normals for cattle; fish oils as sources of vitamin D; parathyroid hormone; distribution of cholesterol between cells and plasma in anemia and polycythemia.

Allent, Prof. E(dgar) A(lfred), 48 Foxbar Road, Toronto, Ont., Can. *Mechanical engineering*. Birmingham, Eng., June 36, 88. B.Sc., Birmingham, 08, Bowes scholar, 08-10, M.Sc., 09. Asst. engineer, Humphrey Pump Co., London, England, 10-12; manager eng. and testing machine depts., W. and T. Avery, Ltd., Birmingham, England, 13-17; chief inspector materials, Austin Motor Co., 17-21; assoc. prof. mech. eng., Toronto, 22-31, prof., 31—Herbert Ackroyd Stuart prize, Inst. Mech. Eng. Gt. Britain, 30. Mech. Eng.; Heat. and Vent. Eng.; Eng. Inst. Can.; Inst. Mech. Eng. Gt. Britain; assoc. fel. Royal Aeronaut. Soc. Internal combustion; thermodynamics; heating and ventilating; heat transmission; industrial management.

Alle, Prof. W(arder) C(lude), University of Chicago, Chicago, Ill. **Zoology*. Bloomingdale, Ind., June 5, 85. B.S., Earlham Col., 08; M.S., Chicago, 10, Ph.D., 12. Asst. zool., Chicago, 10-12; instr. bot., Illinois, 12-13; zool., Williams Col.,

13-14; asst. prof., Oklahoma, 14-15; prof. biol., Lake Forest Col., 15-21; asst. prof. zool., Chicago, 21-23; assoc. prof., 23-28; prof., 28-, dean col. sciences, 25-27. Lecturer, California, 23. Summers, instr., Marine Biol. Lab., Woods Hole, 14-21, in charge invert. zool., 18-21; prof., Utah, 24, 25. Ed., Physiol. Zool. Trustee, Earlham Col., 25-; Marine Biol. Lab., Woods Hole, 32- A.A.; Soc. Nat.; Soc. Zool. (pres., 18-21, sec'y, 18-24, v. pres., 26, pres., 36); Ecol. Soc. (v. pres., 23, pres., 29); Entom. Soc. Amer. Seasonal succession in ponds; rheotaxis in Isopoda; ecology and behavior of isopods; fish, May-fly nymphs and Woods Hole invertebrates; animals in tropical rain-forest; animal aggregations and mass physiology.

Alleman, Prof. Gellert, Wallingford, Pa. Chemistry. Lit-testown, Pa., July 23, 71. B.S., Pa. Col., 93; Ph.D., Hopkins, 97; Sc.D., Gettysburg Col., 25. Instr. chem., Maine, 97-98; Washington (St. Louis), 98-02; prof., Swarthmore Col., 02-36. A.A.; Chem. Soc.; Electrochem. Soc.; Soc. Chem. Indust.; Franklin Inst. (v. pres., 23-25); Deuts. Chem. Gesell. Diazo-compounds; phenol ethers; electrolysis; occluded gases in ferrous alloys; critical temperature and critical pressure of hydrocarbons; isolation and determination of the physical and chemical properties of eleven new acids obtained by the oxidation of petroleum hydrocarbons; organometallic compounds; colloidal metals.

Allen, Dr. Alexander J(ohn), 660 Parish Road, Swarthmore, Pa. Physics, Biophysics. Glenwood Springs, Colo., Oct. 4, 00. A.B., Colorado, 23; A.M., N. Y. Univ., 26, Ph.D., 28. Instr. physics, N. Y. Univ., 26-28, research assoc., 29; Bartol Research Foundation, 29-30; sch. med., Pennsylvania, 30-35; Biochem. Research Foundation, Franklin Inst., 35- Physical Soc.; Franklin Inst. Nuclear physics; chemical and biological effects of x-rays, rays, neutrons and ultra-violet light; absorption spectra; ultra-violet photo-micrography.

Allen, Prof. Arthur A(ugustus), Cornell University, Ithaca, N. Y. Zoology. Buffalo, N. Y., Dec. 28, 85. A.B., Cornell, 07, A.M., 08, fellow, 08-09, Ph.D., 11. Instr. zool., Cornell, 09-15; asst. prof., ornith., 15-24; prof., 24- In charge, Nat. Grouse Investigation, 25-; chairman research conf., Am. Game Assn., 30, 31. Assoc. ed., 'Bird Lore,' 19-35. Am. Museum Nat. Hist. exped., S. Amer., 12. Outdoor life medal, 24. Fel. Ornith. Union; Soc. Mammal; Wilson Ornith. Club; Cooper Ornith. Club. Ornithology; mammalogy; conservation; life histories of North American birds; diseases and artificial propagation of ruffed grouse; bird behavior.

Allen, A(rthur) W(atts), 1452 Scenic Ave., Berkeley, Calif. Metallurgy, Chemistry. Bickleigh, Devon, Eng., Feb. 22, 79. B.A., Cambridge, 02, M.A., 10. Work in biol., indust., chem., hydrometall. and ore dressing, New Guinea, Australia, Africa, N. and S. Amer., 02-17; asst. ed., 'Eng. and Mining Jour.' 17-18; consulting engineer, Penyon Syndicate and du Pont Nitrate Co., Chile, 18-21; asst. ed., 'Mining and Sci. Press.' 21-22; asst. ed., 'Eng. and Mining Jour.' and 'Chem. and Metal. Eng.' 22-25; consulting engineer, Gibbs and Co., Chile, Argentina, and Europe, 25-27; ed., 'Eng. and Mining Jour.' 27-33; consulting engineer, Idaho, Oregon and Calif., 34-35; Chile, 35; metallurgist, S. Amer. Develop. Co., Ecuador, 35-36; consulting engineer, 36- Min. and Metal. Eng. Industrial chemistry; hydrometallurgy; ore dressing; technology of Chilean nitrate.

Allen, Prof. B(enjamin) M(ills), 909 Michelmorena St., Los Angeles, Calif. **Embryology. Greencastle, Ind., July 4, 77. Ph.D., DePauw, 98; Ph.D., Chicago, 03. Instr. anat., Wisconsin, 03-08; asst. prof., 08-11, zool., 11-13; prof., Kansas, 13-22; assoc. prof. biol., California at Los Angeles, 22-24, prof. zool., 24- A.A.; Soc. Nat.; Soc. Zool.; Soc. Exp. Biol.; Asn. Anat. Embryonic development of ovary and testis of the mammals; anatomy of Hirudo; eye of Bdellostoma; development of retic cords, sex cords and sex cells of Chrysomys; origin of sex-cells; effect of extirpation of thyroid gland and hypophysis of amphibians on bodily growth; influence of glands of internal secretion on growth and differentiation.

Allen, C(alvin) Frank (Francis), 88 Montview St., West Roxbury, Mass. Engineering. Roxbury, Mass., July 10, 51. B.S., Mass. Inst. Tech., 72. Civil engineer, water works and sewerage, 72-78; railroad engineer, 79-85; attorney-at-law, 85-86; from asst. prof. to prof. railroad eng., Mass. Inst. Tech., 87-16; retired. Civil Eng.; Eng. Educ. (sec'y and pres.); Ry. Eng.; hon. mem. New Eng. R. R. Club (pres., 06); hon. mem. Mass. Highway Assn. (pres.); hon. mem. Boston Soc. Civil Eng. (pres., 99). Railroad engineering.

Allen, Dr. Caroline K(athryn), Arnold Arboretum, Jamaica Plain, Mass. Botany. Pawling, N. Y., April 7, 04. A.B., Vassar Col., 26; M.S., Washington (St. Louis), 29, Ph.D., 32. Teaching fellow, Washington (St. Louis), 28-29; fellow, Mo. Bot. Garden, 29-32; herbarium asst., Arnold Arboretum, Harvard, 26-28, 32- Revision of the genus Halenia; Lauraceae.

Allen, Prof. Charles E(lmer), 2014 Chamberlin Ave., Madison, Wis. *Botany. Horicon, Wis., Oct. 4, 72. B.S., Wisconsin, 99, Ph.D., 04. Instr. bot., Wisconsin, 01-04; asst. prof., 04-07; assoc. prof., 07-09; prof., 09- Asst., Carnegie Institution, 04-05. Ed. in chief, 'Am. Jour. Bot.' 18-26. Nat. Research Council, 25-31; chairman div. biol. and agr., 29-30. Nat. Acad. A.A. (v. pres., G., 28); Soc. Nat. (pres., 37); Microsc. Soc.; Bot. Soc. (pres., 21); Genetics Soc.; Genetic Assn.; Philos. Soc.; Wis. Acad. (pres., 30-33). Middle lamella in thickened cell walls; spindle formation in pollen mother-cells of larch; nuclear division and chromosome reduction in pollen mother-cells of lily; germination and chromosome reduction in Coleochaete; spermatogenesis in mosses; inheritance in Sphaerocarpus; cytology of Sphaerocarpus.

Allen, Prof. Charles F(rancis) H(itchock), Eastman Kodak Co., Rochester, N. Y. Organic chemistry. Milford, N. H., Aug. 12, 95. A.B., Boston, 19, A.M., 20; A.M., Ph.D., Harvard, 24; D.Sc., McGill, 37. Teaching fellow chem., Boston, 19-20; asst., 20-21; instr., Tufts Col., 24-29; asst. prof., McGill, 29-37; asst. supt. in charge research in synthetic org. chem., Eastman Kodak Co., 37- Sec'y, board editors, 'Org. Syntheses,' 29-37, ed. board, 37- Chem. Soc.; assoc. mem. Soc. Chem. Indust. Delta ketonic nitriles; diacylstyrenes; vinyl phenyl ketone; gamma ketonic esters; carbonyl-bridge compounds; polynuclear systems.

Allen, Prof. Charles M(etcalf), Worcester Polytechnic Institute, Worcester, Mass. Hydraulic engineering. Walpole, Mass., Dec. 12, 71. B.S., Worcester Polytech., 94, M.S., 99, hon. D.E., 29. Instr. mech. eng., Worcester Polytech., 94-02; asst. prof. exp. eng., 02-06; prof., 06-09, hydraulic eng., 09- A.A.; Mech. Eng. (past v. pres.); Eng. Educ.; Civil Eng.; Boston Soc. Civil Eng. (past pres.). Absorption dynamometers; application of the steam-engine indicator to rowing; current meter rating stations; water-wheel testing and flow recorders; absorption dynamometers of large powers; large gears; rope and belt drivers; water measurement; hydraulic model tests; gear-testing apparatus.

Allen, Dr. Charles R(icketson), San Antonio, Texas. Chemistry, Education, Physics. New Bedford, Mass., Aug. 6, 62. B.S., Mass. Inst. Tech., 85; A.M., Harvard, 02; hon. Sc.D., Stout Inst., 27. Senior teacher, high sch., Mass., 86-09; director, New Bedford Indust. Sch., 09-11; agent, Board Educ., Mass., 11-17; Emergency Fleet Corp., 17-18; special agent, Fed. Board for Vocational Educ., 18-24, educ. consultant, 24-34; retired. Asst. gen. chem., Mass. Inst. Tech., 86; private asst. to Prof. Wolcott Gibbs, Harvard, 86. Assoc. ed., 'Vocational Educ. Magazine,' 23-25. Management Assn. Nitrogen in sewage; dissociation of acetylene; industrial relations; vocational education.

Allen, Prof. Chauncey Newell, Hanover, N. H. Psychology. New York, N. Y., Aug. 15, 00. B.S., Dartmouth Col., 24, M.S., 27; Ph.D., Columbia, 31. Direct-by-mail advertiser, Am. Book Co., New York, 24-25; instr. psychol., Dartmouth Col., 25-30; Columbia, 30-31; asst. prof., Dartmouth Col., 31- Lecturer, Mary Hitchcock Hosp., Hanover, N. H. Psychol. Assn. Child and abnormal psychology; sex differences.

Allen, C(hester) H(armon), 3735 Woodburn Ave., Cincinnati, Ohio. Chemistry. Grand Rapids, Mich., 89. A.B., Lawrence Col., 12; A.M., Illinois, 14. Research worker, Rockefeller Inst., 14-16; research and mfg. control, chem. works, Ault and Viborg Co., Cincinnati, 16-29; investigator and consultant, Howard Ecker Chem. Labs., 29-32; commercial research and mfg., Hilton-Davis Chem. Co., 32- Chem. Soc. (chairman, Cincinnati sect., 35, trustee, 36-). Natural and synthetic resin varnishes and printing ink vehicles; commercial organic chemicals; synthesis and oxidation of branched chain fatty acids; preparation, properties and uses of natural resin varnishes.

Allen, Dr. Clyve (Charles), 53rd and Horton Sts., Emeryville, Calif. Organic chemistry. Los Angeles, Calif. B.S., California, 27, M.S., 29, Ph.D., 30. Teaching fellow chem., California, 28-30; research chemist, Shell Develop. Co., Emeryville,

- Calif.*, 30—Physical properties of solutions; correlation of optical and electrical properties of the nitrogen atom in organic compounds.
- Allen, Dr. Doris Twitchell**, Magnolia Ave, Glendale, Ohio. *Psychology*. Old Town, Maine, Oct. 8, 01. A.B., Maine, 23, A.M., 26; Ph.D., Michigan, 30. Teacher, high sch., Maine, 23-24; instr. educ., Maine, 23-25; asst. dept. educ. investigations, Michigan, 26-31; research, Berlin, 31-32; instr. and director child psychol. and educ. field lab., Child Educ. Foundation, New York, 32-35; psychologist, *Children's Hosp., Cincinnati*, 36—Summers, Maine Biol. Sta., Bar Harbor, 24-26; Colorado, 27; Munich, 31; director, Out-of-Door Sch., 34, 35. Mem., Child Educ. Foundation, 34; A.A.; assoc. Psychol. Assn.; Child Study Assn.; Genetic Assn.; Nat. Assn. Nursery Educ.; Int. Council for Exceptional Children (membership cmt, 37). Biological survey; tropic reactions; higher thought processes; topological and vector psychology.
- Allen, Prof. Edgar**, Yale University School of Medicine, New Haven, Conn. *"Anatomy"*. Canon City, Colo., May 2, 92. Ph.B. Brown, 15, A.M., 16, Ph.D., 21; A.M., Yale, 33, Sc.D., 36. Instr. and assoc. anat. sch. med., Washington (St. Louis), 19-23; prof., Missouri, 23-33; dean med. and director univ. hosp., 30-33; prof., anat. and chairman dept. sch. med., Yale, 33-A.A.; Am. Anat. (v. pres., 31); Am. Med. Assn.; Soc. Zool.; Assn. Study Int. Secretions. Anatomy and physiology of reproduction.
- Allen, Dr. Edward R. (iley)**, Krebs Pigment and Color Corp., 256 Vanderpool St., Newark, N. J. *Chemistry*. Pana, Ill., July 28, 84. B.S., Illinois, 06; Ph.D., Cornell, 13. Asst. org. chem., Cornell, 11-12; assoc. soil biol., Ohio Exp. Sta., 13-15; in charge soil technol., 15-17; assoc. biochem., Washington (St. Louis), 17-19; org. chemist, dye works, E. I. du Pont de Nemours and Co., 19-23; director pigment research, Newark plant, 23-29; tech. director pigment colors, Grasselli Chem. Co., 29-31; *Krebs Pigment and Color Corp.*, 31—Visiting investigator, Mo. Bot. Garden, 17-19. Chem. Soc. Organic and biological chemistry; dyes, lakes and pigments.
- Allen, Prof. Edward S. (witzer)**, Iowa State College, Ames, Iowa. *Mathematics*. Kansas City, Mo., Dec. 12, 87. A.B., Harvard, 09, A.M., 19, Ph.D., 14; Rome, 11-13; Göttingen, 12; Berlin, 31-32. Instr. math., Dartmouth Col., 13-14; Brown, 14-15; Michigan, 15-19; asst. prof., West Virginia, 19-21; assoc. prof., Iowa State Col., 21—Math. Soc.; Iowa Acad.; Deuts. Math. Verein; Circolo Mat. di Palermo. Algebraic geometry; probability.
- Allen, Prof. Edwin B. (rown)**, 4 Sheldon Ave, Troy, N. Y. *Mathematics*. Westerly, R. I., Nov. 3, 98. E.E., Rensselaer Polytech., 20, M.S., 30, Ph.D., 34; A.M., Harvard, 34. Instr. math. and civil eng., Rensselaer Polytech., 20-26; asst. prof. math., 26-34; prof. math. and astron. and head dept., 34—Math. Soc.; Math. Assn.; Astron. Soc.; Oriental Soc. Pure and applied mathematics.
- Allen, Prof. Elbert F. (rank)**, 519 Lincoln St., Stillwater, Okla. *Mathematics*. Cloverdale, Ind., Jan. 21, 90. A.B., Ind. State Nor. Sch., 15; A.M., Missouri, 21, Ph.D., 23. Pub. sch., Ind., 09-19; asst. prof. math., Missouri, 19-28; prof., Ky. State Teachers Col., Morehead, 28-29; assoc. prof., Okla. Agr. and Mech. Col., 29-36; prof., 36—Math. Assn. Analysis; contact transformations.
- Allen, Dr. Ena A. (ilda)**, U. S. Department of Agriculture, Washington, D. C. *Zoology*. San Marcos, Texas, Nov. 12, 75. A.B., Texas, 19; A.M., California, 25, Ph.D., 28. Head dept. biol., N. Texas Agr. Col., 19-21, 22-23; tutor bot., Texas, 21-22; teaching fellow zool., California, 23-24, asst., 27-29; assoc. zoologist, zool. dir., bur. animal indust., U. S. Dept. Agr., 29—A.A.; Soc. Parasitol.; Micro. Soc.; Bot. Soc.; Soc. Trop. Med.; Helminth. Soc. Wash. Protozoology; parasitic Protozoa; intestinal Protozoa of man; parasitic Protozoa of poultry and wild birds.
- Allen, Esther C. (ampbell)**, Scripps Institution of Oceanography, La Jolla, Calif. *Chemistry, Bacteriology*. Tecumseh, Okla., March 28, 05. A.B., Pomona Col., 26; M.S., California, 32. Assoc. zool., Northwestern, 28-30; private research, Scripps Institution, California, 32—A.A.; Micro. Soc. Chemistry of sea water; marine bacteriology.
- Allen, Ethel K. (ullmann) (Mrs. Oscar N. elson) (Allen)**, University of Hawaii, Honolulu, Hawaii. *Bacteriology*. Milwaukee, Wis., July 13, 06. A.B., Wisconsin, 28, Herman Fraesch fellow, 28-30, M.S., 30. Collaborator bact. and histol., *Exp. Sta., Hawaii*, 32—Summer, tech. asst., Jacques Loeb lab., Hopkins Marine Sta., Stanford, 29. Fermentation of native tropical foods; legume bacteria; histological technique.
- Allen, Dr. Eugene T. (homas)**, 1862 Mintwood Place, Washington, D. C. *"Chemistry"*. Athol, Mass., April 2, 64. A.B., Amherst Col., 87; Ph.D., Hopkins, 92; Harvard, 93-95. Assoc. chem., Woman's Col. of Baltimore, 90-91; acting prof., Colorado, 92-93; prof., Mo. Sch. Mines, 95-01; chem. geologist, U. S. Geol. Surv., 00-06; research chemist, geophys. lab., Carnegie Institution, 07-32, research assoc., 32-33. Summers, instr., Harvard, 93-95. Nat. Acad. Geol. Soc. Geochemistry; volcanology.
- Allen, Prof. E. (zra)**, New York Medical College and Flower Hospital, New York, N. Y. *Zoology*. Coudersport, Pa., May 8, 70. A.B., Bucknell, 95, Sc.D., 22; fellow, Clark, 00-01; Chicago, 05; Ph.D., Pennsylvania, 14. Teacher science, Perkiomen Sem., 96-00; prof. biol., Mont. State Nor. Col., 03-07; Phila. Sch. Pedag., 07-18; Ursinus Col., 19-27; assoc. ed., 'Biol. Abstracts,' 27-28; assoc. prof. histol. and embryol., N. Y. Med. Col., 28—Investigator, Wistar Inst., 10-18; hon. investigator, Pennsylvania, 15-19; research assoc., Carnegie Institution, 26-27. Educ. adviser, U.S.A., 19, lecturer, A.E.F. Univ. Beaufort, 19. A.A.; Soc. Nat. Soc. Zool.; Am. Anat.; Soc. Exp. Biol. Cytology; mammalian nerve and germ cells; cytological methods; embryology of the mouse.
- Allen, Dr. Florence E. (liza)**, 219 Lathrop St., Madison, Wis. *Mathematics*. Horicon, Wis., Oct. 4, 76. B.S., Wisconsin, 00, M.S., 01, Ph.D., 07. Instr. math., Wisconsin, 01—Math. Soc.; Math. Assn. Cyclic involutions of third order; closure of the tangential process on the rational plane cubic.
- Allen, Francis H. (enry)**, 215 LeGrange St., West Roxbury, Mass. *Ornithology*. Jamaica Plain, Mass., Aug. 3, 66. Grad. Roxbury Latin Sch., 84. Ed. staff, Houghton Mifflin Co., 94-34. A.A.; Ornith. Union; Nuttall Ornith. Club (v. pres.); Northeast. Bird Banding Assn. (councilor). Evolutionary problems; bird-song; habits of birds.
- Allen, Prof. Frank**, University of Manitoba, Winnipeg, Man. Can. *Biophysics*. Meductic, N. B., Feb. 6, 74. B.A., New Brunswick, 95, M.A., 97; A.M., Cornell, 00, fellow, 00-01, Ph.D., 02; LL.D., Manitoba, 24. Teacher, high sch., N. B., Can., 95-99; instr. physics, Cornell, 02-04; prof., Manitoba, 04—Optical Soc.; fel. Royal Soc. Can. (pres., sect. physics and math., 28). Color and color vision; sound, touch and taste sensations; physiological optics; liquid air production; temperature; muscles; glands.
- Allen, Prof. Frank W. (isdom)**, College of Agriculture, University of California, Davis, Calif. *Horticulture*. Columbia, Mo., July 18, 87. B.S.A., Missouri, 10; M.S. Iowa State Col., 13. Instr. hort., Iowa State Col., 10-13; State Col. Wash., 13-14; asst. horticulturist, Exp. Sta., 14-17; bur. markets, U. S. Dept. Agr., 17-20; asst. prof. pomol. col. agr., California, 20-29; assoc. pomologist, 29—Soc. Hort. Sci. Pomology; fruit handling, storage and transportation; optimum storage humidity.
- Allen, Dr. Frank Worthington**, 1650 Scenic Ave, Berkeley, Calif. *Biochemistry*. Harbor Beach, Mich., Sept. 3, 03. California, 24-28, Ph.D., 32; A.B., Stanford, 29. Instr. biochem. med. sch., California, 33—Chemistry and metabolism of nucleic acid and purine derivatives.
- Allen, Dr. Fred J. (ohn)**, 118 E. Stadium Ave, West Lafayette, Ind. *Chemistry*. Elgin, Oregon, Nov. 21, 94. B.S., Oregon State Col., 17; M.S. Purdue, 21, Ph.D., 30. Assoc. chem., Purdue, 17-18, 20-21; instr., Oregon State Col., 19-20, 21-22; Purdue, 22—A.A.; Chem. Soc.; Ind. Acad. Inorganic and physical chemistry; rare gases; purification and properties of krypton and xenon.
- Allen, Prof. Fred W. (illiam)**, 222 N. Amhurst, Albuquerque, N. Mex. *Zoology*. Kansas City, Kans., Feb. 27, 02. A.B., Kansas, 26, A.M., 27, Ph.D., 33. Assoc. prof. biol., New Mexico, 29-36; assoc. prof., 36—Soc. Parasitol.; Kans. Acad.; N. Mex. Acad. Parasitology; immunity to parasitic infections; fish culture in conservancy ditches; distribution of human blood groups and inheritance of agglutinogens in Indians; temperature effect on antibody formation in cold-blooded animals; fish culture in conservancy ditches.
- Allen, Dr. Frederick Madison**, 1031 Fifth Ave, New York, N. Y. *"Medicine"*. Des Moines, Iowa, March 16, 79. A.B.,

- Calif.*, 30— Physical properties of solutions; correlation of optical and electrical properties of the nitrogen atom in organic compounds.
- Allen, Dr. Doris Twitchell**, Magnolia Ave, Glendale, Ohio. *Psychology*. Old Town, Maine, Oct. 8, 01. A.B., Maint., 23, A.M., 26; Ph.D., Michigan, 30. Teacher, high sch., Maine, 23–24; instr. educ., Maine, 23–25; asst. dept. educ. investigations, Michigan, 26–31; research, Berlin, 31–32; instr. and director child psychol. and educ. field lab, Child Educ. Foundation, New York, 32–35; *psychologist, Children's Hosp., Cincinnati*, 36— Summers, Maine Biol. Sta., Bar Harbor, 24–26; Colorado, 27; Munich, 31; director, Out-of-Door Sch., 34, 35. Mem., Child Educ. Foundation. A.A.; assoc. Psychol. Asn.; Child Study Asn.; Genetic Asn.; Nat. Asn. Nursery Educ.; Int. Council for Exceptional Children (membership cmt., 37). Biological survey; tropic reactions; higher thought processes; topological and vector psychology.
- Allen, Prof. Edgar**, Yale University School of Medicine, New Haven, Conn. ^{**}*Anatomy*. Canon City, Colo., May 2, 92. Ph.B., Brown, 15, A.M., 16, Ph.D., 21; A.M., Yale, 33, Sc.D., 36. Instr. and assoc. anat. sch. med., Washington (St. Louis), 19–23; prof., Missouri, 23–33; dean med. and director univ. hosp., 30–33; prof. anat. and chairman dept. sch. med., Yale, 33–A.A.; Asn. Anat. (v. pres., 31); Am. Med. Asn.; Soc. Zool.; Asn. Study Int. Secretions. Anatomy and physiology of reproduction.
- Allen, Dr. E(dward) R(iley)**, Krebs Pigment and Color Corp., 256 Vanderpool St., Newark, N. J. *Chemistry*. Pana, Ill., July 28, 84. B.S., Illinois, 06; Ph.D., Cornell, 13. Asst. org. chem., Cornell, 11–12; assoc. soil biol., Ohio Exp. Sta., 13–15, in charge soil technol., 15–17; assoc. biochem., Washington (St. Louis), 17–19; org. chemist, dye works, E. I. du Pont de Nemours and Co., 19–23; director pigment research, Newark plant, 23–29; tech. director pigment colors, Grasselli Chem. Co., 29–31; *Krebs Pigment and Color Corp.*, 31— Visiting investigator, Mo. Bot. Garden, 17–19. Chem. Soc. Organic and biological chemistry; dyes, lakes and pigments.
- Allen, Prof. Edward S(witzer)**, Iowa State College, Ames, Iowa. *Mathematics*. Kansas City, Mo., Dec. 12, 87. A.B., Harvard, 09, A.M., 19, Ph.D., 14; Rome, 11–13; Göttingen, 12; Berlin, 31–32. Instr. math., Dartmouth Col., 13–14; Brown, 14–15; Michigan, 15–19; asst. prof., West Virginia, 19–21; assoc. prof., Iowa State Col., 21— Math. Soc.; Iowa Acad.; Deuts. Math. Verein; Circolo Mat. di Palermo. Algebraic geometry; probability.
- Allen, Prof. Edwin B(rown)**, 4 Sheldon Ave, Troy, N. Y. *Mathematics*. Westerly, R. I., Nov. 3, 98. E.E., Rensselaer Polytech., 20, M.S., 30, Ph.D., 34; A.M., Harvard, 34. Instr. math. and civil eng., Rensselaer Polytech., 20–26; asst. prof. math., 26–34; prof. math. and astron. and head dept., 34— Math. Soc.; Math. Asn.; Astron. Soc.; Oriental Soc. Pure and applied mathematics.
- Allen, Prof. E(lbert) F(rank)**, 519 Lincoln St., Stillwater, Okla. *Mathematics*. Cloverdale, Ind., Jan. 21, 90. A.B., Ind. State Nor. Sch., 15; A.M., Missouri, 21, Ph.D., 23. Pub. schs., Ind., 09–19; asst. prof. math., Missouri, 19–28; prof., Ky. State Teachers Col., Morehead, 28–29; assoc. prof., Okla. Agr. and Mech. Col., 29–36, prof., 36— Math. Asn. Analysis; contact transformations.
- Allen, Dr. Ena A(lida)**, U. S. Department of Agriculture, Washington, D. C. *Zoology*. San Marcos, Texas, Nov. 12, 75. A.B., Texas, 19; A.M., California, 25, Ph.D., 28. Head dept. biol., N. Texas Agr. Col., 19–21, 22–23; tutor hot, Texas, 21–22; teaching fellow zool., California, 23–24, asst., 27–29; assoc. zoologist, zool. div., bur. animal indust., U. S. Dept. Agr., 29— A.A.; Soc. Parasitol.; Micros. Soc.; Bot. Soc.; Soc. Trop. Med.; Helminth. Soc. Wash. Protozoology; parasitic Protozoa; intestinal Protozoa of man; parasitic Protozoa of poultry and wild birds.
- Allen, Esther C(ampbell)**, Scripps Institution of Oceanography, La Jolla, Calif. *Chemistry, Bacteriology*. Tecumseh, Okla., March 28, 05. A.B., Pomona Col., 26; M.S., California, 32. Asst. zool., Northwestern, 28–30; private research, Scripps Institution, California, 32— A.A.; Micros. Soc. Chemistry of sea water; marine bacteriology.
- Allen, Ethel K(ullmann) (Mrs. Oscar N(elson) Allen)**, University of Hawaii, Honolulu, Hawaii. *Bacteriology*. Milwaukee, Wis., July 13, 06. A.B., Wisconsin, 28, Herman Frasch fellow, 28–30, M.S., 30. *Collaborator bact. and histol., Exp. Sta., Hawaii*, 32— Summer, tech. asst., Jacques Loeb lab, Hopkins Marine Sta., Stanford, 29. Fermentation of native tropical foods; legume bacteria; histological technique.
- Allen, Dr. E(ugene) T(homas)**, 1862 Mintwood Place, Washington, D. C. ^{**}*Chemistry*. Athol, Mass., April 2, 64. A.B., Amherst Col., 87; Ph.D., Hopkins, 92; Harvard, 93–95. Assoc. chem., Woman's Col. of Baltimore, 90–91; acting prof., Colorado, 92–93; prof., Mo. Sch. Mines, 95–01; chem. geologist, U. S. Geol. Surv., 00–06; research chemist, geophys. lab., Carnegie Institution, 07–32, research assoc., 32–33. Summers, Colorado, 19–21; research assoc., 33–34. Director, Out-of-Door Sch., 34, 35. Mem., Child Educ. Foundation. A.A.; assoc. Psychol. Asn.; Child Study Asn.; Genetic Asn.; Nat. Asn. Nursery Educ.; Int. Council for Exceptional Children (membership cmt., 37). Biological survey; tropic reactions; higher thought processes; topological and vector psychology.
- Allen, Prof. E(zra)**, New York Medical College and Flower Hospital, New York, N. Y. *Zoology*. Connersport, Pa., May 8, 70. A.B., Bucknell, 95, Sc.D., 22; fellow, Clark, 00–01; Chicago, 05, Ph.D., Pennsylvania, 14. Teacher science, Perkiomen Sem., 96–00; prof. biol., Mont. State Nor. Col., 03–07; Phila. Sch. Pedag., 07–18; Ursinus Col., 19–27; assoc. ed., Biol. Abstracts, 27–28; assoc. prof. *histol. and embryol.*, N. Y. Med. Col., 28— Investigator, Wistar Inst., 10–18; hon. investigator, Pennsylvania, 15–19; research assoc., Carnegie Institution, 26–27. Educ. adviser, U.S.A., 19, lecturer, A.E.F. Univ. Beaune, 19. A.A.; Soc. Nat.; Soc. Zool.; Asn. Anat.; Soc. Exp. Biol. Cytology; mammalian nerve and germ cells; cytological methods; embryology of the mouse.
- Allen, Dr. F(lorence) E(liza)**, 219 Lathrop St., Madison, Wis. *Mathematics*. Horicon, Wis., Oct. 4, 76. B.S., Wisconsin, 00, 01, Ph.D., 07. *Instr. math., Wisconsin*, 01— Math. Soc.; Math. Asn. Cyclic involutions of third order; closure of the tangential process on the rational plane cubic.
- Allen, Francis H(enry)**, 215 LaGrange St., West Roxbury, Mass. *Ornithology*. Jamaica Plain, Mass., Aug. 3, 66. Grad. Roxbury Latin Sch., 84. Ed. staff, Houghton Mifflin Co., 94–34. A.A.; Ornith. Union; Nuttall Ornith. Club (v. pres.); Northeast. Bird Banding Asn. (councilor). Evolutionary problems; bird-song; habits of birds.
- Allen, Prof. Frank**, University of Manitoba, Winnipeg, Man. Can. *Biophysics*. Meductic, N. B., Feb. 6, 74. B.A., New Brunswick, 95, M.A., 97; A.M., Cornell, 00, fellow, 00–01, Ph.D., 02; LL.D., Manitoba, 24. Teacher, high schs., N. B., Can., 95–99; instr. physics, Cornell, 02–04; prof., Manitoba, 04— Optical Soc.; fel. Royal Soc. Can. (pres., sect. physics and math., 28). Color and color vision; sound, touch and taste sensations; physiological optics; liquid air production; temperature; muscles; glands.
- Allen, Prof. F(rank) W(isdom)**, College of Agriculture, University of California, Davis, Calif. *Horticulture*. Columbia, Mo., July 18, 87. B.S.A., Missouri, 10; M.S., Iowa State Col., 13. Instr. hort., Iowa State Col., 10–13; State Col. Wash., 13–14, asst. horticulturist, Exp. Sta., 14–17; bur. markets, U. S. Dept. Agr., 17–20; asst. prof. pomol., col. agr., California, 20–29; assoc. pomologist, 29— Soc. Hort. Sci. Pomology; fruit handling, storage and transportation; optimum storage humidity.
- Allen, Dr. Frank Worthington**, 1650 Scenic Ave, Berkeley, Calif. *Biochemistry*. Harbor Beach, Mich., Sept. 3, 03. California, 24–28, Ph.D., 32; A.B., Stanford, 29. *Instr. biochem. med. sch., California*, 33— Chemistry and metabolism of nucleic acid and purine derivatives.
- Allen, Dr. F(red) J(ohn)**, 118 E. Stadium Ave, West Lafayette, Ind. *Chemistry*. Elgin, Oregon, Nov. 21, 94. B.S., Oregon State Col., 17; M.S., Purdue, 21, Ph.D., 30. Asst. chem., Purdue, 17–18, 20–21; instr., Oregon State Col., 19–20, 21–22; Purdue, 22— A.A.; Chem. Soc.; Ind. Acad. Inorganic and physical chemistry; rare gases; purification and properties of krypton and xenon.
- Allen, Prof. F(red) W(illiam)**, 222 N. Amhurst, Albuquerque, N. Mex. *Zoology*. Kansas City, Kans., Feb. 27, 02. A.B., Kansas, 26, A.M., 27, Ph.D., 33. Asst. prof. biol., New Mexico, 29–36; assoc. prof., 36— Soc. Parasitol.; Kans. Acad. N. Mex. Acad. Parasitology; immunity to parasitic infections; fish culture in conservancy ditches; distribution of human blood groups and inheritance of agglutinogens in Indians; temperature effect on antibody formation in cold-blooded animals; fish culture in conservancy ditches.
- Allen, Dr. Frederick Madison**, 1031 Fifth Ave, New York, N. Y. ^{**}*Medicine*. Des Moines, Iowa, March 16, 79. A.B.,

California, 02, M.D. 07. Fellow, Harvard Med. Sch, 09-12; assoc. med., Rockefeller Inst, 13-18; practising physician, 19-20; director, Physiat. Inst, Morristown, N. J., 20-33; prof. Internal med., N. Y. Polyclinic Hosp. and Med. Sch. Lecturer, Harvey Soc, 16. A.A; Am. Med. Assn; Am. Physicians; Soc. Exp. Path; Physiol. Soc; Harvey Soc; N. Y. Acad. Med; Pan-Am. Med. Assn. Diabetes; nephritis; metabolism.

Allen, Dr. Glover M(orrison), 25 Garden St, Cambridge, Mass. "Zoology." Walpole, N. H. Feb. 8, 79. A.B, Harvard, 01; A.M, 03; Ph.D, 04. Librarian, Boston Soc. Nat. Hist, 01-07; curator mammals, Harvard, 07-; assoc. prof, 28- Lecturer, Harvard, 24-28. A.A; Soc. Zool; Soc. Mammal. (pres, 27-29); fel. Ornith. Union; Boston Soc. Nat. Hist. (sec'y, 01, v. pres, 30); Nuttall Ornith. Club (pres, 19). Systematic zoology.

Allen, Dr. Harold D(waine), 3415 Ninth St, Port Arthur, Texas. Chemical engineering. Allerton, Ill, Jan. 31, 06. B.S, Ill. Wesleyan, 28; M.S, Iowa, 29; Ph.D, Cornell, 32. Skelly Oil Co, Eldorado, Kan, 29, 32-33; chem. engineer, Texas Co, 33- Chem. Soc. Petroleum refining.

Allen, Dr. Harry W(hills), U. S. Department of Agriculture, Moorestown, N. J. Entomology. Pelham, Mass, Aug. 92. B.S, Mass. Col, 13; M.S, Miss. Agr. and Mech. Col, 22; Ph.D, Ohio State, 26. Sci. asst, bur. entom., U. S. Dept. Agr, 13-17, 19-20; bacteriologist, U. S. Pub. Health Service, 19; from instr. to assoc. prof. entom., Miss. Agr. and Mech. Col, 20-26; assoc. entomologist, Exp. Sta, 23-26; assoc. entomologist and later entomologist, bur. entom. and plant quarantine, U. S. Dept. Agr, 26- U. S. A., 18-19. Entom. Soc. Amer; Asn. Econ. Entom.; Entom. Soc. Wash. Biological control of insects; Tachinidae; Tiphidae.

Allen, Henry B(utler), Franklin Institute, Philadelphia, Pa. Metallurgy. Greenfield, Mass, July 20, 87. Amherst Col, 09; M.E, Columbia, 11. U. S. examiner iron and steel, Port of New York, 12-13; metal. engineer, Henry Disston and Sons, Inc, 13-17, 22-35; v. pres, Dodge Steel Co, 20-22; director museum and sec'y, Franklin Inst, 35-, chairman cmt. on science and arts, 30-31; manager, 32-, chairman museum cmt, 32- Capt, Ordnance Dept, 17-19. The metallurgy of steel.

Allen, Mrs. Howard Nelson, Jr. (Dr. Dorothy Sawyer) Francis, Memorial Hospital, 2 W. 10th St, New York, N. Y. Biophysics. Fitchburg, Mass, Oct. 14, 06. A.B, Radcliffe Col, 28; M.S, Washington (St. Louis), 30; Ph.D, Columbia, 34. Asst. bot, Washington (St. Louis), 29-30; ass't, Mem. Hosp, 28-29, 30-35, ass't. biophysicist, 35- Biological effects of radiations.

Allen, Dr. Ivey, Jr. 230 Grove St, Bloomfield, N. J. Chemistry. Louisburg, N. C, April 29, 06. A.B, Duke, 26, Ph.D, 29; Freiburg, 33-34. Chemist, Bakelite Corp, 29-33, 34- Chem. Soc. Nitrogen bases; phenolic condensation products; polymeric compounds of high molecular weight.

Allen, Prof. John Stanley, 1441 Drummond St, Montreal, Que, Can. Physical and organic chemistry. Montreal, Que, Nov. 19, 06. B.A, British Columbia, 27, M.A, 29; Nat. Research Council Can. bursar, McGill, 29-30, student, 30-31; Ph.D, 32. Teacher science, 27-29; instr. chem, McGill, 31-32; prof. nat. science, Sir George Williams Col, 32- Chem. Soc; Soc. Chem. Indust; Can. Chem. Assn; Oil; polymerization; dipolar moments and organic structure.

Allen, Dr. John Stanhope Valentine, Bethany College, Bethany, W. Va. Physics. Painesville, Ohio, Feb. 14, 06. B.E, Ohio State, 28, Tau Beta Pi fellow, 29-30. M.S, 30. Charles A. Coffin fellow, 30-31, univ. fellow, 31-32. Ph.D, 34. Instr. physics and math, Bethany Col. (W. Va), 33-36, ass't prof, 37- Spectroscopy.

Allen, Dr. John Stuart, 23 Madison St, Hamilton, N. Y. Astronomy. Pendleton, Ind, May 13, 07. A.B, Earlham Col, 28; A.M, Minnesota, 29; Ph.D, N. Y. Univ, 36. Asst. astron, Minnesota, 28-29; instr, 30; Colgate, 30- A.A; Astron. Soc; Royal Astron. Soc. Can; Soc. astron. de France. Binary star orbits.

Allen, Prof. Joseph, 9 Myrtle St, White Plains, N. Y. Mathematics. New Bedford, Mass, March 21, 70. A.B, A.M, Harvard, 92, 92-94. Instr. math, Cornell, 94-97; assoc. prof, Col. City of N. Y, 97- A.A; Math. Soc; Math. Assn. Analytical geometry.

Allen, Prof. Leah Brown, Hood College, Frederick, Md. Astronomy. Providence, R. I, Nov. 6, 84. A.B, Brown, 07; A.M, Wellesley Col, 12. Computer, Lick Observatory, California, 07-09; asst. astrophys, Wellesley Col, 09-12, instr, 12-25, asst. prof, 25-28; prof. astron, Hood Col, 28- Pepper fellow, Pennsylvania, 19-20; Martin Kellogg fellow, Lick Observatory, California, 25. A.A; Astron. Soc. Astrophysics; radial velocities of Me stars; spectroscopic study of T centauri.

Allen, Maxwell W(illford), 893 Third St, Santa Rosa, Calif. Seismology. Pasadena, Calif, Sept. 7, 96. California, 17; Calif. Col. Optometry, 21; Los Angeles Med. Sch. Optometry and Ophthal, 22. Instr. math, Honolulu Mil. Acad, 16-17; asst. observer, U. S. Weather Bur, 19-20; practising optometrist, 22- Lieut, Inf, 17-18. A.A; Seismol. Soc; Geophys. Union. Earthquake catalogs; tidal effect on earthquake occurrence.

Allen, Dr. Melvin C, 40 Monroe St, New York, N. Y. Bacteriology. Oak Grove, Oregon, Aug. 5, 08. B.S, Oregon State Col, 30; M.S, State Col. Wash, 31; Ph.D, Rutgers, 34. Asst, State Col. Wash, 30-31; N. J. Exp. Sta, 31-34; bacteriologist, Nat. Biscuit Co, 34- Asn. Cereal Chemists. Enzymes; fermentation.

Allen, Prof. Mildred, 88 Montview St, West Roxbury, Mass. Physics. Sharon, Mass, March 25, 94. A.B, Vassar Col, 16; A.M, Clark, 17, Ph.D, 22. Instr. physics, Mt. Holyoke Col, 18-20; Wellesley Col, 21, 22-23; Mt. Holyoke Col, 23-24, asst. prof, 24-26; fellow, Bartol Research Foundation, 27-30; research instr, Oberlin Col, 30-31; research, Harvard, 31-33; assoc. prof, Mt. Holyoke Col, 33- A.A; Physical Soc; Asn. Physics Teachers. Tension coefficients of resistance of single crystals.

Allen, Dr. Nat(haniel) Newton, University of Minnesota, St. Paul, Minn. Dairy husbandry. Keytesville, Mo, Aug. 28, 01. B.S, Missouri, 29; Ph.D, Minnesota, 35. Instr. dairy husbandry, Minnesota, 29- Dairy Sci. Assn. Fat of milk in relation to food fat; lipides of the blood of dairy cattle.

Allen, Prof. Oscar Nelson, University of Hawaii, Honolulu, Hawaii. Botany. Corsicana, Texas, May 15, 05. A.B, A.M, Texas, 27; Ph.D, Wisconsin, 30. Asst. agr. bacter, Wisconsin, 27-29; instr, 29-30; asst. prof. bacter. and plant path, Hawaii, 30-35; assoc. prof, 35-, bacteriologist, grad. sch. trop. agr, 31- collaborator, Exp. Sta, 32-, acting head dept. hot, 34. Cooperating soil bacteriologist, Pineapple Producers Cooperative Assn, 31- Mem, Int. Cong. Soil Science. A.A; Bot. Soc; Soc. Bact; Phytopath. Soc; Mycol. Soc; Hawaiian Bot. Soc. (treas, 31); Hawaiian Acad. Agricultural bacteriology; mycology; plant pathology.

Allen, Prof. Paul, Jr. St. John's College, Annapolis, Md. Organic chemistry. Litchfield, Conn, Sept. 2, 98. A.B, Harvard, 19, A.M, 22; Ph.D, 24. Instr. chem, N. Y. Univ, 23-24; research chemist, Marx and Rawolle, Brooklyn, 24-25; Vacuum Oil Co, Paulsboro, 25-29; asst. prof. chem, St. John's Col. (Md), 29-34; assoc. prof, 34- Summer, asst. prof, post-grad. sch, U. S. Naval Acad, 31. Chem. Soc. Reactions of unsaturated ketones; aliphatic sulfonic acids.

Allen, Prof. Paul Williamson, University of Tennessee, Knoxville, Tenn. Bacteriology. Harford, N. Y, 83. B.S, 10, M.S, 14, Ph.D, 22. Assoc. bacter, Illinois, 14-18; chief chemist, Douglas Co, 18-20; chief bacteriologist, Exp. Sta, State Col. Wash, 22-23; prof. bacter. and head dept, Tennessee, 23-Lecturer, Coe Col, 19-20. Soc. Bact; Wash. Acad. Industrial fermentations; microbes; microbiology.

Allen, Dean Raymond B(ernard), Wayne University College of Medicine, Detroit, Mich. Medical education. Cathay, N. Dak, Aug. 7, 02. B.S, Minnesota, 24, A.M, 25, M.D, 28, Mayo Foundation fellow, 30-34, Ph.D, 34. Teaching fellow anat, Minnesota, 24-27; asst. surg, Northwest Clinic, Minot, N. Dak, 28-30; assoc. dean in charge grad. study, col. physicians and surg, Columbia, 34-36; dean col. med, Wayne, 36-N. Y. Acad. Med. Medical sociology, economics and administration; anatomy, development, physiology and diseases of the kidney; urology.

Allen, Dr. Raymond Peck, B. F. Goodrich Co, Akron, Ohio. Chemistry. Lima, N. Y. Jan. 10, 97. Colgate, 15-16; A.B, Cornell, 20, Ph.D, 32. Molé Chem. Co, Rochester, 20-21; asst. chem, Cornell, 22-25; research chemist, B. F. Goodrich Co, 25- Chem. Soc. Metallic luster; high temperature ozonizer; microscopy; rubber pigments.

- Allen, Prof. R(eginald) B(ryant)**, Kenyon College, Gambier, Ohio. *Mathematics*. Medford, N. J., Jan. 3, 72. B.S., Rutgers, '93, M.S., '97; Ph.D., Clark, '05. Acting prof. *math*, Mass. Col., '95; asst. prof., Adelphi Col., '97-'01; instr., Clark, '05-'06; prof., Kenyon Col., '06—A.A.; Math. Soc.; Math. Asn. (chairman, Ohio sect, '16). Hypercomplex number systems; multiple algebras.
- Allen, Dr. Richard D(ay)**, 9 Exchange Terrace, Providence, R. I. *Education, Psychology*. Milwaukee, Wis., May 18, 87. A.B., Brown, '10, A.M., '12; Ph.D., '21. Director *research and guidance, schs, Providence*, '18-'25; asst. supt. in charge, '25—Lecturer, R. I. Col. Educ., '19-'21; Harvard, '21-'33; Brown, '22; Boston, '32-'33. Nat. Vocational Guidance Asn. (pres, '29). Educational and psychological measurements applied to educational and vocational guidance; group guidance.
- Allen, Prof. R(ichard) S(eetnam)**, University of Kentucky, Lexington, Ky. *Physiology, Anatomy*. Pekin, Ill., Nov. 9, '96. B.S., Rochester, '22; M.S., '25; fellow, Chicago, '26-'27, '36-'37. Research assoc., Rochester, '22-'23; asst., '23-'25; instr., col. med., Tennessee, '25-'26; asst. prof., Kentucky, '27-'29; assoc. prof., *physiol. and anat.*, '29-'36; prof., '36—head dept., '31—Physiological chemist, Wilson Research Lab., Chicago, '23; physical chemist, West. Elec. Co., Chicago, '24. Ky. Acad.; Tenn. Acad. Effect of alkalinization on muscular work; rôle of endocrines in heredity; water consumption and elimination in hyperparathyroidism.
- Allen, Prof. Robert Ivey**, John B. Stetson University, Deland, Fla. *Physics, Electrical engineering*. Sparta, Ga., May 17, '98. B.S., Georgia, '20; M.S., '22; fellow, Duke, '31-'32; Ph.D., '33. Asst. prof., physics, Furman, '22-'26; prof. and head dept., J. B. Stetson, '26—Summer, research engineer, Westinghouse Elec. and Mfg. Co., '29. Physical Soc.; Elec. Eng.; Asn. Physics Teachers. Electricity; film speed variation measurements; elementary physics.
- Allen, R(olland) C(ratten)**, Hanna Bldg., Cleveland, Ohio. *Geology*. A.B., Wisconsin, '05, A.M., '08. Instr. econ. geol., Michigan, '08-'09; lecturer, '09-'13; state geologist, Mich., '09-'19; v. pres., *Lake Superior Iron Ore Asn.*, '19-'29; pres., '29—First v. pres., Oglebay, Norton and Co., Cleveland; U. S. Excess Profits Tax Board, '18-'19. A.A.; Geol. Soc.; Soc. Econ. Geol.; Min. and Metal. Eng. (pres, '37); Min. and Metal. Soc. Geology of the Iron River district of Michigan.
- Allen, Dr. Ruth F(lorence)**, 2709 Dwight Way, Berkeley, Calif. *Plant pathology*. Steuron Bay, Wis., May 23, '79. A.B., Wisconsin, '05, A.M., '07; Ph.D., '09. Asst. bot., Wisconsin, '05-'10; instr., Mich. State Col., '10-'14; instr. and asst. prof., Wellesley Col., '14-'18; assoc. pathologist, bur. plant indust., U. S. Dept. Agr., '18-'29; pathologist, '29-'36; retired. A.A.; Bot. Soc.; Phytopath. Soc. Cereal diseases; cytology.
- Allen, Prof. Samuel J(ames) M(cIntosh)**, University of Cincinnati, Cincinnati, Ohio. **Physics*. Maitland, N. S., Can., Oct. 5, '77. B.Sc., McGill, '00, M.Sc., '01; fellow, Hopkins, '03-'04; Ph.D., '06. Demonstrator physics, McGill, '00-'03; instr., Cincinnati, '06-'09; asst. prof., '09-'14; assoc. prof., '14-'19; prof. exp. physics, '19—A.A.; Physical Soc.; Asn. Physics Teachers; Can. Civil Eng. Radioactivity; passage of alpha rays of radium and x-rays through matter; radioactivity of smoky atmosphere; relations between x-ray wave-lengths, atomic numbers and absorption coefficients.
- Allen, Prof. Shirley W(alter)**, University of Michigan, Ann Arbor, Mich. *Forestry*. Sherman, N. Y., Oct. 14, '83. B.S.A., Iowa State Col., '09, M.F., '29. Forest asst. and deputy forest supervisor, U. S. Forest Service, Calif., '09-'13; from asst. prof. to prof. forest exten., N. Y. State Col. Forestry, Syracuse, '14-'18; indust. examiner forest products, Forest Products Lab., U. S. Forest Service, '18-'19; forest supervisor, Angeles Nat. Forest, Calif., '20-'21; forester, Am. Forestry Asn., '24-'28; prof. forestry, Michigan, '28—consultant, forestry branch, Nat. Park Service, '35—Sec'y, Am. forest week cmt., '28. Ed. board, 'Jour. Forestry,' '30. Del. Int. Forestry Cong., Budapest, '36. A.A.; Soc. Foresters (chairman, Cent. States sect, '32, '36); Wilderness Soc.; Mich. Acad. Timber preservation; forest fire control; recreational use of primitive areas and forest resources.
- Allen, Dr. T(homas) C(ort)**, University of Wisconsin, Madison, Wis. *Entomology*. Newark, N. J., May 13, '99. B.S., Oregon State Col., '28; fellow, '28-'29; M.S., '29; Ph.D., Wisconsin, '32. Asst. entom., Wisconsin, '30-'32; instr., '33—Asn. Econ. Entom.; Phytopath. Soc. Economic entomology; entomology in relation to plant diseases.
- Allen, Prof. Victor T(homas)**, St. Louis University, St. Louis, Mo. *Geology*. Dubuque, Iowa, Oct. 28, '98. A.B., Minnesota, '21, M.S., '22; Ph.D., California, '28. Asst. geol., Minnesota, '21-'22; instr., Western Reserve, '22-'25; California, '25-'27, lecturer, '27-'28; asst. prof., St. Louis, '28-'29; assoc. prof., '29-'36; prof., '36—Summers, Minn. Geol. Surv., '21-'22; instr., Cleveland Sch. Educ., '22-'25; Ill. Geol. Surv., '29-'31; Mo. Geol. Surv., '32-'36. Cmtns, Nat. Research Council. A.A.; fel. Geol. Soc.; fel. Miner. Soc. Petrography and geology of the Ione formation of California; various bentonites, glacial deposits and underclays of Illinois; fullers' earth, flint, plastic and diaspore clays of Missouri.
- Allen, W(alter) S(tearns)**, 144-19 35th Ave., Flushing, N. Y. *Chemistry*. Acworth, N. H., Dec. 1, '77. A.B., Amherst Col., '00. Asst. geol., Amherst Col., '00-'02; anal. and research chemist, Gen. Chem. Co., '03, in charge Laurel Hill lab., '10-'17, manager research lab., '26-'29, chief control chemist, '29—Chem. Soc. Applied chemistry.
- Allen, Dr. Willard M(lyron)**, Strong Memorial Hospital, Rochester, N. Y. *Obstetrics, Gynecology*. Macedon, N. Y., Nov. 5, '04. B.S., Hobart Col., '26; fellow, Rochester, '27-'29, M.S., '29, M.D., '32. Nat. research fellow med. sciences and asst. path., sch. med. and dentistry, Rochester, '32-'33; asst. obstet. and gynec., '34-'36; instr., '36—assoc. res. pathologist, Strong Mem. Hosp., '32-'33; intern obstet. and gynec., '33-'34. Cen. Educ. Board fellow and asst. res. obstetrician and gynecologist, '34-'36; res. obstetrician and gynecologist, '36—Eli Lilly award, '35. A.A.; Asn. Anat.; Physiol. Soc.; Chem. Soc. Histology and physiology of female reproductive organs; physiology and chemistry of female sex hormones.
- Allen, Prof. W(illiam) M(arshall)**, University of Saskatchewan, Saskatoon, Sask., Can. *Agricultural economics*. Pucklechurch, Eng., May 9, '92. B.S.A., Saskatchewan, '22; Harvard, '23-'24; Ph.D., Cornell, '25. Instr. farm management, Cornell, '24-'25; asst. prof., Saskatchewan, '25-'28; prof., '28—Mem. Sask. Royal Milk Inquiry Cmn., '33; Land Utilization Board; Milk Control Board; Crop Insurance Cmt.; Advisory Cmt. on Agr. Services, Del. Int. Conf. Agr. Economists, England, '29, Cornell, '30, Germany '34. A.A.; Farm Econ. Asn.; Can. Soc. Agr. Econ. (pres, '32-'34). Utilization of marginal lands of New York; Saskatchewan farm business; farm indebtedness; land utilization.
- Allen, Prof. William F(itch)**, University of Oregon Medical School, Portland, Oregon. *Anatomy, Physiology*. Oneonta, N. Y., '75. A.B., Stanford, '00, A.M., '02; Ph.D., Minnesota, '15. Asst. to Dr. E. P. Allis, '01-'06; physiol., California, '06-'10; instr. embryol. and comp. anat., Illinois, '10-'11; histol., embryol. and neur., Minnesota, '11-'16; prof. anat. and head dept., med. sch., Oregon, '16—Asst. U. S. Fisheries Cmn., '99. A.A.; Asn. Anat.; Physiol. Soc.; Soc. Exp. Biol.; Wash. Acad.; Anat. Gesell. Vascular systems in fish; morphology of the brain and nerves; conditioned olfactory, trigeminal, vagal and depressor reflexes; V ganglion.
- Allen, W(illiam) M(arshall)**, State Department of Agriculture, Raleigh, N. C. *Chemistry*. Anson Co., N. C., Jan. 66. M.S., North Carolina, '93; Hopkins, '98-'99. Asst. state chemist, N. C. Exp. Sta., '93-'96; State Dept. Agr., Ga., '96-'97; state food and oil chemist, '14-'19; state chemist, '19-'32; head food and oil div., '32-'37; retired. Chem. Soc. (pres, N. C. sect, '10); Nat. Asn. Food and Drug Officials (v. pres, '08, sec'y, '09-'15, pres, southeast. sect, '21, nat. pres, '30). Food adulteration.
- Allen, Prof. W(illiam) R(ay)**, University of Kentucky, Lexington, Ky. *Zoology*. Ossian, Ind., March 8, '85. A.B., Indiana, '13, A.M., '14, Ph.D., traveling fellow, '20; Cornell, '16-'17; Instr. zool., Kans. State Col., '14-'16; asst. biol., Cornell, '16-'17; instr., Indiana, '17-'18; asst. prof., Akron, '21-'22; from asst. to prof., Kentucky, '22—Irwin exped. and traveling fellow, Illinois, S. Amer. A.A.; Soc. Zool.; Ecol. Soc.; Micros. Soc.; Soc. Ichthyol. and Herp.; Fisheries Soc.; Limnol. Soc.; fel. Am. Geog. Soc.; Malacol. Union; Ind. Acad.; Ky. Acad.; Calif. Acad. Physiology of fresh-water mussels; South American fishes.
- Allen, Prof. W(infred) E(mory)**, Scripps Institution of Oceanography, La Jolla, Calif. *Biology*. West Newton, Ind., June 6, '73. B.L., Earlham Col., '98; A.M., Lawrence Col., '04; Nebraska, '99-'00, '04-'05; Illinois, '10-'11. Athletic coach,

Earham Col, 96-99; asst. physical director, Nebraska, 99-00; physical director and registrar, Lawrence Col, 03-04; head dept. biol, high sch, Wash, 00-02; Nebr. State Nor. Sch, Kearney, 05-08; asst. zool, Illinois, 10-11; head dept. biol, high sch, Calif, 12-19; asst. prof. biol, Scripps Institution, California, 19- A.A.; Ecol. Soc; Micros. Soc; Lincol. Soc; Bot. Soc; West. Soc. Nat; Calif. Bot. Soc. Morphology; regeneration; fresh-water plankton; marine phytoplankton.

Allendoerfer, Dr. Carl B(arnett), University of Wisconsin, Madison, Wis. *Mathematics*. Kansas City, Mo, April 4, 11. B.S., Haverford Col, 32; Rhodes scholar, Oxford, B.A. 34; fellow, Princeton, 35-37, Ph.D. 37. *Instr. math. Wisconsin*, 37. Math. Soc. Differential geometry; immersion of Riemann spaces in Euclidean spaces.

Aller, Frank D, Durango, Colo. *Metallurgy*. Bushnell, Ill, June 5, 67. Met.E. Colo. Sch. Mines, 92. S. Am. rep, Am. Smelting and Ref. Co, 04-18; director exp. plant, Colo. Sch. Mines, 21-22; consulting engineer. A.A; Min. and Metal Eng. (sec'y, N. Y. sect, 19). Refractory silver-lead ores; leaching copper ores.

Allis, Dr. Gordon A(lbert), 349 S. Mansfield Ave, Los Angeles, Calif. *Organic chemistry, Biochemistry*. Detroit, Mich, Nov. 26, 01. B.S. Calif. Inst. Tech, 22, du Pont fellow, 24. M.S. 24, Ph.D. 26. Chemist, Riverside Portland Cement Co, 22; research chemist, The Celite Co, 22-23; research with George Pines, Los Angeles, 26-27, 28-; lecturer pharmacol, med. sch, California, 32-. Fellow, Harvard Med. Sch, 27-28. A.A; Chem. Soc; Soc. Exp. Biol; Physiol. Soc; Asn. Study Allergy. Isolation of insulin and liver principle effective in pernicious anemia; allergic protein preparations; choline and guanidine derivatives; sympathomimetic amines.

Alley, J(ohn) Dinsmore, 1107 Richmond Ave, Swissvale, Pittsburgh, Pa. *Chemistry*. West Finley, Pa, May 8, 91. B.S. Muskingum Col, 13; A.B. Columbia, 17. Prof. chem, Muskingum Col, 19-20; Westinghouse Research Lab, 20-25; senior indust. fellow, Mellon Inst, 25-. Alloy steels; abrasives; low melting point solders; electrodeposition; air pollution.

Alley, Dr. Otis E(dward), 80 E Concord St, Boston, Mass. *Biochemistry*. Taunton, Mass, July 22, 99. B.S. Boston, 24. A.M. 26, Ph.D. 35; Harvard Med. Sch. Head dept. science, high sch, Methuen, Mass, 24-27. Winthrop, 27-30, Winchester, 30-; lecturer biochem, sch. med, Boston, 30. Teaching fellow, sch. med, Boston, 29-30; Evans Mem. fellow, Mass. Mem. Hosp, 30- Biology; immunology.

Allin, Dr. Elizabeth J(osephine), University of Toronto, Toronto, Ont, Can. *Physics*. Blackwater, Ont, July 8, 05. B.A. Toronto, 26, M.A. 27. Nat. Research Council Can. bursar, 27-28; student, 28-29; fellow, 29-30. Ph.D. 31. Asst. demonstrator physics, Toronto, 26-27; demonstrator and asst, 30-33; Royal Soc. Can. fellow, Cambridge, 33-34; demonstrator, Toronto, 34-. Under-water spark spectra; hyperfine structure of spectral lines.

Alling, Prof. Harold L(attimore), 31 Barrington St, Rochester, N. Y. *Geology*. Rochester, N. Y, Feb. 7, 88. B.S. Rochester, 15; A.M. Columbia, 17. Ph.D. 20. Geologist, N. Y. State Museum, 17-; instr. geol. Rochester, 20-23, asst. prof, 23-24, prof. and head dept, 24-. Chairman cmt. potash-soda feldspars, div. geol. and geog. Nat. Research Council, 27-32. A.A; Geol. Soc; assoc. Min. and Metal. Eng. Miner. Soc. (v. pres, 36); Geophys. Union; Chem. Soc; N. Y. State Geol. Assn. (pres, 31-); Rochester Acad. Crystallization of rock-forming minerals; Adirondack Precambrian; sedimentary petrography; Silurian salt deposits; interpretative petrology of igneous rocks; lavas of Fiji.

Allis, Dr. Edward Phelps, Jr, Milwaukee, Wis, or Palais de Carnoles, Menton, France. **Vertebrate morphology*. Milwaukee, Wis, Sept. 14, 51. C.E. Del. Lit. Inst, 67; Antioch Col, 67-68; Mass. Inst. Tech, 68-69, 71; LL.D., Wisconsin, 03; hon. M.D., Groningen, 14. Mem. and officer, Edw. P. Allis Co, Milwaukee, 71-00. Assoc. museum zool, Harvard, 11. Laureat, Paris Inst, 98; officier d'Acad; chevalier, Légion d'honneur. A.A; Soc. Nat; Asn. Anat; Soc. Mil. Eng; fel. N. Y. Acad; Boston Soc. Nat. Hist; fel. Linnean Soc; London; Zool. Soc. London; Royal Micros. Soc; Royal Meteorol. Soc; London Soc. Arts; Anat. Soc. Gt. Britain and Ireland; British Inst. Philos. Studies; North British Acad; Soc. astron. de France; Soc. météorol. de France; Mus. French Art. The anatomy and development of the head of vertebrates.

Allis, Prof. William Phelps, Massachusetts Institute of Technology, Cambridge, Mass. *Mathematical physics*. Menton, France, Nov. 15, 01. B.S. M.S. Mass. Inst. Tech, 23; D.Sc, Nancy, 24. Research assoc. math. physics, Mass. Inst. Tech, 25-31, instr, 31-34, asst. prof, 34- A.A; fel. Physical Soc. Collision of electrons and atoms; electrical discharges in gases.

Allbaugh, Dr. H(oward) C(oss), R. R. 15, Box 38, Indianapolis, Ind. *Immunology*. Sidney, Ind, July 28, 08. A.B. Manchester Col, 32; Eli Lilly fellow, Hopkins, 31-32, scholar, 32-34, Sc.D. 34. Asst. immunol, Hopkins, 34; biol. dept, Eli Lilly and Co, 34-. Ind. Acad. Filterable viruses; fractional ultrafiltration; vaccinia virus; oral immunization against the common cold.

Allison, Dr. F(ranklin) E(lmer), U. S. Department of Agriculture, Washington, D. C. *Biochemistry*. Oakland City, Ind, Nov. 10, 92. B.S. Purdue, 14; M.S. Iowa State Col, 15; Ph.D. Rutgers, 17. Nat. Canners Asn, 19-20; U. S. Dept. Agr, 17-18, biochemist, bur. chem. and soils, 20-25, chemist, 25-28, senior chemist in charge biochem. investigations, 28- U.S.A, 18-19. A.A; Chem. Soc; Soc. Bact; Soc. Agron; Int. Soc. Soil Sci. Biochemical fixation of nitrogen; bacterial respiration; plant nutrition; soil bacteriology and acidity; fertilizers.

Allison, Prof. Fred, Auburn, Ala. *Physics*. Glade Spring, Va, July 4, 82. A.B. Emory and Henry Col, 04, LL.D. 33; A. M. Virginia, 21, Ph.D. 22; Sc.D. Ala. Polytech. Asst, Hopkins, 10-11; prof. physics, Emory and Henry Col, 11-20; instr, Virginia, 20-22; head prof, Ala. Polytech, 22-. Pres. and visitors research prize, Virginia, 25; Herty research medal, 33. A.A; fel. Physical Soc; Ala. Acad (pres, 29). The effective wave-length of light in white light interferometry; magneto-optic phenomena with applications to a method of chemical analysis.

Allison, Prof. Ira S(himmin), Oregon State Agricultural College, Corvallis, Oregon. *Geology*. Gardner, Ill, March 16, 95. A.B. Hanover Col, 17; Chicago; Ph.D. Minnesota, 24. Instr. and asst. prof. geol, Minnesota, 20-28; prof. Oregon State Col, 28-. Summers, instr, Chicago, 21-22; geologist, Minn. Geol. Surv, 24-28; Columbia River project, U. S. Engineers, 30. A.A; fel. Geol. Soc; Min. and Metal. Eng. Giants Range granite; Precambrian weathering; mineral resources and glacial drainage, Columbia River basin; geology and water supply of northwestern Minnesota; Pleistocene history of Willamette Valley.

Allison, Prof. James B(oyd), Rutgers University, New Brunswick, N. J. *Biochemistry*. Punxsutawney, Pa, Jan. 28, 01. B.S. Pa. State Col, 23; Ph.D. Iowa State Col, 27. Instr. biochem, Rutgers, 27-29, asst. prof, 29- A.A; Chem. Soc. Carbohydrate chemistry; chemical stimulation.

Allison, Prof. John H(oward), University Farm, St. Paul, Minn. *Forestry*. East Granby, Conn, Sept. 25, 83. Ph.B. Yale, 05, M.F. 06; Am-Scandinavian Foundation fellow, Sweden, 23-24. Forest asst. and forest examiner, U. S. Forest Service, 06-12, 18-19; prof. forestry, Minnesota, 13- Soc. Foresters. Forest management.

Allison, Dr. L(oy) W, 500 S. Pelham Road, Jacksonville, Ala. *Psychology*. Blairsville, Ga, 99. A.B. Lincoln Mem. Univ, 23; A.M. Peabody Col, 29. Ph.D. 30. Prof. psychol. and educ, Hiwassee Col, 23-28; head dept. psychol, Ala. State Teachers Col, Jacksonville, 30-. A.A; assoc. Psychol. Asn; S. Soc. Philos. and Psychol. Experimental psychology.

Allison, Dr. Robert V(ernill), University of Florida, Gainesville, Fla. *Soils*. Stryker, Ohio, June 25, 95. B.S. Purdey, 20; M.S. Rutgers, 22. Ph.D. 23. Research, Rothamsted, Harpenden, England, 23-24; chemist and soil biologist, Trop. Plant Research Foundation, Washington, D. C, and Baragua, Cuba, 24-26; soils specialist, Everglades Exp. Sta, Florida, 26-34, in charge, 28-34; soil and water conservation investigations, bur. chem. and soils, U. S. Dept. Agr, 34-35, soil conservation service, 35-37; head dept. soils, Florida, 37- A.A; Soc. Agron; Soil Sci. Soc. (chairman, sect. VI, 36); Geophys. Union; Fla. Hort. Soc; Int. Soc. Soil Sci. Soils; biophysical relation of microflora and plant nutrition.

Allison, Prof. Samuel K(ing), University of Chicago, Chicago, Ill. **Physics, Chemistry*. Chicago, Ill, Nov. 13, 00. B.S. Chicago, 21, Ph.D. 23. Nat. research fellow, Harvard, 23-25; research fellow, Carnegie Institution, 25-26; instr.

ALLISON — ALPERS

- physics**, California, 26-28; asst. prof., 28-29; assoc. prof., 29-30; Chicago, 30— A.A.; Physical Soc. X-rays; atomic structure.
- Allison, V(ernon) C(harles)**, 65½ W. Blackwell St, Dover, N. J. Chemistry. Rice Co, Kans, Aug. 4, 91. B.S., Kans. State Teachers Col, 14; A.M., Clark, 16. Research chemist, U. S. Bur. Mines, Pittsburgh, 16-27; Combustion Utilities Corp, Long Island City, N. Y., and Linden, N. J., 27-29; asst. chief chemist in charge research sect, Picatinny Arsenal, 29-Morrison prize, N. Y. Acad. Sci, 22. A.A.; fel. Inst. Chem; Anthropol. Soc; Soc. Mammal. Explosive dusts; low temperature carbon; munitions research; geochronology.
- Allport, Prof. F(lloyd) H(enry)**, Fayetteville, N. Y. *⁴Psychology. Milwaukee, Wis., Aug. 22, 90. A.B., Harvard, 13, Ph.D., 19. Instr. psychol., Harvard, 19-22; assoc. prof., North Carolina, 22-24; prof. social and polit. psychol., Syracuse, 24-U.S.A., 17-18. A.A.; Psychol. Asn. (director, 28-30); Sociol. Soc. Experimental and social psychology; scientific methods in psychology and social science.
- Allport, Prof. G(ordon) W(illard)**, Harvard University, Cambridge, Mass. *⁴Psychology. Montezuma, Ind., Nov. 11, 97. A.B., Harvard, 19. A.M., 21; Ph.D., 22; Berlin; Cambridge. Instr. psychol., Robert Col, Constantinople, 19-20; instr. and tutor, Harvard, 24-26; asst. prof., Dartmouth Col, 26-30; Harvard, 30— Psychol. Asn; Am. Acad. Psychology of personality; social psychology.
- Allyn, Prof. Harriett M(ay)**, Mt. Holyoke College, South Hadley, Mass. Zoology, Anthropology. New London, Conn., May 4, 83. A.B., Mt. Holyoke Col, 05; M.S., Chicago, 10, Ph.D., 12. Instr. zool., Lake Erie Col, 08-09; Vassar Col, 12-13; Hackett Med. Col, Canton, China, 13-19; Mt. Holyoke Col, 20-21; instr. zool. and dean, Hackett Med. Col, 15-19, 21-23; prof. zool., Monticello Sem, 23-24; instr., Vassar Col, 24-25, asst. prof., 25-28; prof. anthropol. and academic dean, Mt. Holyoke Col, 29— Board directors, Chan Kwang Sch, Canton, China, 21-23. U. S. sec'y, Cong. Int. des Sciences préhist. et protohist., 36. A.A.; Anthropol. Asn; Nat. Asn. Deans of Women (pres., 37-); Soc. Women Geog. Artificial fertilization; excavation in Old Stone Age sites.
- Alm, Prof. O(scar) W(illiam)**, Kansas State College, Manhattan, Kans. Psychology. O'Neill, Nebr., 87. A.B., Nebraska, 17; A.M., Columbia, 18; Ph.D., Minnesota, 29. Assoc. prof. educ., Kans. State Teachers Col, Pittsburg, 19-26; psychol., Kans. State Col, 29— Summer, North Dakota, 27. Kans. Acad. Effect of habit interference upon performance in maze learning; relationship between brain chemistry and maze-learning ability in white rats.
- Almand, Prof. Joseph M(orris)**, Wesleyan College, Macon, Ga. Chemistry. Lithonia, Ga., Aug. 16, 03. B.S., Emory, 24, M.S., 25; Ph.D., Hopkins, 35. Asst. prof. chem., Emory Junior Col, 28-30; Wesleyan Col. (Ga), 30-34; assoc. prof., 35-Chem. Soc; Ga. Acad. Ethylation of benzene.
- Almon, Dr. Lois**, State Laboratory of Hygiene, Madison, Wis. Bacteriology. Milwaukee, Wis., April 28, 04. A.B., Wisconsin, 27. A.M., 29; Ph.D., 32. Asst. exten. dept., Milwaukee Pub. Museum, 23-25; teacher, high sch., Wis., 27-28; research asst. bot., Wisconsin, 28-29; agr. bacter., 29-32; hygiene, State Lab. Hygiene, Wis., 32— Soc. Bact. Root-nodule bacteria; pathogenic Moniliae; antigens of *Eberthella typhi*.
- Almquist, Prof. H(erman) J(ames)**, University of California, Berkeley, Calif. Poultry husbandry. Helena, Mont., March 3, 03. B.S., Mont. State Col, 25; Ph.D., California, 32. Asst. poultry husbandry, California, 34-35; asst. prof., 35-junior poultry husbandman, Exp. Sta, 34-35; asst. poultry husbandman, 35— Poultry nutrition; chicken eggs; autoxidation; the anti-hemorrhagic vitamin.
- Almquist, Dr. J(ohn) A(rthur)**, E. I. du Pont de Nemours and Co, Wilmington, Del. Chemistry. Moscow, Idaho, Oct. 31, 96. B.S., Idaho, 19; Ph.D., California, 22. Teaching fellow, California, 19-22; research chemist, fixed nitrogen research lab, U. S. Dept. Agr., 22-26; E. I. du Pont de Nemours and Co, 27— Chem. Soc. Heterogeneous catalysis; gas purification; high-pressure synthesis; nitrogen fixation.
- Almy, Charles, Jr.**, Dewey and Almy Chemical Co, Cambridge, Mass. Chemical engineering. Cambridge, Mass., April 6, 88. A.B., Harvard, 08; B.S., Mass. Inst. Tech, 10. Research assoc. applied chem., Mass. Inst. Tech, 10-11; tech. director, Am. Vulcanized Fibre Co, 12-15; gen. manager and sec'y, Va. Red Oil Products Corp, 16-17; v. pres., Dewey and
- Almy Chem. Co**, 19—; pres., Browne and Nichols Sch, Inc, 32-Lieut. col., C.W.S., 18-19. British Soc. Chem. Indust. Cansealing compounds; soldering fluxes; adhesives; Darex shoe materials.
- Almy, Prof. E(mory) F(rederick)**, 2632 Tremont Road, Columbus, Ohio. Agricultural chemistry. Greenwood, Nebr., July 6, 95. B.S., Nebraska, 16, M.S., 17; Ph.D., Ohio State, 28. Nestle's Food Co, 19; asst. agr. chem. and soils, Ohio State, 19-21; instr., 21-22; agr. chem., 22-25; asst. prof., 25-34; assoc. prof., 34— U.S.A., 17-19. Dairy Sci. Asn. Dairy chemistry; food analysis.
- Almy, Dr. G(erald) M(arcks)**, University of Illinois, Urbana, Ill. Physics. Ewing, Nebr., April 24, 04. B.S., Nebraska, 24, M.S., 26; Ph.D., Harvard, 30. Instr. physics, Illinois, 30-33; assoc., 33-35; asst. prof., 35— Physical Soc. Molecular spectra.
- Almy, Prof. John E(dwin)**, 2300 A St, Lincoln, Nebr. Physics. Centralia, Ill., Oct. 13, 75. B.S., Nebraska, 96. A. M., 97; Ph.D., Berlin, 00. Instr. physics, Nebraska, 00-02, adj. prof., 02-05; asst. prof., 05-07; assoc. prof., 07-09; prof., 09-chairman dept., 19-20. A.A.; Physical Soc.; Nebr. Acad. Accidental double refraction; spark potentials; discharge through gases; dielectric strength glasses and double refracting media; cathode potential; minimum spark potentials; corona-discharge currents.
- Almy, Dr. L(loyd) H(uber)**, H. J. Heinz Co, Pittsburgh, Pa. Chemistry. Mendota, Ill., Dec. 14, 85. B.S., Illinois, 09; M.S., George Washington, 15; Ph.D., Columbia, 17. Asst. chemist, Mo. Pacific Ry. Co, 09-10; chemist, Vandalia Ry., 11-12; asst. chemist, bur. chem., U. S. Dept. Agr., 12-14; fish pathologist, Bur. Fisheries, 16-18; chemist, bur. chem., U. S. Dept. Agr., 19-26; research chemist, H. J. Heinz Co, 26-Chem. Soc. Food manufacturing.
- Alonso, Dean Agustin S(ikat)**, Northern Luzon Junior College, Vigan, Ilocos Sur, P. I. Psychology, Education. Palo, Leyte, P. I., April 13, 94. A.B., Silliman Inst, 15, B.S.E., 19; A.M., Philippines, 22; Ph.D., Chicago, 25. Asst. prof., Silliman Inst, 15-17; instr. psychol. and educ., 19-22; asst. prof. and acting head dept. psychol. col. educ., Philippines, 25-30; assoc. prof. educ. and psychol. and dean, North. Luzon Junior Col, Univ. Philippines, 30— Ed., 'Philippine Jour. Educ.' 20-21. Subm't, Prison Surv. Board. Trustee, Silliman Inst. Nat. Fed. Teachers (sec'y-treas., 26-30); Ill. Acad; P. I. Sci. Soc; P. I. Acad. Social Sci. (director). Tests and measurements; psychology of learning; elements of statistics.
- Alperin, Dr. David**, New York Post-Graduate Medical School, Second Ave. and 20th St, New York, N. Y. Biochemistry. Bucharest, Roumania. M.S., Freiburg, 02; M.D., N. Y. Univ, 07; Ph.D., Columbia, 12. Lecturer physiol. chem. and director chem. and path. labs, Eclectic Med. Col, 03-12; asst. prof. clin. ophthal., N. Y. Post-Grad. Med. Sch, Columbia. Nucleoprotein metabolism; uricolytic and uricase.
- Alpern, Dr. Dwight K**, Brooklyn College, 80 Willoughby St, Brooklyn, N. Y. Electrochemical engineering. New York, N. Y., Aug. 21, 03. B.S., Mass. Inst. Tech, 25, M.S., 26; fellow, Columbia, 30-31; Ph.D., 32. Engineer, New York Tel. Co, 26-27; instr. elec. eng., N. Y. Univ., 27-29; asst. prof., Swarthmore Col, 29-30; research, Columbia, 30-34; instr. chem. and electrochem., Brooklyn Col, Col. City of N. Y., 33—; advisory develop. engineer, Dept. Water Supply, Gas and Elec., New York, 34—; consulting electrochem. engineer. Director research, Am. Neon Light Corp, 28-29; chief engineer, Radiovision Corp, 29-30, 31-34. Prize, Electrochem. Soc, 30. Elec. Eng; Electrochem. Soc; Chem. Soc. Photoelectric cell designs and applications in determination of color and turbidity and conversion of light into electric power; electrochemical production of inorganic and organic compounds; electrochemical luminescence; colloids.
- Alpers, Prof. Bernard J(acob)**, 111 N. 49th St, Philadelphia, Pa. Neurology. Salem, Mass., March 14, 00. M.D., Harvard, 23; Sc.D., Pennsylvania, 30. Asst. prof. neur. grad. sch. med., Pennsylvania, 30—; assoc. neurosurg. and psychiat. sch. med., 30—; neurologist, Phila. Gen. Hosp., 32—; Pa. Hosp., 33— Commonwealth fellow, Pennsylvania, 26-29; George Harrison Frazier fellow, 30— Mem. Mental Hygiene Cmt, Pa. Neu. Asn; Psychiat. Asn; Phila. Neur. Soc. (ed., 'Transactions,' 29—); Phila. Psychiat. Soc. Cerebrospinal fluid; brain tumors; reflexes; heat regulation; clinical neurology.

Alsb erg, Dr. C(arl) L(ucas), Stanford University, Calif. **Biochemistry*. New York, N. Y., April 2, 77. A.B., Columbia, 96, A.M., M.D., 00; Strasburg and Berlin, 00-03. Asst. physiol. chem., Harvard Med. Sch., 02-05, instr. biochem, 05-08; chem. biologist, bur. plant indust., U. S. Dept. Agr., 08-12, chief bur. chem., 12-21; director food research inst., Stanford, 21-. *Gianini foundation*, 37-, dean grad. study, 27-33. Investigator, Bur. Fisheries, 06-08. Ed. board, 'Annual Rev. Biochem.' Chairman, Pacific Coast regional cmt. Social Science Research Council; mem. Cmn. Inquiry Nat. Policy Int. Econ. Relations; v. chairman exec. cmt. Calif. Econ. Research Council. A.A.; Soc. Biol. Chem. (past pres); Soc. Exp. Biol.; hon. mem. Agr. Chem. (sec'y-treas., 13-21); Chem. Soc. (past councilor and assoc. ed., 'Jour'); Soc. Pharmacol.; Physiol. Soc.; Soc. Plant Physiol.; Am. Cereal Chemists' Assoc. ed., 'Cereal Chem'; Bot. Soc.; Econometric Soc.; Econ. Asn.; Wash. Acad. (past pres); Soc. de Zymol. pure et appliquée; Inst. Pacific Relations (trustee and chairman, research cmt., Am. council, chairman, int. research cmt.). Chemistry of nucleic acids and of proteins; cystinuria; enzymes; phosphoric acid metabolism; poisonous plants; oxidizing enzymes; biology and toxicology of molds; cyanogenesis in plants; pharmacology; food and agricultural chemistry; economic investigations on food and population; standards of living; population, economic planning, debasement and adulteration.

Alsentz er, Prof. H(arry) A(ugust), Jr., University of Pennsylvania, Philadelphia, Pa. *Inorganic chemistry*. Philadelphia, Pa., Feb. 6, 98. B.S., Pennsylvania, 20. Ph.D., 26. Instr. chem., Pennsylvania, 20-27, asst. prof., 27-36, assoc. prof., 36- A.A.; Chem. Soc.; Electrochem. Soc. (chairman, Phila. sect., 35). Cobalt amines; chromium amines; complex tungsten; molybdenum compounds.

Alt, Prof. Howard L(ang), 303 E. Chicago Ave., Chicago, Ill. *Physiology*. Chicago, Ill., July 28, 00. B.S., Northwestern, 23, M.D., 24, M.S., 33, Ph.D., 34. Res. physician, Peter Bent Brigham Hosp., Boston, Mass., 25-29; teaching fellow, Harvard Med. Sch., 27-29; asst., Kaiser Wilhelm Inst., Berlin, 29-30; assoc. med., med. sch., Northwestern, 30-35, asst. prof., 35- A.A.; Am. Med. Asn.; Soc. Exp. Biol.; Cent. Soc. Clin. Research; Chicago Soc. Int. Med.; Hematology; cardiology; micro-respiration; nutritional aspects of hematology.

Altar, Dr. William, Robert College, Istanbul, Turkey. *Physics*. Vienna, Austria, Aug. 27, 00. Ph.D., Vienna, 23. Elec. research engineer, 27-29; instr. physics, Pa. State Col., 29-30, asst. prof., 30-35; fellow physical chem., Princeton, 35-37; instr. math. and elec. eng., Robert Col., Istanbul, 37-. Theoretical physics; radio; communication engineering; molecular physics.

Alt enburg, Prof. Edgar, Rice Institute, Houston, Texas. *Zoology*. Jersey City, N. J., June 11, 88. A.B., Columbia, 11, A.M., 12, Ph.D., 16. Instr. biol., Rice Inst., 16-20, asst. prof., 20- A.A.; Soc. Nat.; Soc. Zool. Genetics.

Alt er, Prof. Chester M., Boston University, Boston, Mass. *Chemistry*. Rushville, Ind., March 21, 06. B.S., Ball State Teachers Col. (Ind.), 27; Grasselli tallow, Indiana, 28, A.M., 28; Ph.D., Harvard, 36. Asst. chem., Pittsburgh, 29-30; Harvard, 30-32, assoc. geophys., 32-34; instr. chem., Boston, 34-37, asst. prof., 37-. Chem. Soc.; Ind. Acad. Chromium plating; atomic weight of nitrogen, potassium, indium, lead and radium G; effect of alternation on lead-uranium ratios of radioactive minerals; determination of the age of the earth.

Alt er, Prof. Dinsmore, Griffith Observatory, Los Angeles, Calif. *Astronomy, Meteorology*. Colfax, Wash., March 28, 38. B.S., Westminster Col. (Pa.), 09; M.S., Pittsburgh, 10; Ph.D., California, 16. Instr. physics and astron., Alabama, 11-12, asst. prof., 12-13, adj. prof., 13-14; instr. astron., California, 14-17; asst. prof., Kansas, 17-19, assoc. prof., 19-24, prof., 24-36; director, Griffith Observatory, 36-. Guggenheim Mem. Foundation fellow, England, 29-30. Col. C.A.R.C. A.A.; Astron. Soc.; Meteorol. Soc. (v. pres., 25-27); Physical Soc.; Geophys. Union; fel. Royal Astron. Soc. Orbita; astronomical meteorology; statistical methods.

Alt or, J. Cecil, 263 S. Tenth East St., Salt Lake City, Utah. *Meteorology*. Near Remseler, Ind. Pub. schs. Weather Bur. frost-warning service, Rogue River Valley, 16; Weather Bur. Office and State Weather Service, Wyo., 16-17, Utah, 17-. In charge, Weather Bur. exhibit, Lethbridge, Can., 12; Tulsa, Okla., 13; Panama-Pacific Expos., 15; U. S. Dept. Agr. exhibits, Wichita, Kans., 14; Denver, 15. Meteorol. Soc.; Utah Hist.

Soc. (sec'y and ed., 'Quarterly,' 28-33); Utah Acad. Applied meteorology; normal precipitation.

Alter, Dr. Nicholas M., 410 Fairmount Ave., Jersey City, N. J. *Pathology*. Hungary, 92. M.D., Hungary, 13. Instr. anat., Hungary, 10-11, path., 11-13; pathologist, Montefiore Home and Hosp., New York, 14-15; Howard A. Kelly Hosp., 15-19; Yale, 19-20; West. Pa. Hosp., 20-23; instr. med., med. sch., Michigan, 23-24; prof. path., sch. med., Colorado, 24-26; pathologist, N. Y. Post-Grad. Med. Sch., Columbia, 26-30; director labs., Margaret Hague Hosp., Jersey City, 31- A.A. Chronic diseases; pregnancy.

Althausen, Dr. Darrell, Hiram Walker and Sons, Peoria, Ill. *Chemistry*. St. Marys, Ohio, Feb. 3, 01. B.S., Oklahoma, 26; Ph.D., Illinois, 32. Asst. chem., Oklahoma, 25-27; Illinois, 27-31, Chem. Foundation fellow, 32-33; research chemist, Nat. Aniline and Chem. Co., Buffalo, 33-34; research supervisor, Hiram Walker and Sons, 34-. Chem. Soc. Latex technology; pharmaceuticals; free radicals; essential oils; liqueur manufacture patents; bio-colloids.

Althausen, Dr. T(hodore) L(eonidowitch), 1224 Taylor St., San Francisco, Calif. *Medicine*. St. Petersburg, Russia, July 25, 97. A.B., California, 22, A.M., 25, M.D., 26. Intern, San Francisco City and County Hosp., 25-26; asst. med., med. sch., California, 26-28, instr., 28-29, asst. prof., 29-36, assoc. prof., 36-, asst. res., Univ. Hosp., 26-27, res., 27-30, asst. visiting physician, 31-34, assoc. visiting physician, 34-. Asst. visiting physician, Gastro-Intestinal Clinic, 27-32, visiting physician, 33-; Guggenheim Mem. Foundation fellow, Leipzig, Freiburg and Paris, 30-31. Fel. Am. Med. Asn.; Soc. Exp. Biol.; Gastro-Enterol. Asn.; Soc. Clin. Invest. Pathology of gestation in vitamin E deficiency; liver and the metabolism of carbohydrates; hepatic function in man and treatment of diseases of the liver; thyroid gland and intestinal absorption.

Altieri, A(ngelo) M(ichael), 33 Warren St., Fitchburg, Mass. *Chemical engineering*. Watertown, Mass., Oct. 11, 07. B.S., Mass. Inst. Tech. Research chemist, Dennison Mfg. Co., 29-31; foreman, U. S. Rubber Co., 31-32; chem. engineer, Fitchburg Paper Co., 33-. Chem. Soc.; Asn. Pulp and Paper Indust. Gelatin foils; adhesives; latex thread; paper making and converting; application of dyestuffs; water proofing processes.

Altmaier, Dr. Carl L(ewis), Jr., Trinity College, Hartford, Conn. *Psychology*. Lansdowne, Pa., Dec. 6, 00. A.B., Pennsylvania, 22, A.M., 26, Ph.D., 30. Asst. psychol., Pennsylvania, 22-23, 25-28, instr., 28-31; philos. and psychol., Trinity Col. (Conn.), 31-36, asst. prof., 36- A.A.; assoc. Psychol. Asn. (clin. sect.); Asn. Applied Psychol.; Conn. Valley Asn. Psychologists (sec'y-treas., 35-37). Clinical and experimental psychology.

Altman, Dr. Luther C(lare), 6849 31st Ave., N. E., Seattle, Wash. *Zoology*. Ottawa, Ohio, Oct. 22, 94. B.S., Washington (Seattle), 23, M.S., 26, Ph.D., 33. Teacher science and boys' adviser, Lincoln High Sch., Seattle, 23-. Summers, asst., Puget Sound Biol. Sta., 22, 24, 25; oceanog. labs., Friday Harbor, Wash., 30. Oligochaeta of Washington.

Altman, Prof. Peter, 17374 Fairfield Ave., Detroit, Mich. *Engineering*. Montreal, Que., Can., Feb. 24, 02. B.A.E., Detroit, 25. Asst., Elec. Welding Co., Montreal, 19-21; mech. and aeronaut., Detroit, 21-25, instr. aeronaut. eng., 25-28, prof., 28-; director aeronaut. dept. Consulting engineer, Verville Aircraft Corp., 29-31; Stinson Aircraft Corp., 32-; dist. engineer, Aero Ins. Underwriters. Soc. Automotive Eng. (papers chairman, aircraft div., 34, 35, chairman, Detroit sect., 35); Nat. Aeronaut. Asn. (mem. tech. comm.); Inst. Aeronaut. Sci.; Nat. Gliders Asn. (director and subchairman, med. cmt.); Eng. Educ.; Aeronaut. Activities Asn. Mich. (director); Detroit Inst. Arts Founders Soc.; Detroit Soc. Automotive Eng. (chairman, aeronaut. div.); Eng. Soc. Detroit. Strength of materials; aerodynamics; propeller design.

Altshuler, Dr. Samuel S(imon), 313 David Whitney Bldg., Detroit, Mich. *Internal medicine*. Russia, June 4, 02. A.B., Michigan, 22, M.D., 25. Res. med. physician, Detroit Harper Hosp., 25-28; instr. internal med., med. sch., Michigan, 28-. Am. Med. Asn.; Col. Physicians. Influenza, tuberculosis; diabetes.

Alty, Prof. T(homas), University of Glasgow, Glasgow, Scotland. *Physics*. Lancashire, Eng., 99. B.Sc., Liverpool, 20, D.Sc., 27. Oliver Lodge fellow, 21-23, M.Sc., 22; Ph.D., Cam-

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bridge, 24. Lecturer physics, Durham, 24-25; prof, Saskatchewan, 25-32, research prof, 32-35; *Cargill prof. applied physics, Glasgow*, 35— Fel. Royal Soc. Can.; fel. Inst. Physics, England; Faraday Soc.; fel. Cambridge Philos. Soc. Surface physics; kinetic theory of gases.

Alvarado, Dr. A (Ifonso) M (iguel), E. I. du Pont de Nemours and Co., Wilmington, Del. *Physical chemistry*. Cartago, Costa Rica, Sept. 19, 00. B.E. Tulane, 21; M.S. Iowa, 22, Ph.D. 24. Asst. chem, Iowa, 21-24; prof, Waukon Junior Col. 24-25; assoc. prof, Loyola Col. (La.), 25-27; *research chemist, exp. sta., E. I. du Pont de Nemours and Co.*, 27-Chem. Soc. Adsorption of vapors by metallic oxides, catalysis of ester formation; composition of Steffens waste; catalytic decomposition of ethanol; iodometry of glucose.

Alvarez, Prof. Walter C (lement), Mayo Clinic, Rochester, Minn. *Medicine*. San Francisco, Calif, July 22, 84. M.D. Cooper Med. Col. 05; Harvard, 13. Asst. path, Cooper Med. Col. 05-06; med, Stanford, 12-13; instr. research med, Hooper Foundation, California, 14-20, asst. prof, 20-24, assoc. prof, 24-26; med, *Mayo Foundation, Minnesota*, 26-34, prof, 34-; head sect, div. med, Mayo Clinic. Caldwell lecturer, Roentgen Ray Soc. 20. A.A; Am. Med. Asn; Am. Physicians; Physiol. Soc.; Soc. Exp. Biol.; Gastro-Enterol. Asn. (pres, 28-); Soc. Pharmacol; fel. Col. Physicians; Soc. Clin. Invest; Am. Hist. Med; Anthropol. Asn; Am. Physical Anthropol; Cent. Soc. Clin. Research; Cent. Interurban Clin. Club; Minn. Soc. Int. Med; hon. mem. Des Moines Acad; cor. mem. Nat. Acad. Med. Spain. Physiology and pathology of digestion; intestinal peristalsis; high blood-pressure.

Alvord, John Watson, 5203 Kenwood Ave, Chicago, Ill. *Hydraulic and sanitary engineering*. Newton Center, Mass, Jan. 25, 61. Europe, 88, 94, 23; hon. C.E. Wisconsin, 13. City engineer, Lake View, Chicago, 84-88; Cicero, Ill, 89; Columbian Expos, 90-93; *consulting engineer*, 94— Appraisal boards; consulting engineer to many municipalities in the Cent. West; govt. war work, two years. Cook County Health Board. Chanute medal, West. Soc. Eng, 02; medal as one of the designers of the Columbian Expos, 93; Washington award, 26. A.A; Civil Eng. (director, 18-); Pub. Health Asn; Water Works Asn. (pres, 10); West. Soc. Eng. (pres). Sewage purification; economics of valuation and appraisement; flood prevention.

Alway, Prof. Frederick J (ames), 1386 Grantham Ave, St. Paul, Minn. *²*Chemistry*. Waterloo, Ont, Can, May 28, 74. B.A, Toronto, 94, hon. D.Sc. 27; Ph.D. Heidelberg, 97. Prof. chem, Nebr. Wesleyan, 98-06; agr. chem, Nebraska, 06-13; *soil chem, Minnesota, and chief div. soils, Exp. Sta.* 13- Mem. fertilizer subcomt, Nat. Research Council. A.A; Chem. Soc; Soc. Agron; Soil Sci. Soc. (pres, 23); Swedish Peat Soc. Reduction of nitro-compounds; hydroxylamino- and nitroso-compounds; bleaching of flour; soils of northern steppes; humus; soil moisture; glacial, prairie, sandy and peat soils; phosphorus and sulfur content of plants.

Alyea, Prof. E (dwin) P (ascal), Duke Hospital, Durham, N. C. *Urology*. Clifton, N. J. Feb. 4, 98. B.S. Princeton, 19; M.D. Hopkins, 23. Instr. surg, Hopkins, 25, urol, 26-29; asst. prof. and assoc. prof. surg. in charge dept. urol, sch. med, Duke, 29— Urol. Asn; fel. Col. Surg. Genito-urinary diseases.

Alyea, Prof. H (ubert) N (ewcombe), D-2 Prospect Apartments, Princeton, N. J. *Chemistry*. Clifton, N. J. Oct. 10, 03. B.S. Princeton, 25, A.M. 26, Ph.D. 28. Am-Scandinavian Foundation fellow, Sweden, 26; Charlotte Elizabeth Procter fellow, Princeton, 26-28; nat. research fellow, Minnesota, 29; int. research fellow, Berlin, 30; instr. chem, Princeton, 30-34, asst. prof, 34— Chem. Soc. Chain reactions; inhibition; heterogeneous and homogeneous catalysis; radiochemistry.

Amadon, Dr. Roger S (hirley), University of Pennsylvania, Philadelphia, Pa. *Veterinary physiology and pharmacology*. Waupun, Wis, Aug. 8, 90. D.V.M., Ohio State, 16. Asst. prof. physiol. and pharmacol, N. Dak. Col. 18-25; prof. vet. physiol, sch. vet. med, Pennsylvania, 25— Physiol. Soc. Phila. Gastric digestion in ruminants; pharmacology of the bovine stomach; blood typing and transfusion in the horse and ox; general anesthesia in the domestic animals.

Amberg, Prof. Charles R (hodimer), Alfred, N. Y. *Ceramics*. Elmira, N. Y. Feb. 8, 05. B.S. Alfred, 27; fellow, Illinois, 27-29, M.S. 29. Prof. ceramic eng, N. Y. State Col.

Ceramics, Alfred, 29— A.A; fel. Ceramic Soc. Applied petrography; x-rays.

Amberg, Dr. Emil, Maccabees Bldg, Detroit, Mich. *Aural surgery*. Santa Fe, N. Mex, May 1, 68. M.D. Heidelberg, 94; Berlin, 97, 98; Vienna, 95, 97, 07. *Practising physician*, 98-House surgeon, aural dept, Mass. Eye and Ear Infirmary, Boston, 96-97; aurist, Detroit Day Sch. Deaf; consulting otologist, Grace Hosp; consulting otolaryngologist, North End Clinic; adj. staff, Harper Hosp. A.A; Col. Surg; Otol. Soc; Am. Med. Asn; Acad. Ophthal. and Otolaryngol. The ear; the lateral sinus; instruments; influence of the work-pause on mental efficiency; interstate reciprocity for the license to practise medicine.

Amberg, Dr. Samuel, Mayo Clinic, Rochester, Minn. *Medicine*. Cannstatt, Germany, Aug. 15, 74. Gymnasium, Cannstatt; Berlin, 95-96; M.D. Heidelberg, 98. Asst. and instr. pediat, Hopkins, 99-03, assoc. 03-10, assoc. prof, 10-12; mem. Sprague Mem. Inst. and assoc. prof. exp. med, Rush Med. Col., Chicago, 12-21; assoc. prof. pediat, med. sch, Minnesota, 21-; assoc. Mayo Clinic, 21— Pharmacologist, C.W.S. 18. A.A; Am. Med. Asn; Pediatric. Soc; Physiol. Soc; Soc. Biol. Chem; Soc. Pharmacol; cor. mem. Vienna Gesell. für Innere Med. und Kinderheilkunde. Pediatrics; pharmacology; physiological chemistry.

Amberson, Prof. J (ames) Burns, Jr, Bellevue Hospital, 415 E. 26th Street, New York, N. Y. *Medicine*. Waynesboro, Pa, June 8, 90. Ph.B. Lafayette Col. 15; fellow, Princeton, 19-22, Ph.D. 22. Consulting physician tuber. Dept. Health, Detroit, 26-27; chief physician, Loomis Sanatorium, Loomis, N. Y, 27-29; asst. prof. clin. med, col. physicians and surg, Columbia, 28-36, prof, 36-; asst. prof. col. med, N. Y. Univ, 34-37, prof, 37- A.A; Am. Med. Asn; Am. Physicians; fel. Col. Physicians; Tuber. Asn; Clin. and Climat. Asn; Harvey Soc; N. Y. Acad. Med. Tuberculosis; chronic pulmonary and chest diseases.

Amberson, Prof. William R (uthrauff), 845 Dickinson St, Memphis, Tenn. *Physiology*. Harrisburg, Pa, June 17, 94. Ph.B. Lafayette Col, 15; fellow, Princeton, 19-22, Ph.D. 22. Instr. physiol. col. med, Tennessee, 21-22, asst. prof, 22-23; sch. med, Pennsylvania, 23-30; prof, Tennessee, 30— Summers, instr. Marine Biol. Lab, Woods Hole, 23-34, research, 34— Physiol. Soc. Blood; respiration; electrophysiology; glandular secretion.

Amblar, Dr. Joseph A (lfred), U. S. Department of Agriculture, Washington, D. C. *Chemistry*. Danbury, Conn, June 30, 89. Ph.B. Yale, 10, Ph.D. 13. Prof. chem, Acadia, 13-16; asst. petrol. chemist, color lab, bur. chem, U. S. Dept. Agr, 17-22, chemist in charge, 22-25; assoc. chemist, carbohydrate lab, 26-27, bur. chem. and soils, 27-; lecturer, George Washington, 27— Exec. cmt, Cmn. on Standardization of Biol. Stains, 23-25, Chem. Soc. rep, 24-26. Chem. Soc; Wash. Acad. Coal-tar intermediates; pyrimidines; pseudothiohydantoins; amines; sulfonic acids; carbohydrates.

Ambrose, Dr. Anthony M (ichael), Stanford University School of Medicine, San Francisco, Calif. *Biochemistry*. Connellsburg, Pa, Sept. 8, 98. B.S. Phila. Col. Pharmacy, 24; M.S. Fordham, 27, Ph.D. 29. Instr. Phila. Col. Pharmacy, 23-24; chemist, H. K. Mulford Co, 24-26; instr. physiol. chem, Fordham, 26-29, asst. prof. biochem, 29-33; consulting chemist, New York, 33-34; assoc. toxicologist, bur. chem. and soils, U. S. Dept. Agr, 34-36, assoc. pharmacologist, 36— Research assoc. Med. Col. of Va, 34-35. U.S.A, 18; capt, C.W.Res. A.A; Chem. Soc; Deuts. Chem. Gesell. The influence of capsicum in digestion; detoxication mechanisms; pharmacology and toxicology of derris; toxicology and metabolism of rotenone; pyrethrum; rhodanates; physiological effect of diethylenglycol.

Ambrose, A (rthur) W (arren), 801 Cherokee Ave, Bartlesville, Okla. *Geology*. Lockeford, Calif, April 20, 89. A.B, Stanford, 14, E.M. 20. Geologist, Shell Co, Calif, 14-17; geol. engineer, Pomeroy and Hamilton, Houston, 17; petrol. technologist, U. S. Bur. Mines, Wash. D. C. 18-19, supt. Petrol. Exp. Sta, Bartlesville, 20, chief petrol. technologist, Washington, 21-22; asst. director, 22-23; manager land and geol. depts, Empire Gas and Fuel Co, 23-25; manager production, Empire Companies, 25-, v. pres, 30— A.A; Asn. Petrol. Geol; Seismol. Soc; Petrol. Inst; Min. and Metal. Eng. (chairman, mid-continent sect, 27, petrol. div, 28, mem, exec. cmt, petrol. div, 29). Petroleum and gas technology.

Ambrose, Dr. H (enry) A (lfred), Gulf Research and Development Corp, Pittsburgh, Pa. *Chemical engineering*.

Newton, Mass., Nov. 13, 02. B.S., Norwich, 24; Ph.D., Mass. Inst. Tech., 30. Junior fellow, Mellon Inst., 29-31, senior fellow, 31-34; *Gulf Research and Develop. Corp.*, 34—Chem. Soc.; Soc. Test. Mat. Rheology; petroleum production; lubrication and lubricants.

Ambrose, Dr. J(ohn) W(illis), Bureau of Economic Geology, Ottawa, Ont., Can. *Geology*. Pincher Creek, Alta., June 20, 04. A.B., Stanford, 32; Ph.D., Yale, 35. Geologist, temporary staff, *Geol. Surv. Can.*, 34, 35-36; geologist, 36—Various phases of geology.

Amdur, Dr. I(sadore), Massachusetts Institute of Technology, Cambridge, Mass. *Chemistry*. Pittsburgh, Pa., Jan. 24, 10. B.S., M.S., Pittsburgh, 30, Ph.D., 32. Nat. research fellow, *Mass. Inst. Tech.*, 32-34; instr. chem., 34—Summer, lecturer, Pittsburgh, 32. Physical chemistry; kinetics of atomic reactions.

Ameele, Dr. Donald J(ules), Kansas State College, Manhattan, Kans. *Zoology*. Detroit, Mich., April 24, 07. A.B., Wayne, 28; Bryant Walker scholar, Michigan, 29, A.M., 30. fellow, 32, Sc.D., 33. Assoc. prof. science, Augustana Col. (S. Dak.), 33-35; helminthol., Michigan, 35-37; instr. zool., 36-37; *Kans. State Col.*, 37—Soc. Zool.; Soc. Parasitol.; Microsc. Soc. Helminthology; trematodes.

Amerine, Dr. Maynard A(ndrew), 214 A St., Davis, Calif. *Agriculture*. San Jose, Calif., Oct. 30, 11. B.S., California, 33, Ph.D., 36. Junior entomol., col. agr., California, 36—Viticulture; photosynthesis; entomol.

Ames, Prof. A(delbert), Jr., Dartmouth College, Hanover, N.H. *Physiological optics*. Lowell, Mass., Aug. 18, 80. A.B., Harvard, 03, LL.B., 06; fellow, Clark, 15-17; hon. A.M., Dartmouth Col., 21. Research prof. physiol. optics, Dartmouth Col., 21—Cmt. physiol. optics, Nat. Research Council, 21, cmt. vision and photo. biol., 24—A.A.; Optical Soc.; Am. Acad.; Am. Research Ophthal. Physiological optics; technique of arts; Aniseikonia.

Ames, Dr. Adeline, Sweet Briar College, Sweet Briar, Va. *Botany*. Henderson, Nebr., Oct. 6, 79. B.S., Nebraska, 03, A.M., 04; Ph.D., Cornell, 13. Asst. bot., Nebraska, 02-04; sci. asst., bur. plant indust., U. S. Dept. Agr., 04-11; asst. pathologist, 11-15; asst. prof. bot., Sweet Briar Col., 19-22; prof. biol., 22—A.A.; Bot. Soc.; Phytopath. Soc. Systematic mycology; plant pathology.

Ames, Dr. Dennis Burley, Rensselaer Polytechnic Institute, Troy, N.Y. *Mathematics*. Bristol, Eng., Sept. 6, 06. B.A., Bishop's Col. (Can.), 27, M.A., 28; Ph.D., Yale, 31. Instr. math., Yale, 31-34; *Rensselaer Polytech.*, 34-37, asst. prof., 37—Math. Soc. Celestial mechanics.

Ames, Prof. E(dward) S(cribner), University of Chicago, Chicago, Ill. *Philosophy*. Eau Claire, Wis., April 21, 70. A.B., Drake, 89, LL.D., 24; B.D., Yale, 92; Ph.D., Chicago, 95. Prof. philos., Butler, 97-00; Chicago, 00-35; dean, Disciples Divinity House, 27—A.A.; Philos. Asn.; Psychol. Asn.; West. Philos. Am. Psychology of religion.

Ames, Pres. J(oseph) S(wetman), 2 Charlotte Place, Guilford, Baltimore, Md. **Physics*. Manchester, Vt., July 3, 64. A.B., Hopkins, 86, fellow, 87-88, Ph.D., 90, LL.D., 36; Berlin, 86-87; LL.D., Pennsylvania, 33. Asst. physics, Hopkins, 88-91, assoc. prof., 91-93; assoc. prof., 93-99, prof., 99-20; director physical lab., 01-26; provost, 26-29, pres., 29-35; emer. pres., 35—Harris lecturer, Northwestern, 13. Chairman, Nat. Advisory Cmt. Aeronautics; chairman div. physical sciences, Nat. Research Council, 24-27. Langley gold medal, 35. Nat. Acad.; Physical Soc. (pres., 19, 20); Am. Acad.; fel. Inst. Aeronaut. Sci.; hon. mem. Royal Inst. Electrodynamics; spectroscopy; spectrum of hydrogen.

Ames, Dr. L(ewis) D(arwin), University of Southern California, Los Angeles, Calif. *Mathematics*. Keeceville, N.Y., July 11, 69. B.Litt., Missouri, 99; A.B., Harvard, 01, A.M., 02, Ph.D., 04. Instr. math., Mo. Nor. Sch., Chillicothe, 90-98, 99-00; Harvard, 01-03; Missouri, 03-06, asst. prof., 06-12, assoc. prof., 12-20; ranching, 20-25; assoc. prof., Texas Tech. Col., 25-26; prof. math., Southern California, 26—Summer, visiting instr., California, 26. Slowly convergent series; analysis situs; continuous groups.

Ames, Prof. Marion A., Elmira College, Elmira, N.Y. *Chemistry*. Lansing, Mich., May 6, 99. A.B., Michigan, 20, M.S., 21; fellow, Bryn Mawr Col., 24-26, Helen Shaeffer Huff Mem. fellow, 26-27, Ph.D., 27. Asst. prof. chem., Hood Col., 21-24;

prof., St. Mary-of-the Woods Col., 27-31; *Elmira Col.*, 31-Chem. Soc. Organic chemistry.

Ames, Prof. Oakes, University Museum, Cambridge, Mass. **Botany*. North Easton, Mass., Sept. 26, 74. A.B., Harvard, 98, A.M., 99. Asst. bot., Harvard, 99-00, instr., 00-10, asst. prof., 15-26, prof., 26-32, Arnold prof., 32-35, supervisor bot. museum, Atkins Institution, Arnold Arboretum, Cuba, chairman council bot. collections, univ., 23-35, research prof. bot. and director bot. museum, 35—Asst. director bot. garden, Harvard, 99-09, director, 09-21. A.A.; Soc. Nat.; Bot. Soc.; Am. Orchid Soc. (v. pres.); Am. Acad.; New Eng. Bot. Club (past v. pres.); Mass. Hort. Soc. (v. pres.); Boston Soc. Nat. Hist.; Biol. Soc. Wash.; N. Y. Acad.; Wash. Acad.; fel. Linnean Soc. London; C. Z. Orchid Soc. (hon. pres.); Int. Asn. Bot. Economic botany; orchidology.

Ames, Dr. J(ohn) W(illiam), 624 Metropolitan Bldg., Denver, Colo. *Medicine*. Eagle River, Mich., Jan. 15, 74. M.D., Michigan, 98. Sanit. officer, U. S. Pub. Health Service, Honolulu, 98-00, Manila, 00-04, Havana, 06-09, staff, hygienic lab., 07; asst. prof. pediat., Colorado, 10-36, assoc. prof., 36-Ed., 'Denver Med. Times,' 13-14. Colo. Board Health, 18-; pres., Denver Pub. Health Council. Lieut. col., M.C., 17-19. Acad. Pediat.; Denver Med. Soc. (pres.). Pediatrics; diseases of the tropics; diseases of children; public health.

Amick, Chester A(lbert), 121 E. Maple St., Bound Brook, N.J. *Chemistry*. Scipio, Ind., April 19, 95. A.B., Indiana, 20, A.M., 21; Lyons; Cornell. Instr., high sch., Ind., 21-25; research chemist, Pacific Mills, Mass., 27-31; director chem. research, U. S. Finishing Co., Providence, 31-32; Glenlyon Print Works, Phillipsdale, R. I., 32-35; research chemist, Calco Chem. Co., 35—A.A.; Chem. Soc.; fel. Inst. Chem.; Asn. Textile Chem. and Colorists; British Soc. Dyers and Colorists. Textile, colloid and carbohydrate chemistry; ultra-violet irradiation; textile printing; starches and gums; synthetic resins.

Amick, Prof. H(arold) C(lyde), University of Tennessee, Knoxville, Tenn. *Geography, Geology*. Greensboro, N.C., Jan. 22, 97. A.B., Elon Col., 20; A.M., North Carolina, 23. Teaching fellow, North Carolina, 22-23; foundation engineer, N.C. Highway Cmn., 23-24; instr. econ. geog. and geol., Tennessee, 24-28, asst. prof., 28—A.A.; Tenn. Acad. Economic geography and geology; slates of east Tennessee; stone quarries of Tennessee; geography of east Tennessee.

Amick, Dr. T(homas) C(icer), Louisburg College, Louisburg, N.C. *Mathematics*. Liberty, N.C., Feb. 14, 69. L.I., George Peabody Col., 91; Ph.D., Central (Ind.), 01; Virginia, 16-17; Chicago, 17-19; A.B., North Carolina, 32, A.M., 33. Teacher, high sch., N.C., 91-06; Western Maryland Col., 06-09; prof. math. and business manager, Elon Col., 09-32; math., Louisburg Col., 35—Summers, prof., N.C. State Col., 17-23; N.C. State Nor. Col., Asheville, 25-26; Appalachian State Teachers Col., 30, 31. Math. Soc.; Math. Asn.; Elisha Mitchell Sci. Soc. Analytic geometry.

Ammann, Dr. O(thmar) H(erman), 111 Eighth Ave., New York, N.Y. *Civil engineering*. Schaffhausen, Switzerland, March 26, 79. C.E., Swiss Fed. Polytech. Inst., Zurich, 02, hon. D.Sc., 30; D.E., N.Y. Univ., 31; M.S., Yale, 32. Struct. draftsman, Wartman and Valette, Brugg, Switzerland, 02; asst. eng., Buckheim and Heister, Frankfurt, Germany, 03-04; designer steel bridges, Joseph Mayer, New York, 04; draftsman, Pa. Steel Co., Steelton, 04-06; designer steel bridges, Ralph Modjeski, Chicago, Ill., 06; asst. engineer, Pa. Steel Co., Steelton, 06-09; prin. asst. engineer, C. C. Schmeider and F.C. Kunz, Phila., 09-12; prin. asst. engineer and asst. chief engineer, Gustave Lindenthal, New York, 12-23; consulting engineer, New York, 23-25; chief engineer bridges, Port N.Y. Authority, 25-30, chief engineer, 30—Mem. board engineers, Golden Gate Bridge, San Francisco, 29-; chief engineer, Triborough Bridge Authority, New York, 34—Thomas Fitch Rowland prize, Am. Soc. Civil Eng., 18. A.A.; Civil Eng.; Inst. Consulting Eng.; Ry. Eng.; Soc. Test. Mat.; British Inst. Civil Eng. Engineering; design and construction of bridges and other engineering projects.

Amos, Dr. Carroll E., 46 Ninth St., Newark, Ohio. *Mathematics*. Fredericktown, Ohio, Jan. 26, 06. B.S., Denison, 28; univ. scholar, Ohio State, 31-32, Ph.D., 32. Asst. math., Ohio State, 28-30, physics, 30-31, hon. fellow, 32-33; head dept. math., Whitworth Col., 33-34; emergency sch. supervisor, Licking County, Ohio, 34-36; dist. supt. adult educ., southeast. Ohio, Works Progress Admin., 36—Math. Asn. Applications of

integral equations to potential and diffraction problems; the place of open forums in workers' education.

Amoss, Dr. Harold L(indsay), Greenwich, Conn. ***Pathology*. Cobb, Ky., Sept. 8, 86. B.S. Kentucky, 05, M.S. 07; M.D. Harvard, 11, Dr. P.H. 12; hon. Sc.D. George Washington, 22. Chemist, Ky. Exp. Sta., 05-06; hygienic lab., U. S. Pub. Health Service, 06-07; bur. chem., U. S. Dept. Agr., 07-08; West. Pa. Hosp., 09; asst. prev. med., Harvard Med. Sch., 09-12; bacter. and path., Rockefeller Inst., 12-14; assoc., 14-19; assoc. mem., 19-22; assoc. prof. med. sch. med., Hopkins, and assoc. physician, Hopkins Hosp., 22-30; prof. Duke, 30-33; *practising physician*, 33—Visiting prof., Peiping Union Med. Col., 31; Rockefeller Inst., New York, 33—Assoc. ed., 'Medicine.' A.A.; Soc. Exp. Path.; Soc. Immunol.; Soc. Clin. Invest.; Soc. Exp. Biol.; Am. Physicians; Col. Physicians; Harvey Soc.; Interurban Clin. Club. Internal medicine; acidity of gastric contents; oxidases in the blood; expired air; dysentery; poliomyelitis; meningitis; encephalitis; experimental epidemiology; pneumococcus; erysipelas; brucella; infectious diseases; streptococcus pneumoniae.

Amsden, Charles (Avery), 4118 Monterey St., Los Angeles, Calif. *Archeology*. Forest City, Iowa, Aug. 18, 99. A.B., Harvard, 22; licence en droit, Toulouse, France, 21. Curator, Southwest Museum, Los Angeles, 27-28, sec'y and treas., 28—Mem. advisory board, Lab. Anthropol., 36—Harvard expeds., Ariz., 13-15; Univ. California coastal explor., 28; Andover-Pecos expd., 29; Southwest Museum explorations, Nev. and Calif., 30—Anthrop. Asn. (councilor, 31-); Soc. Archeol.; Southwest. Archeol. Federation (sec'y, 29-31). American archeology; aboriginal American textiles, pottery and stone implements; early man in America.

Amsden, Dr. George S(amuel), 610 Park Ave., New York, N. Y. *Psychiatry*. Ashtabula, Ohio, May 7, 70. A.B., Harvard, 01, M.D. 05; Munich, 09-10. Intern, Bloomingdale Hosp., 05-06; director lab., 07-14; senior asst. physician, 14-24; prof. clin. psychiatrist, Albany Med. Col., Union (N.Y.), and director psychopath dept., Albany Hosp., 24-29; prof. psychiatrist, N. Y. Post-Grad. Med. Sch., Columbia, 29-31; med. col., Cornell, 31-35; retired. Psychiatrist in chief, N. Y. Hosp., 31-35. A.A.; Psychiatr. Soc.; Psychopath. Asn.; Asn. Research Nervous and Mental Disease; Am. Med. Asn.; Eugenics Research Asn.; N. Y. Psychiatr. Soc.; N. Y. Acad. Med. Personality in its psychiatric and educational bearings.

Amsden, Prof. J(ohn) P(age), 4 Brewster Road, Hanover, N. H. *Chemistry*. Attleboro, Mass., May 23, 99. A.B., Dartmouth Col., 20; A.M., Columbia, 23, Ph.D., 25. Instr. chem., Dartmouth Col., 20-22, 25-30, asst. prof., 30-36, prof., 36-Chem. Soc.; N. H. Acad. Colloidal chemistry; composition of colloidal gold hydrosols.

Amstutz, Dr. E(dward) D(elbert), 622 Brandywine Ave., Schenectady, N. Y. *Organic chemistry*. New Athens, Ohio, May 1, 09. B.S. Col. of Wooster, 30; research scholar, Lawrence Col., 30-32, M.S. 31; Ph.D., Cornell, 36. Asst. chem., Cornell, 33-36; instr., Union (N. Y.), 36—Chem. Soc. Research in the furan series.

Amundsen, Dr. Lawrence H(ardin), Connecticut State College, Storrs, Conn. *Chemistry*. Pine River, Wis., Sept. 23, 09. B.S. Col. of Ozarks, 31; Ph.D., Florida, 35. Asst. org. chem., Florida, 31-35; instr. chem., Adelphi Col., 35-36; Conn. State Col., 36—Summer, instr., Florida, 35. Chem. Soc. Preparation of 5, 7-di-iodoisatin; derivatives of o-aminophenol and o-anisidine.

Anastasi, Dr. Anne, Barnard College, Columbia University, New York, N. Y. *Psychology*. New York, N. Y., Dec. 19, 08. A.B., Columbia, 28, Ph.D., 30. Asst. psychol., Columbia, and lecturer, Barnard Col., 29-30; instr., 30—A.A.; Psychol. Asn.; N. Y. Acad. (sec'y, psychol. sect., 38-). Mental trait organization; psychological statistics; learning; judgment.

Anderegg, Dr. F(redrick) O(sband), Owens-Illinois Glass Co., Newark, Ohio. *Chemistry*. Oberlin, Ohio, Sept. 20, 87. A.B., Oberlin Col., 10; A.M., Harvard, 12, Ph.D., 15. Chemist, Mallinckrodt Chem. Works, 14-16; instr. chem., Illinois, 16-18; asst. prof., Purdue, 18-25; assoc. prof., 25-26; senior indust. fellow, Mellon Inst., 26-30; consulting specialist, building materials, 30—A.A.; Chem. Soc.; Soc. Test. Mat.; Concrete Inst.; Ind. Acad. Silent discharge; lead corrosion; efflorescence and staining of Indiana limestone; soil colloids; cement; cement products; masonry; prefabricated housing.

Anders, Dr. Howard S. 1808 Pine St., Philadelphia, Pa. *Medicine*. Norritonville, Pa., Nov. 12, 66. A.B., Cent. High Sch., Phila., 85, A.M., 92; M.D., Pennsylvania, 90. Intern, Presb. Hosp., Phila., 90-91; instr. clin. med., Medico-Chirurg. Col. Phila., 94-96; lecturer, 97-99, prof. physical diagnosis, 99-13; *practising physician*. Physician, Samaritan and Phila. Gen. Hosps.; pioneer in founding Pa. State Hosp. for tuberculous poor. Am. Med. Asn.; Climat. Asn.; Pub. Health Asn.; Pa. Soc. Tuber. (past pres); Phila. Soc. Arts (past pres); Royal Meteorol. Soc. Public health; epidemiology; physical diagnosis; street width in relation to mortality rate of pulmonary tuberculosis; dust-borne diseases; tuberculosis; the weather and epidemic influenza; heart disease; periodic health examinations.

Andersch, Dr. Marie A(melia), Woman's Medical College of Pennsylvania, Philadelphia, Pa. *Biochemistry*. Rock Island, Ill., April 4, 05. B.S. Illinois, 26; M.S. Iowa, 32, Ph.D., 34. Chemist, Michael Reese Hosp., Chicago, Ill., 26-31; assoc. med., Iowa, 34-35; asst. prof. biochem., Woman's Med. Col. of Pa., 35—Effect of intravenous injections of colloids.

Andersen, Alice M. U. S. Department of Agriculture, Washington, D. C. *Plant physiology*. B.Mus., Nebraska, 16, A.B., 21, A.M., 22. Scientist, bur. plant indust., U. S. Dept. Agr., 22—A.A.; Bot. Soc.; Bot. Soc. Wash. Morphology.

Andersen, Prof. Allen E(mill), 5 Wagner College Road, Staten Island, N. Y. *Mathematics*. Viborg, S. Dak., Dec. 17, 99. A.B., Nebraska, 23, A.M., 24; Ph.D., Harvard, 34. Prin. high sch., Nebr., 21-22; teaching fellow math., Nebraska, 22-24; instr., Oklahoma, 24-25; asst. prof., Northeast Mo. State Teachers Col., 25-28; instr., Harvard, 29-32; Worcester Polytech., 32-33; prof. and chairman dept., Wagner Col., 33—Topics in theory of binary forms.

Andersen, Dr. Carl N(orman), 53 Seaver St., Wellesey Hills, Mass. *Chemistry*. Anglesea, N. J., Aug. 12, 96. B.S., Pennsylvania, 21; Ferguson fellow, Columbia, 22-24; Ph.D., 24. Research chemist, Vacuum Oil Co., 24-26; Charles Pfizer, 26-27; Frazer Tablet Co., 27-28; Lever Bros. Co., 28—Chem. Soc. Soaps; oils; glycerine; organo-metallic compounds; synthesis of phenyl mercury compounds and their bacteriological and biochemical relations; biochemistry of fats.

Andersen, Dr. Dorothy H(ansine), Babies Hospital, 167th St. and Broadway, New York, N. Y. *Pathology*, *Endocrinology*. Asheville, N. C., May 15, 01. A.B., Mt. Holyoke Col., 22; M.D., Hopkins, 26; Sc.D., Columbia, 35. Instr. anat., sch. med., Rochester, 26-27; intern, Strong Mem. Hosp., 27-28; instr. path., col. physicians and surg., Columbia, 29-35, assoc., 35—attending pathologist, Babies Hosp., 35—Asn. Anat.; Soc. Exp. Biol.; Soc. Exp. Path.; Harvey Soc.; N. Y. Acad. Med. Physiology of endocrine glands.

Andersen, Prof. Emma N(athalia), University of Nebraska, Lincoln, Nebr. *Botany*. Ames, Nebr. A.B., Nebraska, 10, A.M., 13; Ph.D., Chicago, 27. Teacher, high sch., Nebr., 13-17; asst. prof. bot., Nebraska, 17—A.A.; Bot. Soc.; Phytopath. Soc.; Micros. Soc.; Nebr. Acad. Plant morphology; microchemistry.

Andersen, Dr. Hans P(eter), The Upjohn Co., Kalamazoo, Mich. *Organic chemistry*. Lake Benton, Minn., Feb. 11, 04. A.B. St. Olaf Col., 27; M.S. Okla. Agr. and Mech. Col., 29; Ph.D., Iowa, 31. *Organic chemist*, Upjohn Co., 31—Chem. Soc. Homologs of apocynol and apocynin; zinc alkyls and chloroamines; organic mercurials.

Andersen, Prof. Olaf, 657 Fairmont Ave., Westfield, N. J. *Mineralogy, Petrology, Geology*. Honefoss, Norway, March 12, 84. B.A., Oslo, 03, D.Sc., 11; Columbia, 11-12. Petrologist, geophys., lab., Carnegie Institution, 12-18; govt. geologist, Norwegian Geol. Surv., Oslo, 18-28; petrologist, research lab., U. S. Steel Corp., 28-30; consulting petrologist, 30—prof. petrog. analysis, Stevens Inst. Tech., 30—Lecturer, Oslo, 10-11, 18-28; Stevens Inst. Tech., 28-30; Princeton, 34; Columbia, 36. Reusch medal, Norway Geol. Soc., 31. Fel. Miner. Soc.; N. Y. Miner. Club (v. pres., 36); Norsk Geol. Foren. (pres., 23, councilor, 24); Stockholm Geol. Foren. Physico-chemical petrology; non-metallic mineral deposits; Precambrian geology of Norway.

Andersen, Prof. Paul, University of Minnesota, Minneapolis, Minn. *Structural engineering*. Copenhagen, Denmark, Nov. 24, 00. B.S., Royal Polytech. Inst. Copenhagen, 24; M.S. Illinois, 32, Ph.D., 34. Struct. engineer, Am. Bridge Co., N. Y.,

24-29; designer bridges, State Highway Dept., Ark., 29-31; instr. struct. eng., Minnesota, 34-35; struct. engineer, Panama Canal, 35-37; assoc. prof. struct. eng., Minnesota, 37- Civil Eng.; Eng. Educ. Structural and elastic properties of concrete; torsion; structural analysis.

Anderson, Dr. Alexander P(erce), Laboratory, Red Wing, Minn. *Botany, Industrial chemistry. Red Wing, Minn., Nov. 22, 62. B.S., Minnesota, 94, M.S., 95; Ph.D., Munich, 97. Botanist and bacteriologist, Clemson Col., 97-99; asst. prof. hot., Minnesota, 99-00; biologist and entomologist, Clemson Col., 00-01; curator herbarium, Columbia, 01; private research. A.A.; Forestry Asn.; Deuts. Bot. Gesell. Formation of abnormal resin-canals in Coniferae; growth of fruits determined by weighing; plant diseases; starch and starchy products; puffed food products; crackles.

Anderson, Dr. Alfred B(ernhard) C(orinellus), College of Agriculture, University of California, Davis, Calif. Physics. Los Angeles, Calif., July 25, 06. A.B., California at Los Angeles, 28; Ph.D., Calif. Inst. Tech., 33. Fellow, Calif. Inst. Tech., 33-34; physicist, Calif. Forest and Range Exp. Sta., U. S. Forest Service, 35-36; teaching and research, col. agr., California, 36- Structure and properties of extremely thin metallic films.

Anderson, Alfred C(onrad), U. S. Department of Agriculture, Washington, D.C. Agronomy. Church's Ferry, N. Dak., July 11, 87. B.S.A., N. Dak. Col., 12. N. Dak. Soil Surv., 12-16; asst. soil surveyor, U. S. Dept. Agr., 16- A.A.; Soc. Agron.; Soil Sci. Soc. Soil classification and genesis.

Anderson, Prof. Alfred L(eonard), 851 E. Seventh St., Moscow, Idaho. Geology. Moscow, Idaho, Nov. 19, 00. B.S., Idaho, 22, M.S., 23; Ph.D., Chicago, 31. Asst. prof. chem., Idaho Tech. Inst., 24-26; geologist, Idaho Bur. Mines and Geol., 27-28; asst. prof. geol., Idaho, 28-32; prof., 32-; asst. geologist, U. S. Geol. Surv., 31- Fel. Geol. Soc.; Soc. Econ. Geol.; Geophys. Union; Northwest Sci. Asn. Structural geology; physiography; petrology; metallic mineral deposits.

Anderson, Prof. Amos C(arey), Ohio University, Athens, Ohio. Psychology. Centerville, Pa., June 25, 97. A.B., Michigan, 22, A.M., 24; Ph.D., Yale, 31. Instr. Mich. State Teachers Col., Mt. Pleasant, 22-23; head dept. psychol., N. Dak. State Teachers Col., Mayville, 24-25; from instr. to assoc. prof., Ohio (Athens), 25- Assoc. Psychol. Asn.; Midwest. Psychol. Asn. Feeling and recall; extraneous factors and learning; time discrimination in the white rat.

Anderson, Andrew W(allace), 2725 Montlake Blvd., Seattle, Wash. Fisheries. Dawson, Yukon, Can., April 25, 01. B.S., Washington (Seattle), 22. Construction, installation and design, fisheries reduction plants, Calif., Norway, Iceland and Hawaii, 22-30; fisheries statistic and marketing, Bur. Fisheries, 30, asst. fisheries technologist, 30- Lecturer, sch. fisheries, Washington (Seattle). Trustee, Mountaineers, Inc. Fisheries reduction; fishery by-products; fish meals and oils.

Anderson, Prof. Arthur, University of Nebraska, Lincoln, Nebr. Agronomy. Ulysses, Nebr., June 29, 89. B.S., Nebraska, 16, M.S., 23; Ph.D., Ohio State, 32. Asst. agron., Nebraska, 17-18; instr., 18-19; asst. prof., 19-34; assoc. prof., 34- A.A.; Soc. Agron. The genetics, ecology and physiology of field crops.

Anderson, Dr. A(rthur) B(ernhardt), 8718 Harper Ave., Chicago, Ill. Chemistry. North Fond du Lac, Wis., Feb. 17, 07. A.B., Wisconsin, 29, U. S. Dept. Agr. fellow, 29-31, Ph.D., 33. Fellow biochem., Wisconsin, 33-34; chemist, Quaker Oats Co., Cedar Rapids, 34-37, research chemist, Chicago, 37- Wood, plant and cereal chemistry.

Anderson, Prof. Arthur L(awrence), Iowa State College, Ames, Iowa. Animal husbandry. Minneapolis, Minn., Nov. 5, 93. B.S., Minnesota, 16; M.S., Iowa State Col., 22. Asst. vet. med., Minnesota, 16-17; instr., high sch., Minn., 17-19; animal husbandry, Minnesota, 19-20; asst. prof. and assoc. prof., Iowa State Col., 20- Soc. Animal Production; Nat. Swine Growers Asn. (director). Animal nutrition; pork production; live-stock judging.

Anderson, Dr. Arthur (von) K(rogh), State College, Pa. Biochemistry. Montevideo, Minn., Feb. 27, 90. B.S.A., Minnesota, 13, M.S., 15; Shevlin fellow, 15-16, Ph.D., 23. Prof. chem., St. Olaf Col., 16-18; instr. anal. chem., Minnesota, 19-20; agr. biochem., 20-23; assoc. prof. physiol. chem., Pa. State Col., 23-25, prof., 29- 2nd lieut., Sanit. C., 18-19; lieut., Sanit. R.C., 20-

Chem. Soc. (chairman, cent. Pa. sect., 31). Blood chemistry; fungus metabolism; physiological chemistry.

Anderson, Dr. Bert Geo(rge), Yale University, New Haven, Conn. Dentistry. Litchfield, Minn., Sept. 10, 88. D.D.S., Minnesota, 14. Instr. dentistry, Minnesota, 14-17; asst. prof., 18-22; assoc. oral surg., Peiping Union Med. Col., 22-26; asst. prof., 26-30; assoc. prof. dentistry, Columbia, 30-31; asst. prof. surg., sch. med., Yale, 31- Assoc. dental surgeon, New Haven Hosp. and Dispensary. Dental Asn.; N. Y. Acad. Dentistry; Int. Dental Research Asn.; Int. Col. Dentists. Dental caries.

Anderson, Dr. Bertil G(ottfrid), Western Reserve University, Cleveland, Ohio. Zoology. Escanaba, Mich., Jan. 5, 04. A.B., Augustana Col. (Ill.), 26; M.S., Iowa, 29, Ph.D., 30. Asst. biol., Augustana Col. (Ill.), 24-26; instr., high sch., Ill., 26-27; asst. zool., Iowa, 27-30; instr. biol., Western Reserve, 30- Summers, visiting prof., Transylvania Col., 33, 34. A.A.; Soc. Zool.; Limnol. Soc.; Ohio Acad. Growth; regeneration; general physiology; physiology of Cladocera.

Anderson, C. Travis, U. S. Bureau of Mines, Pittsburgh, Pa. Physical chemistry. Iowa, June 17, 01. Stanford, 25. Asst. physical chemist, Pacific Exp. Sta., U. S. Bur. Mines, and assoc. physical chemist, Pittsburgh Exp. Sta. Chem. Soc. Low temperature specific heats on organic compounds; metals, oxides, sulfides, carbonates and sulfates; metallurgy of iron and steel.

Anderson, Carl B(ernard), 1120 Wabash Ave., Mattoon, Ill. Geology. Nebraska City, Nebr., Sept. 6, 89. Nebraska, 08-11; B.S., Washington (Seattle), 12; fellow, Chicago, 12-16. Geologist, Ill. Geol. Surv., 13-16; Gypsy Oil Co. and Gulf Oil Corp., 16-19; consulting geologist and petrol. engineer, New York, 19-23; Tulsa, 23-35; div. geologist, Gulf Oil Corp., 35- Consulting mining engineer, U. S. Bur. Mines, 21-22. Summers, U. S. Geol. Surv., 10-12, 34. A.A.; Asn. Petrol. Geol. Stratigraphy; artesian waters of Illinois; the occurrence of petroleum and gas.

Anderson, Dr. Carl D(avld), California Institute of Technology, Pasadena, Calif. *Physics. New York, N. Y., Sept. 3, 05. B.S., Calif. Inst. Tech., 27; Charles A. Coffin fellow, 27-28, Ph.D., 30. Teaching fellow physics, Calif. Inst. Tech., 27-30, research fellow, 30-33; asst. prof., 33- Gold medal, Am. Inst., 35; Nobel prize, 36; Cresson medal, Franklin Inst., 37. X-ray photoelectrons; cosmic and gamma rays; positive electrons; induced radioactivity.

Anderson, Prof. C(arl) L(eonard), Utah State College, Logan, Utah. Hygiene, Public health. Ironwood, Mich., Feb. 28, 01. B.S., Michigan, 28, M.S., 31, Dr.P.H., 33. Director health educ., Grosse Ile, Mich., 28-31; pub. health admin., State Dept. Health, Mich., 31-32; rural health admin., State Dept. Health, Mich., and U. S. Pub. Health Service, 33-35; asst. prof. and assoc. prof. hygiene and pub. health, Utah State Col., 35- Physiology; mental and physical hygiene.

Anderson, Prof. Charles A(lfred), University of California, Berkeley, Calif. Geology. Bloomington, Calif., June 6, 02. A.B., Pomona Col., 24; Ph.D., California, 28. Assoc. geol., California, 26-28; instr., 28-30; asst. prof., 30- Fel. Geol. Soc.; Geophys. Union; Miner. Soc. Ore deposits; petrology; volcanology.

Anderson, Prof. Charles H(erbert), University of Kentucky, Lexington, Ky. Engineering. Birmingham, Eng., Sept. 68. Private schs., England. Chief engineer, Seattle, Renton and South. R.R.; Cincinnati Car Co.; Westinghouse Elec. and Cincinnati Car Co.; prof. eng. design, Kentucky, 19- Engineering design; constant pressure internal combustion motors.

Anderson, Dr. Claude M(atthews), Jr. Leander McCormick Observatory, University, Va. Astronomy. Denver, Colo., April 17, 07. A.B., California, 29, A.M., 30, Ph.D., 33. Research assoc. astron., California, 34-37; instr., McCormick Observatory, Virginia, 37- Astron. Soc. Pacific. Theoretical astronomy.

Anderson, Clifford N(orman), Bell Telephone Laboratories, 463 West St., New York, N. Y. Radio engineering. Scandinavia, Wis., Sept. 22, 95. Ph.B., Wisconsin, 19, M.S., 20; Am. Scandinavian Foundation fellow, Norway, 21-22. Prin. schs., Wis., 13-17; instr. eng. physics, Wisconsin, 19-20; engineer, standardizing lab., Gen. Elec. Co., Mass., 20-21; radio engineer, dept. develop. and research, Am. Tel. and Tel. Co., 22-34; Bell Tel. Labs., 34- Ensign, U.S.N.R., 17-19. Radio Eng.; Geophys. Union. Radio transmission.

Anderson, Dr. David Allen, Equitable Life Assurance Society, Minneapolis, Minn. *Education, Psychology*. Lamoni, Iowa, Aug. 19, 74. A.B., Iowa, 08, A.M., 10, traveling fellow, 10-11; Ph.D., 12. Prof. educ., Lacsrosse State Nor. Sch., 12-13; teacher and prin. schs., Iowa and Ill.; asst. prof. educ., Washington (Seattle), 13-16; assoc. prof., 16-17; prof. educ. and head dept. educ. and psychol., Pa. State Col., 17-26; pres., Ohio State Nor. Col., Kent, 26-28; North. Nor. and Indust. Sch., S. Dak., 28-33; *insurance underwriter*, Equitable Life Assurance Soc. of the U. S., 33- Summer schs., 11-26. Soc. Study Educ. Duration of tones; time interval; direction of sound; darkness and quiet; pitch discrimination; curricula for secondary education.

Anderson, D(avid) Quentin, Scripps Institution of Oceanography, La Jolla, Calif. *Bacteriology*. Manti, Utah, Sept. 20, 05. B.S., Utah, 28; M.S., Iowa State Col., 30. Teaching fellow bacter., Iowa State Col., 28-30; junior bacteriologist, eng. exp. sta., 30-31; agr. by-products lab., bur. chem. and soils, U. S. Dept. Agr., 31-34; asst. marine bacteriologist, Scripps Institution, California, 34- West. Soc. Nat.; Soc. Pacific. Sanitary bacteriology; public health engineering; food and fermentation chemistry; waste disposal; biological utilization of agricultural wastes; marine bacteriology; oceanography.

Anderson, Prof. Donald B(enton), College of Agriculture, University of North Carolina, Raleigh, N. C. *Plant physiology*. Schoolcraft, Mich., Sept. 1, 99. A.B., B.S., Ohio State, 20, A.M., 22, fellow, 24-25; Ph.D., 25. Instr. bot., Wisconsin, 23-24; asst. prof., N. C. State Col., 25-29; assoc. prof., 29-36; prof., 36-, cotton fiber investigator, U. S. Dept. Agr., North Carolina, 36- Int. Educ. Board fellow, Vienna, 27-28. A.A.; Soc. Plant Physiol.; Bot. Soc.; N. C. Acad. Plant microchemistry; cell wall structure.

Anderson, Dr. Douglas S(mith), Tulane University, New Orleans, La. *Electrical engineering*. Lexington, Va., Sept. 6, 71. A.B., Washington and Lee, 90, hon. Sc.D., 33; A.M., Tulane, 92; Polytech. Sch., Zurich, 06-07. Asst. prof. physics, Tulane, 93-97; assoc. prof., 97-00; prof. elec. eng., Mississippi, 00-01; assoc. prof., Tulane, 01-06; prof. and head dept., 07-36; dean col. eng., 19-36; retired. A.A.; Elec. Eng.; Eng. Educ.

Anderson, Dr. Earl J(ennings), University Farm, St. Paul, Minn. *Plant pathology*. Roy, Wash., June 8, 08. B.S., State Col. Wash., 32, M.S., 34; Ph.D., Maryland, 37. Asst. bot., Maryland, 34-35; Exp. Sta., 35-37; nat. research fellow, Minnesota, 37- Latent viruses in potatoes; powdery mildews of legumes; cytology of fungi; physiological aspects of root-rot diseases.

Anderson, Prof. Edgar, Missouri Botanical Garden, St. Louis, Mo. *^oBotany, Genetics. Forestville, N. Y., Nov. 9, 97. B.S., Mich. State Col., 18; M.S., Harvard, 20, Sc.D., 22. Asst. genetics, Harvard, 21-22; asst. prof. bot., Washington (St. Louis), 22-30; assoc. prof., 30-31; geneticist, Mo. Bot. Garden, 22-31; arborist, Arnold Arboretum, Harvard, 31-35; prof. bot., Washington (St. Louis), and geneticist, Mo. Bot. Garden, 35- Nat. research fellow, 29-30. Order Yugoslavian Crown, 37. A.A.; Herb. Soc.; Genetics Soc.; Soc. Nat.; Am. Acad. Self-study; geographical variation.

Anderson, E(dmund) A(rnold), Circle Drive, Palmerton, Pa. *Metallurgy*. Bridgeport, Conn., July 27, 99. Ph.B., Yale, 20, M.S., 23. Metallurgist, research div., N. J. Zinc Co., 23- Min. and Metal. Eng. Zinc and zinc alloys; electroplating on zinc; x-ray of zinc and zinc alloys.

Anderson, Edward, 1111 W. Michigan, East Lansing, Mich. *Mechanical engineering*. Milwaukee, Wis., Oct. 10, 94. B.S., Wisconsin, 18, M.S., 28. Instr. steam and gas eng., Wisconsin, 19-28; asst. and assoc. prof. mech. eng., Nebraska, 28-30; petrol. production, Tulsa, 30-33; sales engineer, 33-34; assoc. prof. mech. eng., Iowa, 34-35; instr., Wisconsin, 35-36; Mich. State Col., 36- Mech. Eng. (sec'y, mid-continent petrol. sect., 30); Eng. Educ.; Soc. Mil. Eng. Petroleum production.

Anderson, Dr. E(dward) E(ric), Harvard University, Cambridge, Mass. *Psychology*. Stanberry, Mo., April 6, 05. A.B., Illinois, 29, A.M., 30, fellow, 30-31; Ph.D., 34. Asst. psychol., Illinois, 31-34; nat. research fellow biol. science, Stanford, 34-35; instr. and tutor psychol., Harvard, 35- Assoc. Psychol. Asn. Motivation; individual differences; animal behavior.

Anderson, Prof. Edward X, University Station, N. Dak. *Chemistry*. Minneapolis, Minn., Feb. 9, 85. B.S., Minnesota,

08, M.S., 09; Ph.D., Iowa, 15. Asst. chem., Minnesota, 04-09; instr., Iowa, 09-13; instr., North Dakota, 13-17, asst. prof., 17-25; assoc. prof., 25- Electrical conductivity of salts in pyridine; nucleation of vapors, pure and mixed, in dust-free air; chemical etymology.

Anderson, Prof. Edwin J(oseph) (Arthur), Pennsylvania State College, State College, Pa. *Entomology*. St. Marys, Pa., April 19, 00. B.S., Pa. State Col., 24; M.S., Cornell, 25. Asst. apicult., Pa. State Col., 21-24; instr. entom., Clemson Col., 25-26; assoc. prof., Pa. State Col., 26- A.A.; Asn. Econ. Entom. (v. pres., sect. apicult., 37); Entom. Soc. Amer. Pathological changes in the tissues of the honey-bee infested with the mite, *Acarapis woodi*; diseases and enemies of the honey-bee; bee-keeping in Pennsylvania.

Anderson, Prof. E(lmer) O(lin), Connecticut State College, Storrs, Conn. *Dairy industry*. Dassel, Minn., Aug. 18, 97. B.S., Minnesota, 20, M.S., 22. Asst. dairy indust., Minnesota, 20-22; instr., Nebraska, 22-25; asst. prof., Conn. State Col., 25-28; assoc. prof., 28- Dairy Sci. Asn. (chairman, east. sect. 30). Soft curd milk; changes in milk during freezing; associated organisms, methods of control and detection and diathermy of bovine infectious mastitis.

Anderson, Prof. Ernest, University of Arizona, Tucson, Ariz. *Chemistry*. Kaufman, Texas, 81. B.S., Texas, 03, M.S., 04, fellow, 04-05; fellow, Chicago, 06-09. Ph.D., 09. Research instr. chem., Chicago, 09-12; asst. prof., Mass. Col., 12-14, assoc. prof., 14-17; prof. agr. chem., Transvaal, 17-20; chem., Nebraska, 20-23; Arizona, 23- A.A.; Chem. Soc.; Royal Soc. S. Africa. Organic and physical chemistry; sugars; aldehydes; calorimeter; alkali soils of South Africa; physical properties of arsenic trioxide; benzoil condensation; hydrolysis of plant gums; chemistry of the hemicelluloses.

Anderson, Prof. E(rnest) G(ustaf), California Institute of Technology, Pasadena, Calif. *Genetics*. Concord, Nebr., 91. B.S., Nebraska, 15; Ph.D., Cornell, 20. Research assoc., Carnegie Institution, 20-22; instr. biol., Col. City of N. Y., 22-23; nat. research fellow, Michigan, 23-26; asst. prof. bot., 26-27; Lloyd fellow science, 27-28; assoc. prof. genetics, Calif. Inst. Tech., 28- A.A.; Soc. Nat.; Genetic Asn.; Bot. Soc. Genetics of maize and Drosophila.

Anderson, Dr. E(rnest) W(illard), Iowa State College, Ames, Iowa. *Applied mathematics*. Fargo, N. Dak., Aug. 23, 05. B.S., N. Dak. Col., 26; M.S., Iowa State Col., 28, Ph.D., 33. Instr. math., Iowa State Col., 27-37, asst. prof., 37- Physical Soc.; Iowa Acad. Elasticity; aerodynamics.

Anderson, Dr. Esther S(anfreida), University of Nebraska, Lincoln, Nebr. *Geography*. Lincoln, Nebr. B.S., Nebraska, 15, A.M., 17; fellow, Wisconsin, 20-21; Clark, 29-30, Ph.D., 32. Instr. geog., Nebraska, 19-20; asst., Wisconsin, 20-21; instr., Nebraska, 21-29, 30-34; assoc. prof., 35- Summer, prof., Sam Houston State Teachers Col., 25. Del. Int. Geog. Cong., Warsaw, 34. Nat. Council Geog. Teachers (director, Nebr. chap., 32-); Nebr. Acad.; Int. Geog. Union. Regional, economic and industrial phases of geography; the sugar beet industry and other agricultural crops in the United States.

Anderson, Eval, 1841 Warwick Road, San Marino, Calif. *Chemistry*. Halsberg, Sweden, Dec. 3, 83. B.S., California, 13. Chemist, chem. engineer and tech. director, West. Precipitation Co., 13- A.A.; Chem. Soc.; Chem. Eng.; Physical Soc. Cement and by-products; electrical precipitation; collection of dust and fume.

Anderson, Dr. Evelyn M, University of California Medical School, San Francisco, Calif. *Biochemistry*. Willmar, Minn., March 20, 99. A.B., Carleton Col., 21, A.M., 22; M.D., California, 28; Ph.D., McGill, 34. Lecturer biochem., McGill, 34-35; assoc. prof. med., med. sch., California, 35- Physiol. Soc. Pituitary physiology.

Anderson, Dr. Forrest N(elson), 1325 W. Adams Blvd., Los Angeles, Calif. *Neuropsychiatry*. Galesburg, Ill., Sept. 17, 94. A.B., Kansas, 16, M.D., 21; Commonwealth fellow, Pennsylvania, 25-28, Sc.D., 30. Instr. bacter., Kansas, 22-23, neuropsychiat., 23-24, 28-29; asst. surgeon, U. S. Pub. Health Service, 24-25; director child guidance clinic, Los Angeles and Pasadena, 29-; lecturer mental hygiene, exten. div., California, 31-; assoc. prof. pediat., Col. Med. Evangelists, 32- Psychiatrist, Mental Hygiene Surv. of Problem Indian Children, Okla., 35. Am. Med. Asn.; Psychiat. Asn.; Orthopsychiat. Asn.; Los Angeles Soc. Neur. and Psychiat.; Phila. Neur. Soc. Child guidance; child psychiatry; thalamus in relation to behavior.

- Anderson, Dr. Frank M.**, 58 Hillcrest Road, Berkeley, Calif. *Geology*. Phoenix, Oregon, June 4, 63. A.B., Willamette, 89; A.B., Stanford, 95, Ph.D., 30; M.S., California, 97. Teacher, high sch., Calif., 95-96; instr. miner., California, 97-98; geologist, Calif. Mining Bur., 99-01; South. Pacific and oil companies, 02-24; consulting geologist, 20- Curator paleont., Calif. Acad., 03-17. Geol. Soc.; Paleont. Soc. Oil geology; paleontology; economic geology of northern California; Cretaceous paleontology of the Pacific coast; lower Cretaceous deposits of California and Oregon.
- Anderson, Dr. George H(arold)**, California Institute of Technology, Pasadena, Calif. *Geology*. Elko, Nev., Nov. 21, 93. Michigan, 12-13; A.B., Stanford, 17, A.M., 20; Colorado, 27-29; Harvard, 22, 23; Ph.D., Calif. Inst. Tech., 33. Instr., high sch., Calif., 19-20; v. prin., Nev., 20-27; instr. geol., Colorado, 28-29; teaching fellow, Calif. Inst. Tech., 29-33. Curator, 34- Instr., California at Los Angeles, 34-35. Summer, instr., Nevada, 25. Miner. Soc.; Mineralogy; geology of the White Mountain quadrangle of California-Nevada; granitization of sediments; albitization and other post-consolidation phenomena in igneous rocks.
- Anderson, Prof. G(eorge) R.**, University of Toronto, Toronto, Ont., Can. *Physics*. Shetland Islands, 68. B.Sc., Toronto, 93, M.A.; A.M., Harvard, 05. Instr. physics, Toronto, 99-03; prof. eng. physics and head dept., 04- Consulting engineer on sound problems and director photog. dept., 08- Fel. Acoustical Soc.; Illum. Eng. Soc. (pres., Toronto chap., 26). Engineering physics; architectural acoustics; sound and heat insulation.
- Anderson, Prof. G(ustavus) E(dwin)**, 645 Lahoma Ave., Norman, Okla. *Geology*. Sweden, B.S., Chicago, 05, Ph.D., 25; A.M., Columbia, 06. Prof. geol. and mining, Wu-Han Univ., China, 08-10; N. Mex. Sch. Mines, 10-17; chief geologist, dept. southwest, Am. Smelting and Ref. Co., 17-20; consulting geologist, 20-22; prof. geol., Oklahoma, 22- Consulting geologist, Indian Territory Illum. Oil Co., 27- Asn. Petrol. Geol. Sedimentation.
- Anderson, Dr. Hamilton H(olland)**, University of California Medical School, San Francisco, Calif. *Pharmacology, Tropical medicine*. Sacramento, Calif., Oct. 20, 02. A.B., California, 26, fellow, 29-31. M.D., 30, M.S., 31. Asst. pharmacol. med. sch., California, 29, instr., 31-34, asst. clin. prof., 34- Soc. Pharmacol.; Soc. Exp. Biol.; Am. Med. Asn. (council med. educ. and hosp., 37-); Soc. Trop. Med. Chemotherapy of amebiasis and leprosy; tropical therapeutics; toxicology.
- Anderson, Dr. Harold H(omer)**, 508 W. Delaware St., Urbana, Ill. *Psychology*. Dakota City, Nebr., Oct. 23, 97. B.S., Harvard, 22, 22-23; diplôme, Inst. J. J. Rousseau, Switzerland, 28; Ph.D., Geneva, 29. Psychol. work with problem children, U. S. and Switzerland, 25-29; asst. prof. psychol., child welfare research sta., Iowa, 29-36; Illinois, 36- A.A.; assoc. Psychol. Am.; Soc. Research Child Develop.; Nat. Asn. Nursery Educ. (v. pres., 33-35); Iowa Acad. Child psychology; personality; mental hygiene.
- Anderson, Prof. Harold V(ictor)**, Lehigh University, Bethlehem, Pa. *Chemistry*. Manistique, Mich., April 4, 90. B.Ch.E., Michigan, 12; M.S., Lehigh, 25; Illinois, 28-29. Chemist, Dixie Portland Cement Co., 14-18; instr. chem., Lehigh, 18-21, asst. prof., 21-30, assoc. prof., 30- Summer, chemist, Air Nitrates Corp., Muscle Shoals, 18. A.A.; Chem. Soc. X-rays; analysis of materials by x-ray diffraction.
- Anderson, Prof. H(arold) W(illiam)**, 2622 Hunt St., Ames, Iowa. *Electrical engineering*. Albany, Wis., April 5, 99. B.S., Kansas, 21, E.E., 29; M.S., Mass. Inst. Tech., 31, fellow, 33-34. Sc.D., 34. Develop. and research dept., Am. Tel. and Tel. Co., New York, 21-22; dept. elec. eng., Kansas, 22-31; asst. prof., Iowa State Col., 31- Elec. Eng. Electronics; high-voltage research.
- Anderson, Prof. H(arry) W(arren)**, 811 Michigan Ave., Urbana, Ill. *Botany*. LaSalle, Ind., Oct. 14, 85. A.B., Wabash Col., 07, A.M., 10; fellow, Washington (St. Louis), 10-11; Ph.D., Illinois, 17. Instr. bot., Wabash Col., 08-10; pathologist, Exp. Sta., Illinois, 11-12; prof. bot., Wabash Col., 12-17; assoc. prof. pomol. and path., Illinois, 17-31; prof., 31- A.A.; Phytopath. Soc. (v. pres.); fel. Ind. Acad. Plant pathology; chestnut blight fungus; fruit diseases.
- Anderson, I(rvin) V(ictor)**, 435 S. Fourth St., W., Missoula, Mont. *Forestry*. Whitehall, Mich., May 14, 98. B.S., Mich. State Col., 20. Forest guard, U. S. Forest Service, 18, forest ranger, 20-21, forest asst., 22-23, forest examiner, 24-25, asst. forest supervisor, 26-27; assoc. forester, forest products research, North. Rocky Mt. Forest and Range Exp. Sta., 28-35, forester, 35-36, senior forester, 36- Soc. Foresters (sec'y, treas., North. Rocky Mt. sect., 31). Wood waste in logging; effect of fire on lumber produced from fire-damaged timber; selective logging in the larch-Douglas fir region of northwestern Montana; ponderosa and Idaho white pine types of the Inland Empire; trends in stumpage prices in the Inland Empire.
- Anderson, J(acob) P(eter)**, P. O. Box 530, Juneau, Alaska. *Botany*. Glenwood, Utah, April 7, 74. Nebraska, 93-95; B.S., Iowa State Col., 13, M.S., 16. Instr. science, Graceland Col., 02-06; horticulturist, Exp. Sta., U. S. Dept. Agr., Sitka, 14-16; florist. Summer, instr., Iowa State Col., 13. A.A.; Bot. Soc.; Phytopath. Soc.; Genetic Asn.; Iowa Acad. Horticulture; mycology; local floras; plant diseases.
- Anderson, John A(nker)**, West Central School of Agriculture, Morris, Minn. *Horticulture*. Ft. Ransom, N. Dak., May 21, 92. B.S., N. Dak. Col., 16. *Horticulturist, west cent. sch. agr., Minnesota*, 17- Summer, field foreman, N. Dak. Col., 17. Minn. Hort. Soc. Hardy fruits, trees and ornamentals; variety trials of vegetables; perennials; windbreak investigations.
- Anderson, Dr. J(ohn) Ansel**, National Research Laboratories, Ottawa, Ont., Can. *Biology, Agriculture*. Sidcup, Kent, Eng., Aug. 16, 03. B.Sc., Alberta, 26, M.Sc., 28; diploma, Graz, 30; Ph.D., Leeds, 30. Grad. asst., Nat. Research Council Can., 26-30; biologist, Nat. Research Labs., Ottawa, Can., 30- Can. Soc. Tech. Agr. Biochemistry of rust resistance; yellow coloring matters of wheat leaves; methods of experimental malting and malt analysis; diastatic enzymes of barley and malt.
- Anderson, Prof. J(ohn) Arlington**, Rutgers University, New Brunswick, N. J. *Bacteriology*. Marathon Co., Wis., Aug. 23, 93. B.S., Wisconsin, 20, M.S., 22, Ph.D., 26; Benjamin Franklin fellow of Am-Scandinavian Foundation, Sweden, 23-24; Int. Educ. Board fellow, Sweden, 24-25. Asst. agr. chem. and agr. bacter., Wisconsin, 19-23, 25-26; instr. bacter., Rutgers, 26-28, asst. prof., 28-34, assoc. prof., 34- A.A.; Soc. Bact.; Dairy Sci. Asn. Biochemical activities of bacteria; fermentations and enzyme actions.
- Anderson, Dr. J(ohn) A(rthur)**, Standard Oil Co. of Indiana, Whiting, Ind. *Chemistry*. Chicago, Ill., Jan. 24, 00. B.S., Illinois, 22; Oberlin Col., 23; Ph.D., Yale, 26. *Research chemist, Pure Oil Co.*, 26-27; *Standard Oil Co. of Ind.*, 27- Chem. Soc. Colloids; petroleum chemistry; silica gel; refining of gasoline; wax in mineral oils; patent research.
- Anderson, Dr. J(ohn) A(ugust)**, Mt. Wilson Solar Observatory, Pasadena, Calif. ^{**}*Astronomy*. Rollag, Minn., Aug. 7, 76. B.S., Valparaiso, 00; Ph.D., Hopkins, 07. Instr. astron., Hopkins, 08-09; assoc., 09-11; assoc. prof., 11-15; staff, Mt. Wilson Observatory, Carnegie Institution, 16- Asst., U. S. Naval Observatory; eclipse exped., Spain, 05; asst., Carnegie Institution, 07. A.A.; Astron. Soc.; Seismol. Soc.; Physical Soc.; Optical Soc.; Chem. Soc. Spectroscopy; ruling of gratings; seismometers.
- Anderson, Dr. John E(dward)**, University of Minnesota, Minneapolis, Minn. ^{**}*Psychology*. Laramie, Wyo., June 13, 93. A.B., Wyoming, 14; A.M., Harvard, 15, Ph.D., 17. Instr. and asst. prof. psychol., Yale, 19-25; prof. and director inst. child welfare, Minnesota, 25. Chairman cmt. on child develop., Nat. Research Council, 28-32, mem., 32-, mem. anthrop. and psychol. div., 31-34. A.A. (sec'y, I., 29-33, v. pres. and chairman, 34); Psychol. Asn. (sec'y, 23-25, councilor, 26-28, 34-37); Soc. Exp. Biol. Experimental, animal and child psychology.
- Anderson, Prof. John E(dward)**, State Teachers College, West Chester, Pa. *Botany*. Ironwood, Mich., May 21, 94. A.B., Michigan, 23, A.M., 24, Cole fellow, 30-31, Ph.D., 33. Prin., pub. sch., 12-13; instr., high sch., 15-18, 19-20; exten. work, Mich. Agr. Col., 20-21; instr. bot., Coe Col., 24-25, asst. prof., 25-30; head asst., bot. gardens, Michigan, 31-33; prof. bot., Pa. State Teachers Col., 33- Bot. Soc.; Pa. Acad.; Mich. Acad.; fel. Iowa Acad. Cytology; genetics; microbiology.
- Anderson, Dr. John F.**, 195 College Ave., New Brunswick, N. J. *Bacteriology*. Fredericksburg, Va., March 14, 73. M.D., Virginia, 96; Vienna; Paris; Sch. Trop. Med., Liverpool.

- Asst. surgeon, U. S. Pub. Health Service, 98-03, passed asst. surgeon, 03-12, surgeon, 12-15, asst. director hygienic lab., 02-09, director, 09-15; director research and biol. labs, *E. R. Squibb and Sons*, 15-19, v. pres, 19— Lecturer, Rutgers, 16-23; prof, Georgetown, 12-15; Cutler lecturer, Harvard; lecturer, Harvey Soc, 07. A.A.; Asn. Path. and Bact. (pres, 15); Am. Physicians; Soc. Exp. Biol; Soc. Exp. Path. (v. pres); Pub. Health Asn. (pres, 15); Am. Med. Asn. Hygiene; sanitation; immunology; anaphylaxis; serum therapy; etiology of typhus and measles.**
- Anderson, Dr. J(udson) L(owell), Tropical Oil Co, Barranca Bermja, Colombia, S. Amer. *Geology*. Philadelphia, Pa, July 17, 02. A.B, Hopkins, 24, Ph.D, 28. Petrographer, Lago Petrol Corp, Maracaibo, Venezuela, 28-30; *geologist and petrographer*, Sinclair Explor. Co, Loanda, Angola, Portuguese W. Africa, 30-31; *Trop. Oil Co*, 32— Research, Hopkins, 31-32. Sedimentary petrography and the physical character of oil-producing sands.**
- Anderson, Prof. Leigh C(harles), 1109 Packard St, Ann Arbor, Mich. *Chemistry*. Muskegon, Mich, March 28, 99. B.S, Michigan, 21, M.S, 22, Ph.D, 24. Instr. org. chem, Michigan, 24-28, asst. prof, 28-37, assoc. prof, 37— Chem. Soc. Tautomerism of hydroxytriaryl carbinals and quinone oximes; absorption spectra of triphenylmethane derivatives; halochromism of ketones; deuterium compounds.**
- Anderson, Prof. L(eo) Dewey, 2017 Staunton Road, Cleveland, Ohio. *Psychology*. Laramie, Wyo, July 8, 98. A.B, Wyoming, 20; A.M, Carnegie Inst. Tech, 21; Ph.D, Columbia, 29. Asst. prof. psychol. and chief investigator mech. ability project, Minnesota, 23-27; psychologist, Bur. Educ. Experiments, New York, 27-29; assoc. prof. psychol, Western Reserve, and research director, Brush Foundation, 29— Summers, instr, Rutgers, 29; lecturer, Wyoming, 30. Assoc. Psychol. Asn. Mental and physical growth; transfer of training; measurement of school success; socio-economic environment and mechanical ability; statistics.**
- Anderson, Dr. Leroy, 294 Saratoga Ave, San Jose, Calif. *Horticulture*. Magee, N. Y, Dec. 4, 66. B.S, Cornell, 96, fellow, 96-97, M.S.A, 97, Ph.D, 02. Asst. dairy husbandry, Cornell, 97-00; instr. animal and dairy indust, California, 00-02; director, Calif. Polytech. Sch, 02-08; prof. agr. practise and supt. farm schs, California, 08-13; pres, *Santa Clara Valley Water Conservation Dist*, 29-33, sec'y, 33— A.A. Cooperative marketing of farm products; water conservation.**
- Anderson, Dr. Lewis E(dward), Duke University, Durham, N. C. *Botany*. Batesville, Miss, June 16, 12. B.S, Miss. State Col, 31; A.M, Duke, 33; Morris fellow, Pennsylvania, 33-35, Ph.D, 36. Asst. bot, Duke, 31-33; asst. instr, Pennsylvania, 36; instr, Duke, 36— Summers, instr, Duke, 33. Bot. Soc; Genetic Asn; Sullivan Moss Soc. (curator, mosses, 36-); N. C. Acad; Phila. Bot. Club. Bryophytes of North Carolina; rock succession; mitochondria in the life cycle of higher plants.**
- Anderson, Dr. Lucille Russell, Children's Hospital, Los Angeles, Calif. *Pathology*. Knoxville, Tenn, Feb, 2, 05. A.B, Carson-Newman Col, 26; Sc.D, Hopkins, 30; M.D, Vanderbilt, 33. Asst. pathologist, Children's Hosp, 36-37; practising pediatrician, 37— Bacteriology; convalescent serum.**
- Anderson, Prof. Marlowe G(eorge), Northern Montana College, Havre, Mont. *Zoology*. Oakland, Nebr, July 8, 08. A.B, Nebr. Wesleyan, 28; A.M, Northwestern, 30, Ph.D, 34. Instr. zool, Northwestern, 31-36; asst. prof, North. Mont. Col, 36— Investigator, Shedd Aquarium, Chicago, 33. A.A; Soc. Parasitol; Micros. Soc. Taxonomy and morphology of Cestoda; germ cell cycles and physiology of Trematoda.**
- Anderson, Dr. Melvin E(lanson), Rogers Brothers Seed Co, Idaho Falls, Idaho. *Plant pathology*. Logan, Utah, June 25, 03. B.S, Utah State Col, 25, M.S, 30; Ph.D, Wisconsin, 32. Asst, Wisconsin, 29-34; plant pathologist, *Rogers Brothers Seed Co*, 34— Agent, U. S. Dept. Agr, 29-30, asst, bur. forest path, 33-34. Cabbage yellows disease; disease-resistant varieties in the pea and bean.**
- Anderson, Dr. M(ycleron) S(allee), 1433 Manchester Lane, N. W, Washington, D. C. *Chemistry*. Stanhope, Iowa, Nov. 13, 87. A.B, Simpson Col. (Iowa), 13; M.S, Iowa State Col, 16; Ph.D, George Washington, 22. In charge chem, Penn Col. (Iowa), 13-14; asst, Iowa State Col, 16-17; scientist, bur. soils, U. S. Dept. Agr, 17-24; assoc. chemist, 24-30, chemist, bur. chem. and soils, 30— A.A; Chem. Soc. (asst. ed, "Ab- stracts," 31-); Soc. Agron; Soil Sci. Soc; Inst. Chem. Soil chemistry; soluble salts in soil; colloids; soil organic matter.**
- Anderson, Dr. Nelson J(ay), 602 S. Grand Ave, Bozeman, Mont. *Chemistry*. Burchard, Nehr, Dec. 19, 94. B.S, Kans. State Col, 20; M.S, Illinois, 22; Ph.D, Chicago, 34. Instr, Illinois, 21-22; director dept. physical science, Parsons Junior Col, Kans, 22-25; dept. chem, Waukegan Township High Sch, Waukegan, Ill, 25-36; instr. chem, Mont. State Col, 36— Analyst, Board Health, Parsons, Kans, 23-25; lecturer, Abbott Labs, North Chicago, 36. Chem. Soc. Thermodynamics; physical chemistry.**
- Anderson, Prof. Nola Lee, Tulane University, New Orleans, La. *Mathematics*. Bucklin, Mo, Jan. 9, 97. B.S, Missouri, 22, A.M, 26, Ph.D, 29. Teacher, high sch. and junior col, Mo, 22-25; instr. math, Missouri, 28-30; assoc. prof, *Newcomb Col, Tulane*, 30-36, prof, 36— Math. Soc; Math. Asn. Differential geometry; extension of Maschke's symbolism; trigonometry of hyperspace; normals in hyperspace.**
- Anderson, Dr. Oscar D(anuel), Cornell University Medical College, Ithaca, N. Y. *Physiology*. Anderson, S. C, June 3, 03. B.S, Wake Forest Col, 24; Ph.D, Cornell, 29. Asst. psychol, Cornell, 28-29, physiol, 29-30, instr, 30-31, nat. research fellow, 31-33, Rockefeller Foundation fellow, med. col, 33-37, asst. prof, 37— Assoc. Psychol. Asn; Soc. Exp. Biol. Psychology; neurophysiology.**
- Anderson, Prof. Oscar E(lmer), Arcata, Calif. *Physics*. Vancouver, B. C, Can, Sept. 1, 08. B.A, British Columbia, 29, M.A, 31; Ph.D, California, 34. Teaching fellow, British Columbia, 29-31; California, 31-34; instr, Educ. Dept, B. C, Can, 34-35; physics, California, 35-36; assoc. prof, *Humboldt State Col, Calif*, 36— Nuclear mechanical and magnetic moments of elements by spectroscopic means; hyperfine structure of spectral lines.**
- Anderson, Oscar G(ustaf), Tobacco By-Products and Chemical Corp, Louisville, Ky. *Horticulture*. Gardner, Mass, Aug. 5, 88. B.S, Mass. Col. Instr. sch, Mass, 13-14; pomol, Purdue, 14-17, asst. prof. hort, 17-19, assoc. prof, 19-22, prof, 22-31; Kay Lab, 31-32; *Tobacco By-Products and Chem. Corp*, 32— Summers, Am. Cyanamid Co, N. Y; Japanese Beetle Lab, Riverton, N. J; Ohio Exp. Sta. Soc. Hort. Sci. Ind. Hort. Soc. Spray materials and appliances; control of the Japanese beetle and codling-moth.**
- Anderson, Prof. Paul A(lexander), State College of Washington, Pullman, Wash. *Physics*. Chicago, Ill, Nov. 26, 97. A.B, Illinois, 20; London, 20-21; Ph.D, Harvard, 23. Eastman Kodak Research Lab, 23-25; asst. prof. physics, Yenching Univ, 25-28; prof, *State Col. Wash*, 31— Nat. research fellow, Harvard and Berlin, 29-31. Contact differences of potential between metals; crystal growth and adsorption on metal crystals; thermodynamic properties of metal alloys.**
- Anderson, Dr. Paul J(ohnson), Connecticut Agricultural Experiment Station, Windsor, Conn. *Botany*. Ladoga, Ind, March 27, 84. A.B, Wabash Col, 10; fellow, Cornell, 10-12, Ph.D, 14. Instr. bot, Mass. Col, 15-16, asst. prof, 16-17, assoc. prof, 18-19, prof, 20-25, assoc. plant pathologist, Exp. Sta, 17-25; director tobacco substa, Conn. Exp. Sta, 25— Field pathologist, State Chestnut Blight Cmn, Pa, 12-14. Bot. Soc; Phytopath. Soc. Injury to fruit trees; diseases of rose, cauliflower, onion and tobacco; North American phyllo-stictas.**
- Anderson, Prof. Phillip Arthur, 1343 Cleveland Ave, St. Paul, Minn. *Animal husbandry*. St. Paul, Minn, May 1, 90. B.S, Minnesota, 14. Instr. animal husbandry, Minnesota, 15-17, asst. prof, 17-**
- Anderson, Prof. R. L(uelle), 145 E. 32nd St, New York, N. Y. *Mathematics*. Jamestown, N. Y, Oct. 22, 00. A.B, Mt. Holyoke Col, 22; Ph.D, Bryn Mawr Col, 30. Instr. math, Rochester, 26-28; Bryn Mawr Col, 29-30; *Hunter Col*, 28-29, 30-36, asst. prof, 36— Math. Soc; Math. Asn. Analysis.**
- Anderson, Dr. Robert J(ohn), 11713 Lake Ave, Lakewood, Ohio. *Metallurgy, Metallography*. Cleveland, Ohio, July 10, 92. B.S, Case, 14, Met.E, 17; Sc.D, Mass. Inst. Tech, 25. Instr. metal, Mo. Sch. Mines, 14-15; asst, Henry M. Howe, 15-16; chief metallurgist, Cleveland Metal Products Co, 17; metal. engineer and chief non-ferrous metals sect, U. S. Bur. Mines, Pittsburgh, 19-24; consulting engineer, 24— Lecturer, Carnegie Inst. Tech, 23-24; research metallurgist, Bur. Air-**

craft Production, 18; consultant, Soviet Govt, 29. MacFadden gold medal, Foundrymen's Assn, 25. British Inst. Metals. Aluminum.

Anderson, Robert van V(leck), Deutsche Vacuum Oil A. G., Hamburg, Germany. *Geology*. Galesburg, Ill, April 18, 84. A.B, Stanford, 06. Field asst. and geol. aid, U. S. Geol. Surv, 06-09; asst. geologist, 09-12; geologist, 12-13; S. Pearson and Son, 13-18; director, Whitehall Petrol. Corp. Ltd, 19-23, chief geologist, 23-26; research, 26-; collaborator, Service de la Carle géol. de l'Algérie, 30-32; Geol. Soc. Amer. research grant, Algeria, 33-34; *Socony Vacuum Co*, 34-; Sci. exped, Japan, 05; W. T. B. rep. and Am. del. on Inter-Allied Trade Cmt, Stockholm, 18-19. *Geol. Soc.* (chairman, Cordilleran sect, 28); Asn. Geog.; Paleont. Soc.; Soc. Econ. Geol.; Archeol. Inst.; Soc. géol. de France. Cretaceous and Tertiary geology of California, India and Algeria; geology of oil fields.

Anderson, Dr. Rose G(ustava), 522 Fifth Ave, New York, N. Y. *Psychology*. Gothenburg, Nebr, June 23, 93. A.B, Nebraska, 17, A.M, 18; Ph.D, Columbia, 25. Asst. psychol. clinic, Board Educ, Cleveland, 18-19; asst. and mental examiner, research bur, State Board Control, Miami, 19-23; psychologist, Minneapolis Child Guidance Clinic, 25-30; bur. educ. adjust, Westchester County Children's Asn, N. Y, 30-32; director children's div, *Psychol. Service Center*, New York, 32-; Instr. N. Y. Univ, 31-32. *Psychol. Asn*; Asn. Applied Psychol. (exec. cmt, 34-); N. Y. Acad. Intelligence tests; behavior; vocational and educational guidance.

Anderson, Dr. Ross P(eter), 50 W. 50th St, New York, N. Y. *Chemistry*. Savannah, N. Y., Feb, 22, 87. A.B, Cornell, 08, Ph.D, 12. Asst. chem, Cornell, 07-11, instr, 11-14; asst. prof, 14-17; chief chemist, United Nat. Gas Co, 17-24; technologist, Am. Petrol. Inst, 24-; Capt, C.W.S, 18. A.A; Chem. Soc. Petroleum.

Anderson, Dr. Rubert S(igfred), Princeton University, Princeton, N. J. *Chemistry*. Spokane, Wash, June 12, 98. B.S, Washington (Seattle), 21; A.M, Columbia, 23; Ph.D, 25. Asst. chem, Cooper Union, 21-23; Columbia, 23-24, instr. physiol, col. physician and surg, 24-27; Yale, 27-31; research assoc. biol, Princeton, 31-; Chem. Soc. Enzymes; potential measurements; bioluminescence.

Anderson, Prof. Rudolph J(ohn), Yale University, New Haven, Conn. **Biochemistry*. Härrna, Sweden, Sept. 13, 79. B.S, Tulane, 06; Upsala, Berlin and London; Ph.D, Cornell, 19. Biochemist, N. Y. Exp. Sta, Geneva, 11-20; chief in research biochem. and prof, Cornell, 20-27; prof. chem, Yale, 27- Ed. board, *Jour. Biol. Chem.* Capt, Sanit.C, 17-19, major, O.R.C, 19. A.A; Soc. Biol. Chem; Chem. Soc. (sec'y, div. biol. chem, 24, 25, chairman, 25, 26). Nutrition, calorimetry; organic phosphorus compounds of plants; metabolism of inositol; plant chemistry; pigments; sterols; chemistry of bacterial lipoids.

Anderson, Dr. Rudolph M(artin), National Museum of Canada, Ottawa, Ont, Can. *Zoology*. Winneshiek Co, Iowa, June 30, 76. Ph.B, Iowa, 03, Ph.D, 06. Asst. museum, Iowa, 01-06; instr, Blees Mil. Acad, 06-08; field agent, Am. Museum Nat. Hist, 08-12; asst. mammal, 13; mammalogist, Nat. Museum Can, 13-; chief biol. div, Can. Dept. Mines and Resources, 20- Chairman library cmt, Geol. Surv. Can. and Nat. Museum Can. Assoc. ed, 'Can. Field-Naturalist,' 17-; Stefansson-Anderson exped. to Arctic regions, Am. Museum Nat. Hist. and Geol. Surv. Can, 08-12; chief south. party, Can. Arctic exped, 13-16, gen. ed, 'Report,' 19-; zool. expeds, Sask. and Alta, 19, northeast. N. B, 21, Gaspé Peninsula, Que, 22-23, Cape Breton Island and Prince Edward Island, 24. East. Townships, Que, 25, Gatineau Valley, Que, 26, Wood Buffalo Park, N. W. T. and Alta, 27, Greenland and East. Arctic Islands, 28. Kootenay dist, south. B. C, 29. Advisory board, wildlife protection, Can, 17-; north. advisory board, 25- A.A; Soc. Mammal. (director, 19-); Ornith. Union; Cooper Ornith. Club; Biol. Soc. Wash; fel. Can. Geog. Soc; Ottawa Field Naturalist' Club (pres, 21, 22); British Assn; hon. fel. Dresden Ornith. Verein. Mammalogy; ornithology; taxonomy; zoological collecting methods; Arctic history and bibliography; distribution, ecology and life histories of Arctic, sub-Arctic and Canadian animals; wildlife conservation.

Anderson, Dr. Russell H(oward), 2151 Maple Road, Homewood, Ill. *Agriculture*. Jewett, Ill, March 19, 96. B.S, Illinois, 23, A.M, 25, Ph.D, 29. Asst. hist, Illinois, 25-27, 28-29; prof, Nebr. State Teachers Col, Peru, 27-28; curator agr. and forestry, *Museum Science and Indust*, Chicago,

29- Agr. Hist. Soc; Agr. Eng; Am. Hist. Asn; Soc. Am. Archivists. Technological, social and economic history of agriculture.

Anderson, Prof. R(ussell) L(lloyd), Johnson C. Smith University, Charlotte, N. C. *Zoology*. Pittsburgh, Pa, Jan, 12, 07. B.S, Pittsburgh, 28, M.S, 30, Ph.D, 33. Instr. biol, J. C. Smith Univ, 30-31, asst. prof, 31-33, assoc. prof, 33-34, prof, 34- A.A; Genetics Soc. Tissue transplantation; physiological genetics.

Anderson, Dr. Ruth (Mrs. John Bennett), 2620 S. Figueroa St, Los Angeles, Calif. *Zoology*. Marshalltown, Iowa, Nov, 26, 99. A.B, Missouri, 21; A.M, Columbia, 22; fellow, Illinois, 24-25, Ph.D, 30. Asst. zool, Barnard Col, Columbia, 20-21; Illinois, 23-24; assoc, California at Los Angeles, 25-29, instr, 29-31, asst. prof, 32-37. A.A. Somatic effect of single gene change in *Drosophila*; physiological effects of pellagra.

Anderson, Dr. S(amuel) Herbert, Signal Corps Laboratories, Ft. Monmouth, Oceanport, N. J. *Physics*. Berrien Springs, Mich, Aug, 21, 80. A.B, Park Col, 02, A.M, 03; Ph.D, Illinois, 12. Prof. physics and chem, Albany Col. (Oregon), 05-07; asst. prof. physics, Occidental Col, 07-10; from instr. to assoc. prof, Washington (Seattle), 12-28; physicist, Daniel Guggenheim Fund Promotion Aeronautics, 28-30; *Signal Corps Labs*, 30- Physical Soc. Effect of frequency on capacity; photoelectric cells; photoelectric properties of vapors of alkali metals; catenary loaded at one point; overtones of tuning forks; design and calibration of phonodeik; tungsten arc characteristics; end corrections of organ pipes; x-ray radiography of light metal alloys; transmission of radiation through fog.

Anderson, Dr. Sarah Ferrall, Radcliffe College, Cambridge, Mass. *Psychology*. Leetonia, Ohio, July 18, 05. A.B, Illinois, 29, A.M, 30, Ph.D, 35. Asst. psychol, Illinois, 30-36; tutor, Radcliffe Col, 36- Assoc. Psychol. Asn. Experimental and animal psychology.

Anderson, Prof. Stewart W(ise), Virginia Military Institute, Lexington, Va. *Electrical engineering*. Portsmouth, Va, 86. B.S, Va. Mil. Inst; M.S, Wisconsin. Teacher, Charlotte Hall Sch, Md; engineer, construction dept, U. S. Navy Yard, Va; instr, Va. Mil. Inst. and Wisconsin; asst. prof. and prof. eng, Va. Mil. Inst. V. pres, State Board Eng. Examiners, Va, 37. U.S.A, 17-19, capt, major, Eng.R.C. Fel. Elec. Eng; Eng. Educ.

Anderson, Sumner M(organ), 896 S. Seventh St, Charleston, Ill. *Geology*. Charleston, Ill, Aug, 19, 03. B.S, Illinois, 25. Geologist, Standard Oil Co. of N. J. Okla. and Venezuela, 25-26; Cerro do Pasco Copper Corp, Peru, 27-30; asphalt chemist, Flintkote Corp, N. J, 31-32; foraminiferal research and special museum work, N. Y. Univ. and Columbia, 33-34; geologist, Nat. Park Service, Va, West Coast and Rocky Mt. States, 35- Rocky Mt. Assn. Petrol. Geol. Volcanism in northern California.

Anderson, Prof. Walter S(ewell), University of Kentucky, Lexington, Ky. *Genetics*. Academy, W. Va, 67. A.B, A.M, Randolph-Macon Col; Cold Spring Harbor. Prin, Alderson Collegiate Inst, 96-03; prof. biol, Ky. Wesleyan Col, 03-13; genetics, Kentucky, 13- Genetic Asn. Inheritance of coat color in horses; sterility in males of mammals; vitality of spermatozoa of domestic and marine animals.

Anderson, Dr. W(ells) F(oster), 300 W. Adams St, Chicago, Ill. *Geology*. Tomah, Wis, July 14, 02. A.B, Wisconsin, 26, M.S, 28, Ph.D, 30. Geologist, U. S. Gypsum Co, 30; quarry supt. Windsor plant, Can. Gypsum Co, 31-32, works manager plant, Windsor, N. S, 32-36, production manager, 36-Summers, field geologist, Consol. Mining and Smelting Co, 28, 29. Geology and origin of gypsum deposits of western New York and Ontario; structural features in formation of certain gypsum deposits of the Maritime Provinces, Canada.

Anderson, Prof. W(illiam) A(rthur), 1024 Woodlawn, Iowa City, Iowa. *Botany*. Ballard Co, Ky, Jan, 25, 00. A.B, Kentucky, 23, A.M, 24; Ph.D, Harvard, 31. Microscopist, Exp. Sta, Kentucky, 25-27; instr. bot, Tennessee, 27-29; Austin teaching fellow, Harvard, 29-30, asst. taxonomic bot, 30-31; instr. bot, Iowa, 31-36, assoc. prof, 36- Summer, assoc, Iowa Lakeside Lab, Bot. Soc; Fern Soc; New Eng. Bot. Club. Plant taxonomy; floristics; flora and especially ferns of Tennessee; Monocotyledonae.

- Anderson, Prof. W(illiam) B(allantyne)**, 310 N. 26th St., Corvallis, Oregon. *Physics*. Rockford, Ill., Oct. 8, 67. B.S., Wisconsin, 01; M.S., 03; Ph.D., 06. Asst. physics, Wisconsin, 04-05; from instr. to assoc. prof., Iowa State Col., 05-14; prof., *Oregon State Col.*, 14- A.A.; Physical Soc.; Asn. Physics Teachers; Astron. Soc. Pacific. Spark spectrum in gases at high pressure; physics for technical students.
- Anderson, Prof. W(illiam) E(llijah)**, Miami University, Oxford, Ohio. *Mathematics*. Arcadia, Ohio, Oct. 2, 75. A.B., Wittenberg Col., 02; Chicago, summers, 03, 08, 09; Harrison fellow, Pennsylvania, 11-12; Ph.D., 13; Cambridge, 29-30. Teacher, high sch., Ohio, 02-05; prof. math., Midland Col., 05-08; Wittenberg Col., 08-18; instr., Pennsylvania, 12-13; assoc. prof., *Miami (Ohio)*, 18-21; prof., 21- A.A.; Math. Soc.; Math. Asn.; Astron. Soc.; fel. Royal Astron. Soc. Astronomy; college mathematics.
- Anderson, Dr. W(illiam) T(hedore), Jr.**, Hanovia Chemical and Manufacturing Co., Newark, N. J. *Physics, Physical chemistry*. Trenton, N. J., Jan. 2, 99. B.S., Princeton, 21, du Pont fellow, 21, 22-23; Ph.D., 23. Research director, *Hanovia Chem. and Mfg. Co.* Chem. Soc.; Optical Soc. Ultra-violet radiations.
- Anderson, Dean Winslow S(amuel)**, Rollins College, Winter Park, Fla. *Chemistry*. Portland, Maine, July 28, 98. B.S., Bates Col., 21; M.S., Minnesota, 23; N. C. State Col., 23-25; LL.D., Southern Col. (Fla.), 33. Asst. chem., Bates Col., 18-21; assoc. prof., Rollins Col., 21-22; asst., Minnesota, 22-23; instr. and asst. prof., N. C. State Col., 23-25; prof., *Rollins Col.*, 28-, dean, 29-, dean men, 28-29. A.A.; Chem. Soc.; Inst. Chem.; Electrochem. Soc.; Am. Geog. Soc.; Jordan Sci. Soc.; Assn. Academic Deans of South. States (pres, 36); Fla. Acad.; Inst. littéraire et artistique de France. Inorganic and industrial chemistry; qualitative analysis; colored lithophones; cottonseed hulls.
- Anderton, Dr. Ethel L(ouise)**, High School, West Haven, Conn. *Mathematics*. Dover, N. H., Sept. 23, 88. A.B., Wellesley Col., 11; A.M., Yale, 22. Ph.D., 25. Teacher, high schs., 11-24; instr. math., Wellesley Col., 24-27; asst. prof., Mt. Holyoke Col., 28-31; Goucher Col., 31-32; teacher, high sch., West Haven, Conn., 33-. Math. Soc.; Math. Asn. Geometry.
- Anderton, Dr. W(alter) P(almer)**, 159 E. 77th St., New York, N. Y. *Clinical medicine*. New York, N. Y., April 15, 86. A.B., Harvard, 08; M.D., Columbia, 11. Instr. clin. med., col. physicians and surg., Columbia, 16-17, med., 17-22, assoc., 22-29; asst. prof. clin. med., 29- Intern, Bellevue Hosp., 11-13; with N. Y. and Manhattan Eye, Ear and Throat Hosps., 14; Seton Hosp., 15, asst. visiting physician, 15-16; with Riverside Tuber. Sanatorium, 15, Vanderbilt Clinic, 15-17, 28-30; asst. visiting physician, Presb. Hosp., 20-29, assoc. attending physician, 29-, outpatient dept., 16-28. Trustee, Francis Asbury Palmer Fund, New York, v. pres., 17-; trustee, Palmer Inst.-Starkey Sem., Lakemont, N. Y. Fel. Am. Med. Asn.; fel. Am. Col. Physicians; Tuber. Asn.; Heart Asn.; N. Y. Gastro-Enterol. Asn. (v. pres., 33, pres., 34); fel. N. Y. Acad. Med. (sec'y, sect. med., 22, chairman, 23). Aortitis.
- Andervont, Dr. Howard B(aneroff)**, 677 Chestnut St., Waban, Mass. *Biology*. Canton, Ohio, March 8, 98. B.S., Mt. Union Col., 23; Sc.D., Hopkins, 26. Asst. filterable virus, sch. hygiene and pub. health, Hopkins, 23-26; fellow, Hopkins and Carnegie Institution, 26-27; instr. epidemiol. and prev. med., sch. pub. health and med., Harvard, 27-30; biologist, U. S. Pub. Health Service, 30-38, senior biologist, 38-A.A. Filterable viruses; cancer.
- Andes, Dr. Jerome E(lly)**, West Virginia University School of Medicine, Morgantown, W. Va. *Pathology*. Lebeck, Mo., March 18, 04. B.S., Mont. State Col., 29; M.S., Iowa State Col., 31; fellow, Western Reserve, 30-32; Ph.D., 32; B.M., Louisiana, 35; M.D., 36. Asst. chem., Iowa State Col., 29-30; instr. biochem., sch. med., Louisiana, 32-35; intern, Charity Hosp., New Orleans, 35-36; asst. prof. path., sch. med., *West Virginia*, 36-Blood chemistry; creatine metabolism in muscular diseases; surface tension; nutritional edema.
- Andes, Dr. Ralph V(erne)**, Northern Montana College, Havre, Mont. *Physical chemistry*. Lebeck, Mo., April 17, 07. B.S., Mont. State Col., 30; Ph.D., Iowa State Col., 35. Asst. chem., Iowa State Col., 30-35; instr., Graceland Col., 35-36; chem. and math., *North. Mont. Col.*, 36- A.A.; Chem. Soc. Heat capacity; entropy; free energy of iron carbide.
- Andre, Dr. Floyd**, Iowa State College, Ames, Iowa. *Entomology*. New Sharon, Iowa, Sept. 13, 09. B.S., Iowa State Col., 31, M.S., 33, Ph.D., 36. Asst., *Iowa State Col.*, 32-34, instr. entom., 36-, research asst., *Exp. Sta.*, 34- Ecology and control of white grubs; the influence of temperature, moisture and food on growth, structural characters and sex ratio of certain Hemiptera; taxonomy of Thysanoptera.
- Andres, Paul G(erhard)**, 1509 E. Michigan St., Indianapolis, Ind. *Electrical engineering*. Kitchener, Ont., Can., May 14, 92. B.S., Mich. State Col., 18, E.E., 23. Instr. elec. eng., Mich. State Col., 18, asst. prof., 18-21; research engineer, Automatic Elec. Co., Chicago, 21-25; chief engineer, Newcomb Hawley, St. Charles, Ill., 25-27; Temple Radio, Chicago, 27-30; research engineer, P. R. Mallory, Indianapolis, 31-34; chief state radio engineer, Ind., 34-36; consulting engineer, 37-Elec. Eng.; Radio Eng. Operating time of relays and magnets; loud speakers; radio field intensity surveys; electrical and ignition contact metal transfer.
- Andresen, Dr. Kurt H(einrich)**, Pennsylvania State College, State College, Pa. *Petroleum engineering*. Kassel, Germany, Feb. 21, 10. Dipl.Ing. Tech. Hochschule, Berlin, 33, D.Ing., 35. Asst., Berlin, 33-35; advising chemist, Julius Pietsch A. G., 35-36; junior research assoc., Stanford, 36-37; research assoc., Pa. State Col., 37- Chem. Soc.; Deuts. Chem. Gesell. Theoretical fundamentals for oil manufacturing; colloidal solutions; apparatus for the oil industry; surface problems in oil production from oil-sands.
- Andrews, Prof. Frank J(ullan)**, 625 Crown St., Walnut Hills, Cincinnati, Ohio. *Biochemistry, Organic chemistry*. Cincinnati, Ohio, Nov. 15, 89. A.B., Cincinnati, 28. M.S., 31; Ph.D., 34. Asst. chemist and bacteriologist, Cincinnati Water Works, 12-16; instr. chem., Ohio Mech. Inst., Cincinnati, 16-17; pres., Andreas-Mitchel Chem. Co., 19-21; instr. prev. med. col. med., Cincinnati, 21-34; prof. biochem. and prev. med., Eclectic Med. Col., 31- Sergt., M.C., 17-19. Chem. Soc.; fel. Inst. Chem. Chemistry of the brain with reference to aminolipids and phosphatides; quantitative analytical control studying synthetic processes in organic chemistry.
- Andrews, Dr. Dorothy M(abel)**, Pennsylvania College for Women, Pittsburgh, Pa. *Psychology*. Minneapolis, Minn., Nov. 11, 09. A.B., Minnesota, 30. A.M., 31. Ph.D., 35. Asst., Employment Stabilization Research Inst., 31-33; teaching asst., psychol., Minnesota, 33-35; instr., Pa. Col. for Women, 35-37; asst. prof., 37- Assoc. Psychol. Asn. Aptitude testing; abilities of clerical workers; achievement testing.
- Andrew, Dr. Victor J(ohn)**, 7221 S. Francisco Ave., Chicago, Ill. *Physics*. Medina Co., Ohio, Aug. 31, 02. B.S., Col. of Wooster, 26; M.S., Chicago, 28. Ph.D., 32. Radio engineer, U. S. War Dept., 26-27; Westinghouse Elec. and Mfg. Co., 28-30; x-ray engineer, Westinghouse Lamp Co., 33-34; chief engineer, Doolittle and Falknor, 34-35; consulting engineer and manufacturer, 37- Compton cosmic ray exped., Colo., 31. Radio Eng. Precision frequency control; transmitting antennas; x-ray spectroscopy.
- Andrew, Dr. W(arren)**, 1221 Winter St., Augusta, Ga. *Zoology*. Portland, Oregon, July 19, 10. A.B., Carleton Col., 32; Arnold fellow, Brown, 32-33; M.S., 33; Yale, 33-34; Ph.D., Illinois, 36. Asst. instr. zool., Yale, 33-34; Illinois, 34-36; fellow anat., sch. med., Georgia, 36- Asn. Anat. Senescence in Cladocera; Nissl substance of Purkinje cells of mice and rats in relation to age; nature of the Nissl substance; differentiation of Purkinje cells in man.
- Andrews, Dr. A(lbert) LeRoy**, Cornell University, Ithaca, N. Y. *Botany*. Williamstown, Mass., Dec. 27, 78. A.B., Williams Col., 99; A.M., Harvard, 03; Ph.D., Kiel, 08. Instr. German, West Virginia, 03-04; Dartmouth Col., 04-05; Cornell, 09- Systematic botany, especially bryology; North American Sphagnaceae, Bryaceae and Mniacaceae.
- Andrews, Prof. A(ndrew) Irving**, University of Illinois, Urbana, Ill. *Ceramic engineering*. Baraboo, Wis., June 10, 95. B.S., Wisconsin, 20. M.S., 21; U. S. Bur. Mines fellow, Ohio State, 23-24; Ph.D., 24. Asst. chem., Wisconsin, 20-22; Ohio State, 22-24; prof. ceramic eng., Alfred, 24-25; asst. prof., Illinois, 25-28; assoc. prof., 28-32; prof., 32- Consulting engineer, A. O. Smith Corp., 26-33; E. I. du Pont de Nemours and Co., 35- Ensign, U.S.N., 18-19. Fel. Ceramic Soc.; Chem. Soc.; Chem. Eng. Dolomite refractories and vitreous enamels.
- Andrews, Dr. Anne D(ale) B(iddle)**, 200 Stonewall Road, Berkeley, Calif. *Mathematics*. Hanford, Calif., Dec. 13, 85. A.B., California, 08; Ph.D., 11. Instr. math., Washington (Seattle), 11-12; asst., California, 13-18, 20-23, instr., 23-33. Math. Soc. Projective geometry.

- Andrews, Prof. Carl Bowers**, University of Hawaii, Honolulu, Hawaii. *Engineering*. Pahala, Hawaii, April 17, 79. B.S., Rose Polytech, 08, M.S., 09, C.E., 17; M.S., Mass. Inst. Tech., 28. With Baldwin and Alexander, surveyors, 08-09; asst. engineer, Hawaii, 09; engineer, Oahu Ry., 10-18; chief engineer, Pampanga Sugar Develop. Co., P. I., 19-20; prof. eng., Hawaii, 20—Mem. board registration, professional engineers, Hawaii. Capt., C. Eng., 18. Assoc. Civil Eng.; Ry. Eng.; Eng. Educ.
- Andrews, Darwin M. Maxson**, P. O. Box 2, Boulder, Colo. *Botany*. Fayette Co., Ill., Oct. 3, 69. Hon. M.S., Colorado, 35. *Practising horticulturist*, 93—Cultivation, selection and improvement of native plant species of Colorado.
- Andrews, David Arthur**, U. S. Geological Survey, Washington, D. C. *Geology*. Jacksonville, Mo., April 6, 06. A.B., Missouri, 27, A.M., 28; Yale, 28-30. Asst. geol., Missouri, 27-28; Yale, 28-30; junior geologist, U. S. Geol. Surv., 29-34; asst. geologist, 34—A.A.; Geol. Soc. Wash. Paleontology; stratigraphy; physiography; ground water in New Mexico and Arizona.
- Andrews, Dr. Donald Hatch**, Johns Hopkins University, Baltimore, Md. **Chemistry*. Southington, Conn., June 11, 98. A.B., Yale, 20, Ph.D., 23. Asst., Yale, 23-24; research assoc., California, 24-25; nat. research fellow, Leiden, Holland, 25-26; research fellow, Bartol Research Foundation, Franklin Inst., 26-27; assoc. chem., Hopkins, 27-29; assoc. prof., 29-30; prof., 30—chairman chem. dept. and director chem. lab., 36—Mem. première cmn. Inst. Int. du Froid. Chem. Soc.; fel. Physical Soc.; fel. London Chem. Soc.; Deuts. Physik. Gesell. Application of thermodynamics to organic chemistry.
- Andrews, Dr. Edmund**, 950 E. 59th St., Chicago, Ill. *Surgery, Chemistry*. Chicago, Ill., April 4, 92. A.B., Yale, 13; M.D., Chicago, 15. *Prof. surg., Chicago*, 29—attending surgeon, Billings Hosp., 29—Surg. Asst.; Soc. Clin. Surg.; Soc. Exp. Biol.; Am. Med. Assn.; Am. Soc. Med. Hist.; West. Surg. Soc.; Cent. Soc. Clin. Research; Chicago Surg. Soc.; Inst. Med. Chicago; Chicago Acad. (v. pres.). Hernia; liver and kidney diseases; medical history.
- Andrews, Prof. Ethan Allen**, Johns Hopkins University, Baltimore, Md. **Zoology*. New York, N. Y., Sept. 10, 59. Ph.B., Yale, 81, 82; Polytech, Hanover, 83; fellow, Hopkins, 84-86; Ph.D., 87. Asst., U. S. Fish Comm., 79-81; biol., Hopkins, 87-92; assoc. prof., 92-08; prof., 08-30; emer. prof., 30—A.A.; Soc. Nat.; Soc. Zool. (v. pres., 91, pres., 04). Anatomy and embryology of invertebrates.
- Andrews, Floyd Shields**, Cornell University, Ithaca, N. Y. *Horticulture, Botany*. Charlotte Co., Va., May 6, 98. B.S., Va. Polytech, 24; M.S., Mich. State Col., 28; Wisconsin, 29. Asst. Mich. State Col., 26-28; assoc. prof. hort., Clemson Col., 28-37; asst. veg. crops, Cornell, 37—Soc. Hort. Sci. Pomology; factors influencing size of apples; sterility of the apple; physiological factors influencing fruiting of bush lima beans.
- Andrews, Dr. Frank Marion**, 901 E. Tenth St., Bloomington, Ind. *Botany*. Vienna, Ind., 70. A.B., Indiana, 94, A.M., 95; Ph.D., Leipzig, 02; Amsterdam, 07; Leipzig, 07-08; Smithsonian table, Naples Zool. Sta., 08; Strassburg, 08-09. Asst. bot., Indiana, 94-97; instr., 97-04; asst. prof., 04-07; assoc. prof., 07-22; prof., 22—Summer, Marine Biol. Lab., Woods Hole, 03. A.A.; Bot. Soc.; Soc. Plant Physiol.; Sigma Xi (pres., 16); fel. Ind. Acad. (v. pres., 20, pres., 21); Soc. linn. de Lyon. Physiological botany; protoplasm; plant chemistry; centrifugal force; pollen; chlorophyll; plant movements.
- Andrews, Horace**, 125 Lancaster St., Albany, N. Y. *Civil engineering*. New Haven, Conn., March 19, 52. Ph.B., Yale, 71, C.E., 72. U. S. Coast and Geod. Surv., 72-78; N. Y. State Trigonometric Surv., 78-84; inspecting engineer, State Board Health, N. Y., 84-86; city engineer, Albany, 86-00; consulting engineer; retired. Instr., Sheffield Sci. Sch., Yale, 72-73; Albany Board Health, 86-00; examined for eng. positions, N. Y. State Civil Service, 88-94. A.A.; Civil Eng. (director, 08-10); Soc. Munic. Improv.; Deuts. Geom. Verein. Geodetic and higher surveying; municipal engineering.
- Andrews, Horace Justin**, U. S. Forest Service, Portland, Oregon. *Forestry*. Sidnaw, Mich., Oct. 31, 92. A.B., Michigan, 15, M.S. (Forestry), 16. Instr. and asst. prof., Michigan, 16-18; Iowa State Col., 21-23; in charge Land Econ. Surv., Mich., 24-26; state fire warden and in charge state land office, Mich., 27-29; regional director forest surv., Pacific Northwest Forest Exp. Sta., U. S. Forest Service, 30—U.S.A., 18-19. Soc. Foresters; Mich. Eng. Soc.; Mich. Acad. Land economics.
- Andrews, Dr. Howard Lincoln**, Bradley Home, East Providence, R. I. *Physics*. Davisville, R. I., Oct. 27, 06. B.S., Brown, 27, M.S., 28, Charles A. Coffin fellow of Gen. Elec. Co., 28-29, Ph.D., 31. Instr. physics, Brown, 29-34, research assoc. psychol., 34-37; Bradley Home, 37—Physical Soc.; assoc. Radio Eng. High frequency oscillations; action currents.
- Andrews, Prof. James Clarence**, University of North Carolina, Chapel Hill, N. C. *Physiological chemistry*. Colfax, Ind., March 8, 92. B.S., Iowa, 15; Ph.D., Columbia, 18. Asst. chem., Columbia, 15-18; research chemist, E. I. du Pont de Nemours and Co., 18-22; instr. physiol. chem. sch. med., Pennsylvania, 22-26; asst. prof., 26-37; prof. biol. chem. and head dept., North Carolina, 37—Chem. Soc.; Soc. Biol. Chem. Amino acids; biochemistry of sulfur and of sulfur-containing amino acids and their derivatives; cystinuria.
- Andrews, John Scott**, U. S. Department of Agriculture, Beltsville, Md. *Parasitology*. New Palestine, Ind., Oct. 1, 05. B.S., Purdue, 27, M.S., 29. Asst. gen. biol., Purdue, 27-29; Paul F. Williams fellow, 29-30; junior zoologist, zool. div., bur. animal indust., U. S. Dept. Agr., 30-36; asst. zoologist, 36—Soc. Parasitol.; Helmint. Soc. Wash. Parasitic diseases of sheep; ruminant parasites.
- Andrews, Dr. John Southard**, 2121 Scudder St., St. Paul, Minn. *Chemistry*. Gray, Maine, March 2, 04. B.S., Maine, 26; A.M., Harvard, 27; Ph.D., Hopkins, 36. Instr. chem., Delaware, 27-28; research chemist, Pilot Labs., N. J., 28-30; research assoc., Hopkins, 35-36; research chemist, research labs., Gen. Mills, Minn., 30-34, 36—Organic phosphorus compounds; amylases and proteases; porphyrin chemistry.
- Andrews, John Thomas Reed**, 6401 Paddock Road, Bond Hill, Cincinnati, Ohio. *Chemistry*. Island Pond, Vt., April 18, 94. B.S., Vermont, 20. Research chemist, Procter and Gamble Co., Ivorydale, Ohio, 20—Chem. Soc. (sec'y-treas., Cincinnati sect., 28-30, trustee, 30—chairman, 33); Oil Chemists Soc. Analytical methods for oils, fats, soaps and other detergents; glycerin.
- Andrews, Dr. Justin Meredith**, 615 N. Wolfe St., Baltimore, Md. *Protozoology*. Providence, R. I., Aug. 28, 02. Ph.B., Brown, 23; Sc.D., Hopkins, 26. Tech. asst. med. zool., sch. hygiene and publ. health, Hopkins, 23-24; asst. protozool., 24-26; instr., 26-27; assoc., 27-30; assoc. prof., 31—Visiting prof., Philippines, 30-31. Summers, Cold Spring Harbor, 24-28. A.A.; Soc. Parasitol. (councilor, 37—). Parasitic protozoology; intestinal flagellates; coccidioides; trypanosomes; balantidiasis; amebiasis.
- Andrews, Dr. Loring B. Eal**, Harvard University, Cambridge, Mass. *Astronomy*. Boston, Mass., July 30, 06. A.B., Harvard, 25, A.M., 27; Ph.D., 33. Asst. astron., Harvard, 25-28; Radcliffe Col., 26-28; instr., Harvard and Radcliffe Col., 28—A.A.; Astron. Soc.; Physical Soc.; Math. Soc.; Astron. Soc. Pacific; Royal Astron. Soc. Occultations; dark nebulosities.
- Andrews, Prof. Lyle Vernon**, 503 Morehead St., Chadron, Nebr. *Physical chemistry*. Presho, S. Dak., March 17, 06. A.B., Nebr. State Nor. Col., 26; M.S., Nebraska, 29, fellow, 31-32; Ph.D., 32. Instr. chem., Nebr. State Nor. Col., Chadron, 27-28; prof., 32—Chem. Soc. Electrochemistry; isoelectric points; conductivity of solutions.
- Andrews, Dr. Roy Chapman**, American Museum of Natural History, New York, N. Y. *Zoology*. Beloit, Wis., Jan. 26, 84. A.B., Beloit Col., 06, hon. Sc.D., 28; A.M., Columbia, 13; hon. Sc.D., Brown, 26. Leader, Cent. Asiatic expds., Am. Museum Nat. Hist., 16-32, v. director, 31-35, in charge explor. and research, 31—director, 35—Am. Museum Nat. Hist. exped. Alaska, 08; St. Lawrence, 09; special naturalist, 'Albatross' exped., Orient, 09-10; exped., Korea, 11, 12; naturalist, Borden exped., Alaska, 13. Kane medal, Geog. Soc. Phila., 29; Hubbard medal, Nat. Geog. Soc., 31; Explorers Club medal, 32; Chas. P. Daly medal, Am. Geog. Soc., 36; Vega medal, Royal Geog. Soc., Sweden, 37. A.A.; Soc. Mammal.; Philos. Soc.; Biol. Soc. Wash.; N. Y. Acad. Calif. Acad.; cor. mem. Zool. Soc. London. Water mammals; Asiatic exploration.
- Andrews, Prof. Thomas G. Gayle**, University of Alabama, University, Ala. *Geology*. Jackson, Tenn., May 4, 03.

A.B., Vanderbilt, 25, A.M., 27; Ph.D., Minnesota, 32. Asst. *geol.*, Vanderbilt, 26-28; instr., Lincoln Mem. Univ., 28-29; asst., Minnesota, 29-32; instr., Alabama, 32-34, asst. prof., 34-Summers, field and office asst., Tenn. Geol. Surv., 27, 29, 30, 31; museum asst., Ala. Museum Nat. Hist., 28; field asst., U. S. Geol. Surv., 35, 36. Min. and Metal. Eng.; Miner. Soc.; Ala. Acad. (sec'y, geol. div., 33-35, v. pres., 35). Insoluble residues as an aid in correlation.

Andrews, Dr. T(roy) M(onroe), Mellon Institute, Pittsburgh, Pa. *Chemistry*. Chapel Hill, N. C. Dec. 14, 93. A.B., North Carolina, 14, M.S., 17, Ph.D., 21. Chemist, E. I. du Pont de Nemours and Co., 17-19; Forest Products Lab., U. S. Forest Service, 21-23; Texas Co., 23-25; A. E. Staley Mfg. Co., 25-27; research fellow, Mellon Inst., 27- Dyes; carbohydrates; pulp; cellulose; petroleum; plastics; by-products.

Andrus, Dr. E(dwin) Cowles, Johns Hopkins Hospital, Baltimore, Md. *Physiology*. Kaatsbon, N. Y. Feb. 28, 96. A.B., Oberlin Col., 16, A.M., 17; M.D., Hopkins, 21. House officer, Hopkins Hosp., 21-22; asst. res. physician, 22-23; nat. research fellow med., 23-25; from instr. to assoc. prof., Hopkins, 25-, asst. dean med. faculty, 29-34, res. physician, Hopkins Hosp., 25-27; assoc. physician, 29-34, asst. visiting physician, 34- Physiology of the heart; hyperthyroidism.

Andrus, L(ucius) B(uckley), Indianapolis Athletic Club, Indianapolis, Ind. *Electrical engineering*. Columbus, Ohio, Sept. 22, 75. Ohio State; E.E., 10; M.S., Notre Dame, 16. Supt. fire alarm, telegraph and police signal systems, Columbus, Ohio, 00-02; Westinghouse Elec. and Mfg. Co., 02-04; gen. supt., Ind. and Mich. Elec. Co., 04-17; operating v. pres. and chief engineer, Am. Pub. Utilities Co., Mich., 17-23; pres., North. Ind. Power Co.; v. pres., Cent. Power Co., 24-; pres., Ind. Gas Light Co.; Ind. Railways and Light Co.; Noblesville Water and Light Co.; v. pres., Ind. Hydro-Elec. Power Co.; Pub. Service Co. of Ind.; Terre Haute Elec. Co. Past. pres., Wabash Valley Elec. Co.; Ind. Elec. Corp. Lecturer, Notre Dame. A.A.; Elec. Eng.; Mech. Eng.; Franklin Inst.; Ind. Eng. Soc. Effect of synchronous motors on line regulation; effect of inertia on speed regulation; water wheel tests in place.

Andrus, Dr. Ruth, State Education Department, Albany, N. Y. *Psychology*. Syracuse, N. Y., March 12, 86. A.B., Vassar Col., 07, A.M., 08; fellow, Columbia, 23-24, Ph.D., 24. Teacher, prep. schs., 09-13; academic dean and dean women, Ky. Col. for Women, 14-22; director child guidance clinic, Monmouth County Organization for Social Service, 24-26; asst. prof. educ. and research assoc., Teachers Col., Columbia, 26-27; assoc. prof. educ. and acting director inst. child welfare research, Columbia, 27-28; chief child develop. and parent educ. bur., Univ. State of N. Y., State Educ. Dept., 28- Lecturer, Teachers Col., Columbia, 24-26. Summer, director child study, inst. euthenics, Vassar Col., 25. Mem. governing board, Nat. Council Parent Educ., 26-30, 34. Psychol. Asn.; Educ. Research Asn.; Nat. Asn. Nursery Educ. (pres., 35-); N. Y. Acad. Child development; parent education.

Andrus, Prof. William DeWitt, Cornell University Medical College, York Ave. and 69th St., New York, N. Y. *Surgery*. Saugerties, N. Y., Feb. 28, 96. A.B., Oberlin Col., 16, A.M., 17; M.D., Hopkins, 21. Asst. surg., Hopkins, 21-22; instr., Cincinnati, 22-26, asst. prof., 26-31; assoc. prof. med. col., Cornell, 31- Nat. research fellow, 22-25. A.A.; Asn. Thoracic Surg.; Soc. Clin. Surg. Physiology of surgical pneumothorax and pneumectomy; cancer of the esophagus; angina pectoris; fractures of the femur; surgery of the chest, blood-vessels and sympathetic nervous system; intestinal obstruction; esophageal obstruction and fistula.

Angell, Dr. F(rank), Stanford University, Calif. **Psychology*. R. I., 57. B.S., Vermont, 78, L.H.D., 92; Ph.D., Leipzig, 91. Teacher, high sch., Wash., D. C., 80-87; asst. prof. *psychol.*, Cornell, 91-92; prof., Stanford, 92-22, emer. prof., 22- Investigator, Cmn. Relief Belgium, 15-16. Psycho-physics; sensory discrimination; space perception.

Angell, Dr. James R(owland), Yale University, New Haven, Conn. **Psychology*. Burlington, Vt., May 8, 69. A.B., Michigan, 90, A.M., 91, LL.D., 31; A.M., Harvard, 92; Berlin and Halle, 93; Litt.D., Vermont, 15; LL.D., Yale, Harvard, Princeton, Columbia, Chicago, Union (N. Y.), Cincinnati, McGill, Wesleyan, Middlebury Col., Brown, Ill. Col., Wabash Col., California, 34, N. Y. Univ., Williams Col., 36, Dartmouth Col., 36,

Rutgers, 37; hon. Ph.D., Rensselaer Polytech. Instr. philos., Minnesota, 93-94; asst. prof. psychol. and director lab., Chicago, 94-01, assoc. prof., 01-05, prof. and head dept., 05-19, senior dean, 08-11, dean faculties arts, lit. and science, 11-19, acting pres., 18-19; chairman, Nat. Research Council, 19-20; pres., Carnegie Corp., 20-21; Yale, 21-37, emer. pres., 37-; educ. director, Nat. Broadcasting Co., 37- Lecturer, California, 03; Wellesley Col., 04; Ichabod Spencer lecturer, Union, 11; lecturer, Sorbonne, Paris, 14; Elihu Root lecturer, Carnegie Institution, 35. Trustee, Am. Museum Nat. Hist., 37- Officier, Légion d'honneur; grand officer, Order of the Crown, Italy. Gold medal, Nat. Inst. Social Sci., 37. U.S.A., 17-19. Nat. Acad.; Psychol. Asn. (pres., 06); Philos. Soc.; fel. Am. Acad.; West. Philos. Asn. (v. pres., 06); hon. mem. British Psychol. Soc. Psychology of attention; organic accompaniments of conscious processes; auditory localization; reaction time; effect of partial tones on localization of sound; dermal space-perception; memory and development in motor coordination; animal intelligence; rhythm; vision; affection.

Angelo, Dr. Ernest, 2342 Commonwealth Ave., St. Paul, Minn. *Horticulture*. New York, N. Y. Jan. 6, 91. B.S. (Agr), West Virginia, 19; M.S., Cornell, 25; Ph.D., Minnesota, 34. Instr. hort., West Virginia, 19-28; chief game protector, W. Va. Game and Fish Cmn., 28-29; instr. hort., Minnesota, 29- Summer, plant disease surv., U. S. Dept. Agr., 19. Soc. Hort. Sci. Grape pruning and hardiness; pollination; inheritance in fruits; strawberry hardiness; potato wart.

Angerer, Dr. C(lifford) A(ckermann), University of Pennsylvania, Philadelphia, Pa. *Zoology. Physiology*. Philadelphia, Pa., 05. A.B., St. Stephen's Col., Columbia, 29; scholar, Pennsylvania, 32-33, Harrison fellow, 33-35, Ph.D., 37. *Instr. zool., Pennsylvania*, 35- Colloid chemistry of protoplasm.

Angervein, Dr. D(anie) Murray, Cornell University Medical College, York Ave. and 69th St., New York, N. Y. *Pathology*. St. John, N. B., Can., Oct. 8, 03. B.A., Mt. Allison, 24; M.D., McGill, 29. Demonstrator biol., Mt. Allison, 24; instr. path. med. col., Cornell, 32-; asst. pathologist, New York Hosp., 32- N. Y. Path. Soc.; N. Y. Trop. Med. Soc. Infection and immunity.

Angier, Prof. Roswell P(arker), 140 Edgehill Road, New Haven, Conn. *Psychology*. St. Paul, Minn., Oct. 21, 74. A.B., Harvard, 97, A.M., 01, Ph.D., 03; Berlin, 04-06; LL.D., Franklin and Marshall Col., 22. Asst. physiol. lab., Berlin, 05-06; instr. psychol., Yale, 06-08, asst. prof., 08-17, prof., 17-; acting director psychol. lab., 09-14; director, 14-, assoc. dean grad. sch., 37-, dean freshmen, 20-25, chairman, Inst. Psychol., 24-29, dept. psychol., 28-, mem. exec. cmt., Inst. Human Relations, 29-31. A.A.; Psychol. Asn.; Physiol. Soc.; Philos. Asn. Esthetics; psychology and physiology of vision; motivation; personality.

Angle, Dr. E(dward) J(ohn), 2219 B St., Lincoln, Nebr. *Medicine*. Cedarville, Ill., April 1, 64. M.D., Cincinnati, 87; B.S., Wisconsin, 90; M.D., Pennsylvania, 95; A.M., Nebraska, 98. Prof. genito-urinary and skin diseases, col. med., Nebraska, 05-10; specialist dermat. and genito-urinary surg., 10- Advisory med. board, U.S.A. A.A.; Am. Med. Asn.; Am. Acad. Med.; Urol. Asn.; Royal Soc. Arts. Zoology; genito-urinary and skin diseases; kidneys of the pig.

Angert, Dr. Laura, Mt. Vernon Junior College, Mt. Vernon, Wash. *Botany*. Ont., Can., 84. A.B., Washington (Seattle), 15, M.S., 25, Ph.D., 30. Teacher, high sch., Wash., 19-27; instr. bot., Mt. Vernon Junior Col., 27- Calif. Bot. Soc. Brown algae.

Angulo (y Gonzalez), Dr. A(rmando) W(andegecrito), Wistar Institute, Philadelphia, Pa. *Anatomy*. Gibara, Cuba, July 22, 00. B.L., B.S., Inst. Prov. de Oriente, Santiago de Cuba, 20; A.B., Kansas, 22, A.M., 24, Ph.D., 26. Asst. instr. anat., Kansas, 22-25, instr., 25-26; fellow, Wistar Inst., 26-30, head tech. lab., 28-29, assoc., 30-31, assoc. mem., 31- A.A.; Asn. Anat.; Soc. Zool.; Microsc. Soc. Motor nuclei in the cervical cord at birth; motor cell column in the cervical region before birth; prenatal and somatic activity development of the albino rat; myelinogeny and behavioral capability; fetal behavior; the sensory system in relation to the local sign; correlation of structure and function.

Angyal, Dr. A(ndrás), Worcester State Hospital, Worcester, Mass. *Psychiatry*. Debrecen, Hungary, June 21, 02. Ph.D., Vienna, 27; M.D., Torino (Italy), 32. Research worker, psychol. inst., Vienna, 23-28; psychol. lab., Univ. Torino, Italy, 28-29; Psychiat. Hosp., Torino, 29-32; Rockefeller fellow,

Yale, 32-33; psychiatrist and later chief psychiatrist, research service, *Worcester State Hosp.*, 33- Psychology of dream and hypnagogic states; orientation in space by man; sensory neurology, especially kinesthesia; psychiatric study of schizophrenia; theory of personality.

Annand, Dr. Percy N(icol), U. S. Department of Agriculture, Washington, D. C. *Entomology*. Telluride, Colo., Nov. 16, 98. B.S., Colo. Agr. Col., 20; A.M., Stanford, 22; Ph.D., 28. Asst. entomologist, Great West, Sugar Co., 20-21; asst., Stanford, 21-22; head dept. biol., San Mateo Junior Col., 22-29; sugar beet insect investigations, bur. entom. and plant quarantine, U. S. Dept. Agr., 29-32, asst. leader div. truck crop and garden insects, 32-34, leader div. cereal and forage insects, 34-37, special research asst. to chief, 37- A.A.; Entom. Soc. Amer.; Am. Econ. Entom. Ecol. Soc.; Taxonomy of Adelgids; ecology and control of *Eutettix tenellus*; thrips and flower pollination.

Annetts, Dr. May, 169 Simpson Ave., Toronto, Ont., Can. *Physics*. Gloucestershire, Eng., Sept. 27, 06. B.A., Toronto, 28; M.A., 29. Ph.D., 33. Demonstrator and research asst. physics, Toronto, 28- Physical properties of colloidal solutions.

Arning, Prof. Norman H(erbert), University of Michigan, Ann Arbor, Mich. *Mathematics*. Holland, Ont., Can., Aug. 28, 83. B.A., Queen's (Can.), 05; M.A., 06; Clark, 06-09. Teacher and prin. schs., and construction engineer, 09-16; instr. math., Maine, 19-20; *Michigan*, 20-23, asst. prof., 23- Asst. ed., *Am. Math. Monthly*, 23-26. 7th Can. Ry. Troops, France, 17-19. Higher geometry.

Ansbacher, Dr. Stefan, E. R. Squibb and Sons, 25 Columbia Heights, Brooklyn, N. Y. *Chemistry*. Frankfurt-am-Main, Germany, Jan. 27, 05. B.Sc., Frankfurt, 23; Heidelberg, 23; Tübingen, 23-24; Freiburg, 24-25; M.Sc., Geneva, 29, D.Sc., 33. Asst. path. inst., Geneva, 29-30; research chemist, State Food Research Cmn., S. C., 30-31; research lab., Borden Co., 31-36; E. R. Squibb and Sons, 37- Am. Med. Asn. medal, 36. Chem. Soc.; Deuts. Chem. Gesell.; Schweiz. Chem. Gesell. Biological and medical chemistry; chemotherapy of tuberculosis; toxicology; trace elements in organic matter; irradiation of food products; milk and by-products; lactoflavin and other water-soluble vitamins.

Anslow, Prof. Gladys A(melia), 72 Dryads Green, Northampton, Mass. *Physics*. Springfield, Mass., May 22, 92. A.B., Smith Col., 14, A.M., 17; Chicago, 21; Smith Col. fellow, Yale, 22-24. Ph.D., 24. Demonstrator physics, Smith Col., 14-15, asst., 15-17, instr., 17-24, asst. prof., 24-30, assoc. prof., 31-37, prof., 37- A.A.; fel. Physical Soc.; Am. Physics Teachers. Spectral series; ionization of gases; absorption spectra.

Anson, Prof. Barry J(oseph), 303 E. Chicago Ave., Chicago, Ill. *Anatomy*. Muscatine, Iowa, March 21, 94. A.B., Wisconsin, 17; fellow, Harvard, 22-26. A.M., 23; Ph.D., 27. Sci. asst., Bur. Fisheries, 17-22; nat. research fellow, 22-26; instr. anat. med. sch., Northwestern, 26-27, assoc., 28-30, assoc. prof., 30- Investigator, bur. research, Am. Otol. Soc. Summers, sci. aid, Bur. Fisheries, 15-17. Am. Anat. Life history of fresh-water fishes and their ecological relation to the malaria-bearing mosquito; parasitism in the Unionidae; membranous labyrinth, lips and labial villi of vertebrates; human otic capsule and stapes; gross anatomy of surgically important areas; histopathology of human temporal bone.

Anson, Dr. Mortimer L, Rockefeller Institute, Princeton, N. J. *Physiology*. New York, N. Y., Oct. 7, 01. A.B., Harvard, 22; Ph.D., Cambridge, 26. Assoc., Rockefeller Inst., 27- Chemical physiology.

Antevs, Dr. Ernst (Valdemar), The Corral, Globe, Ariz. ^{**Geology} Värtöfta, Sweden, Nov. 20, 88. Ph.D., Stockholm, 17. Docent, Stockholm, 17-35; research assoc., Carnegie Institution, 34- Research assoc., Am. Geog. Soc., 21-22; Carnegie Institution, 22-23, 28-29; Geol. Surv. Can., 23-24, 29-30; Harvard, 24-26. Geol. exped., Bear Island, 16; Spitsbergen, 18. Research Corp. N. Y. awards, 30. A.A.; Geol. Soc.; cor. mem. Acad. Nat. Sci. Phila.; Stockholm Geol. Soc. Glacial geology; tree growth as climatic indicator; Mesozoic plants; late Quaternary geology and climate of the Southwest.

Anthony, Charles, Springcroft, Les Croutes, St. Peter Port, Guernsey, Channel Islands. *Engineering*. Hereford, Eng., Oct. 10, 65. Royal Sch. Mines, Bristol; Cambridge. Asst. engineer, Bateman and Parsons, 90-91; engineer first class, Argentine Govt., 91-98; prin. res. engineer, Buenos Aires Sanit.

Improv. Works Commissioners, 93-02; consulting engineer chosen by Cape Colonial Govt. E. London Water Supply Scheme, 03-06; legal rep. and chief engineer, Dirks and Dates, 06-08; gen. manager, Bahia Blanca Water Works Co., Argentina, 09-25; retired. Civil Eng.; fel. London Chem. Soc.; fel. Royal Astron. Soc.; British Inst. Civil Eng.; fel. British Sanit. Inst.; fel. Royal Soc. Edinburgh; fel. Royal Meteorol. Soc. Hydraulic and sanitary engineering; sewage disposal; color and turbidity determination; chemical treatment and filtration.

Anthony, Prof. Ernest L(ee), Michigan State College, East Lansing, Mich. *Dairy husbandry*. Comstock, Nebr., Sept. 6, 88. B.S.A., Missouri, 12; M.S.A., Pa. State Col., 14. Asst. dairy husbandry, Pa. State Col., 12-13, instr., 13-15, asst. prof., 15-18, assoc. prof., 18-19; prof. and head dept., West Virginia, 19-28; prof., Mich. State Col., 28-, dean div. agr., 33- Am. Scandinavian Foundation fellow, Copenhagen, 23-24. Dairy Sci. Asn. History, feeding and breeding of dairy cattle.

Anthony, Dr. Harold E(lmer), American Museum of Natural History, New York, N. Y. *Zoology*. Beaverton, Oregon, April 5, 90. B.S., Columbia, 15, A.M., 20; Sc.D., Pacific (Oregon), 34. Asst. zool. and chem., Pacific (Oregon), 10-11; mammal, Am. Museum Nat. Hist., 11-19, assoc. curator, 19-26, curator, 26- Summers, field asst., U. S. Biol. Surv., 10, 11. Sci. expds. to west. states, Mex., Ecuador, Peru, Bolivia, Chile, Argentina, Venezuela, Panama, Isthmus of Darien, P. R., Cuba, Jamaica, Virgin Islands, St. Martins Islands, Alaska, Arctic Ocean and Africa. Mem. cmt. on wildlife, Nat. Research Council, 32-36, chairman cmt. preservation nat. conditions, 36-; advisory cmt. on mammals, Nat. Asn. Audubon Societies, 34-; director, 35- F.A., 17-19, capt. Soc. Mamm. (v. pres., 26, 31-35); director and trustee, pres., 35-); Ecol. Soc.; fel. N. Y. Zool. Soc.; fel. N. Y. Acad. (treas., 34-); hon. mem. Bogota Col. de Cien. Nat. Mammalogy; mammals of the Western Hemisphere, especially of South America and the West Indies; Pleistocene Mammalia of the West Indies.

Anthony, Dr. Myron V(ernon), Stauffer Chemical Co., 420 Lexington Ave., New York, N. Y. *Entomology*. Louisville, Ohio, Jan. 15, 09. B.S., Ohio State, 30, M.S., 32, scholar, 33-34; Ph.D., 35; Crop Protection Inst. fellow, Conn. Exp. Sta., 34-35. Asst. entomologist, Exp. Sta., Tennessee, 29-30; asst. zool., Ohio State, 32-33; entomologist, Stauffer Chem. Co., 35- Summers, field asst., bur. entom., U. S. Dept. Agr., 31, 32, 33. A.A.; Am. Econ. Entom. Fluorine compounds as insecticides; sulfur and carbon disulfide as insecticides; leaf-hoppers as pests of alfalfa.

Anthony, Dr. Roy D(avld), State College, Pa. *Horticulture*. Rochester, N. Y., April 2, 84. B.S., Rochester, 08; B.S.A., Cornell, 10. M.S.A., 13; Ph.D., 20. Asst. pomol., Cornell, 10-11; instr., 12-13; assoc. horticulturist, N. Y. Exp. Sta., Geneva, 13-19; research horticulturist, Pa. State Col., 19- A.A.; Soc. Hort. Sci.; Soc. Plant Physiol. Fruit stocks, nutrition and storage.

Antopol, Dr. William (Arnold), 201 Lyons Ave., Newark, N. J. *Pathology*. Brooklyn, N. Y., April 6, 03. B.S., Col. City of N. Y., 23; M.D., L. I. Col. Med., 27. George Blumenthal, Jr., fellow path., Mt. Sinai Hosp., 28-29, Theodore Escherich fellow, 29-30; pathologist, Bayonne Hosp., 30-35; pathologist and director labs, Beth Israel Hosp., 35- Consulting pathologist, Hudson County Tuber. Hosp., 32-; asst. path., Mt. Sinai Hosp., 29-; Herbert L. Cellar fellowship grant, 30; Emanuel Libman fellowship grant, 32; Am. Med. Asn. grant, 35. Am. Path. and Bact.; Pub. Health Asn.; fel. N. Y. Acad. Med.; N. Y. Path. Soc.; Biochem. Soc. Gt. Britain. Cardiac pathology; glycogenesis and heart hypertrophy; thrombophlebitis of the pulmonary veins; mechanism of heart failure after pitressin and its prevention; acetylchlorine and blood amylase; Lycopodium granuloma.

Apfel, Prof. Earl Taylor, 943 Westmoreland Ave., Syracuse, N. Y. *Geology*. Waterloo, Iowa, Nov. 6, 92. A.B., Cornell, 23; M.S., Iowa, 25; Ph.D., 26. Asst., Iowa, 23-26; prof. geol., Ill. Wesleyan, 26-28; assoc. prof., Syracuse, 28-36, prof., 36- Iowa Geol. Surv., 24-28; Ill. Geol. Surv., 29-30. Geologist, Syracuse Museum exped., Venezuela, 30-31. A.A.; Am. Petrol. Geol. Structural geology; Pleistocene physical history and sedimentation.

Apfelbaum, Prof. Percy Max, College of the City of New York, New York, N. Y. *Chemistry*. Paris, France, Dec. 15, 00. B.S., Col. City of N. Y., 23, Chem.E., 24, fellow, 24-28; A.M.,

- Columbia, 27, Ph.D. 33. Tutor chem, Col. City of N. Y., 28-34, instr, 34-36; asst. prof, 36- A.A.; Chem. Soc; fel. Inst. Chem. Organic chemistry; odor and constitution of organic compounds; hydroaromatic compounds.
- Appgar, Dr. Charles S(chlerer)**, Box 265, Mohegan Lake, Ithaca, N. Y. Zoology. Pittsburgh, Pa, Aug. 6, 02. B.S. Pittsburgh, 26, M.S. 27, Ph.D. 30. Instr. zool, Pittsburgh, 26-30; fellow, Wistar Inst, 30-33; Pa. Game Cmn, 33-36; instr. anat, med. col, Cornell, 36- A.A.; Soc. Mammal; Biol. Photog. Asn. Morphology; wildlife management; photography of wildlife.
- App, Dr. Frank**, Bridgeton, N. J. *Agronomy*. Buffalo Roads, Pa, Jan. 26, 86. B.S. Pa. State Col, 11; Ph.D. Cornell, 19. Asst. agron, Pa. State Col, 11; asst. prof. New Hampshire, 11-14; Rutgers, 14-15, head dept, 15-18; chief div. agron. and agr. econ, N. J. Exp. Sta, 18-23; prof. agr. econ, 19-23; v. pres. and managing director, Minch Brothers, 23-27; consulting agr. economist, 27- Collaborator, U. S. Dept. Agr, 18-19, 22-23; consulting agr. economist, N. J. Dept. Agr, 20-23. Mem. exec. cmt, Farm Bur. Federation, 23; sec'y, N. J. Federation County Boards Agr, 20-23, treas, 23-27; agr. marketing adviser, Puerto Rican Improv. Fruit Cmt, 29-30; mem, N. J. Farm Relief Cmn, 29-30; Govt. Farm Mortgage Cmn, 33-; pres, N. J. Farm Bur, 34- Asst. ed, 'Jour. Farm Econ'; agr. ed, 'Camden Post', 27. A.A.; Soc. Agron; Asn. Farm Management and Farm Econ (chairman, research cmt, 18-20). Agricultural economics; management and distribution.
- Appel, Prof. F(rederic) W(hipple)**, St. John's College, Annapolis, Md. *Biology*. Washington, D. C, Dec. 25, 99. Ph.B. Chicago, 24, Ph.D. 27. Nat. research fellow, Chicago, 27-28; asst. prof. biol, St. John's Col. (Md), 28-29; assoc. prof, 29- A.A.; Soc. Zool; Genetic Asn; Popul. Asn; Asn. Anat; Biol. Soc. Wash. General embryology and physiology; zoology.
- Appel, Dr. Kenneth Ellmaker**, Haverford, Pa. *Psychiatry*. Lancaster, Pa, May 15, 96. A.B. Franklin and Marshall Col, 15, hon. Sc.D, 35; A.M. Harvard, 16, Ph.D, 18, M.D, 24. Res. physician, Univ. Hosp, Pennsylvania, 24-36; asst. physician, Pa. Hosp. Nervous and Mental Diseases, Phila, 26-29; psychiatrist and chief out-patient dept, Inst. Mental Hygiene, 29-; asst. prof. Psychiat, sch. med, Pennsylvania, 29- Psychiat. Asn; Am. Med. Asn; Col. Physicians; Phila. Psychiat. Soc; fel. Col. Physicians Phila. Mental hygiene; physiology and chemistry of psychosis; neurosis; behavior disorders following encephalitis.
- Appel, W(illiam) D(unford)**, 3365 Runnymede Place, Washington, D. C. *Chemistry*. Washington, D. C, Dec. 21, 92. B.S. Chicago, 17. Asst. econ ornith, bur. biol. surv, U. S. Dept. Agr, 12-13; zool, Chicago, 14-17; chemist in charge anal. lab, Fed. Dyestuff and Chem. Corp, Tenn, 17-18; research chemist, Ault and Viborg Co, Ohio, 18-20; Newport Co, Wis, 20-22; dye chemist, Bur. Standards, 22-28; chief textile sect, 28- Chem. Soc; Soc. Test. Mat; Asn. Textile Chem, and Colorists; U. S. Inst. Textile Research; Wash. Biol. Field Club; Wash. Acad. Spectrophotometric transmission measurements of dye solutions; commercial evaluation of dyes; action of light on dyed textiles; textile test methods.
- Appelrot, Prof. Samuel**, Haifa, Palestine. *Physiology*. Lublin, Poland, Dec. 13, 98. Hebrew baccalaureate, Hebrew Col. (Palestine), 19; M.D. American Univ. Beirut, 27; Rockefeller fellow, Chicago, 29-30, Ph.D. 30. Instr. physiol. and pharmacol. med. sch, American Univ. Beirut, 27-29, adj. prof. physiol, 30-35; practising physician, 35- Cardiac inhibition and tonus; vitamin D and blood pressure; pilocarpine and glycemia.
- Apperly, Prof. Frank L(ongstaff)**, Medical College of Virginia, Richmond, Va. *Pathology*. Shepparton, Victoria, Australia, July 26, 88. B.A. Oxford, 12, M.A. M.B, 15, M.D, 20; L.R.C.P, London, 15; M.D. Melbourne, 22, fellow, Queens Col, 23. D.Sc, 24. Med. supt, Royal North. Hosp, London, 18-20; senior lecturer path, Melbourne, 20-32; prof. Med. Col. of Va, 32- Junior pathologist, Royal Melbourne Hosp, 21-32; physician, St. Vincent's Hosp, Melbourne, 26-32. Australian Alps physiol. exped, 31. Armytage med. research prize, Melbourne, 22; Syme sci. research prize, Australia, 23. Capt, Royal Army Med. Corps, 15-18. A.A.; Soc. Exp. Path; Asn. Path. and Bact; Va. Acad; British Med. Asn; Royal Col. Physicians; Royal Col. Surg; Australian Asn. Physicians. Pathological physiology and chemistry relating to gastric, blood and respiratory functions.
- Apple, Dr. R(ichard) S(eymour)**, 14 N. Ashley Place, Wilmington, Del. *Chemical engineering*. Columbus, Miss, July 4, 09. B.S. Iowa State Col, 30, M.S. 31, Ph.D. 36. Research chemist, Krebs pigment dept, E. I. du Pont de Nemours and Co, 35- Tau Beta Pi fellow and asst, Iowa State Col. Chem. Soc. Coal carbonization; anti-freeze; white pigment.
- Applebaum, Dr. Edmund**, 630 W. 168th St, New York, N. Y. *Dentistry*. New York, N. Y. D.D.S, N. Y. Col. Dentistry, 22. Instr. dental histol, sch. dental and oral surg, Columbia, 28-34, asst. prof, 35- A.A. Dental pathology; dental caries; polarized light and hard dental tissues.
- Applebaum, S(amuel) B(ernard)**, 285 Riverside Drive, New York, N. Y. *Chemistry*. New York, N. Y. Feb. 18, 91. B.S. Col. City of N. Y, 10, fellow, 10-13; C.E. Columbia, 13. With Permutit Co, 13-28, v. pres, 28- Mech. Eng; Water Works Asn. Water purification and conditioning.
- Appleby, Dean W(illiam) R(emsen)**, University of Minnesota, Minneapolis, Minn. *Metallurgy, Assaying*. Hoboken, N. J. Feb. 11, 65. A.B. Williams Col, 86. A.M, 93; sch. mines, Columbia, 87. Asst. anal. and pharmaceut. chem, N. Y. Col. Pharmacy, 88-89; prof. mining and metal, Minnesota, 91-92, metal. and dean sch. mines, 90- Consulting metal. engineer. U. S. Bur. Mines, 18- Jury awards, Panama-Pacific Expos. Min. and Metal. Eng; Min. and Metal. Soc; Eng. Educ; Chem. Soc; Soc. Chem. Indust; Lake Superior Min. Inst; London Inst. Min. and Metal; N. of England Inst. Min. and Mech. Eng.
- Appledorn, Prof. Herman H(iskias) Jr**, University Club, State College, Pa. *Chemistry*. Norwich, Conn, June 15, 92. A.B. Clark, 13; A.M. Yale, 18, 19, 20-21. Asst. chem, Yale, 17-18, 19, instr, 19-20, 21; asst. prof, Pa. State Col, 21- C.W.S, 18, sergt. A.A.; Chem. Soc. Inorganic chemistry.
- Appleman, Prof. C(harles) O(rville)**, University of Maryland, College Park, Md. **Plant physiology*. Millville, Pa, Dec. 6, 78. B.E. Pa. State Nor. Sch, 97, B.P. 98; Ph.B. Dickinson Col, 03; Ph.D. Chicago, 10. In-tr. Swarthmore Prep. Sch, 03-04; prof. biol, Lombard Col, 04 08; plant physiologist, Exp. Sta. Maryland, 10-, prof. plant physiol, Univ, 18-, dean grad. sch, 19- Lecturer, U. S. Dep. Agr. Summer, Cold Spring Harbor, 95. A.A.; Soc. Nat; Soc. Plant Physiol. (v. pres, 32, pres, 33); Bot. Soc. (chairman, physiol. sect, 20, 27); Chem. Soc; Potato Asn. (chairman, research cmt, 21-23); Wash. Acad; Bot. Soc. Wash. Botany; physiology and biochemistry of plants; carbohydrate metabolism; respiration.
- Appleton, Prof. John B(argete)**, 1161 Columbia Ave, Claremont, Calif. *Geography*. Durham, Eng, 92. B.Sc, London, 22; M.S. Chicago, 24, Ph.D, 25; London; Oxford; Besançon. Asst. geog, Chicago, 23 25; asst. prof, Illinois, 25-29; assoc. prof. and head dept, Scripps Col. and Claremont Cols, 29-37, prof. and head dept, 37- Visiting prof. and Seelye Mudd research fellow, Col. Chinese Studies, Peiping, China, 35. Summers, visiting prof. George Peabody Col, 23, 25; British Columbia, 28; North Carolina, 29; Claremont Col, 31, 33-35; Southern California, 32. British Army, 14-19. Fel. Am. Geog. Soc; Am. Geog; fel. Royal Geog. Soc. Economic, regional, historical and political geography; international relations.
- Appleton, Prof. J(oseph) L(uke) T(easdale)**, University of Pennsylvania, Philadelphia, Pa. *Bacteriology*. Albany, N. Y. Sept. 18, 88. B.S. Hamilton Col, 09, hon. Sc.D, 35; D.D.S. Pennsylvania, 14. Instr. chem, Pa. State Col, 10, zool, 10-11; from instr. to prof. bacteriopath, dental sch, Pennsylvania, 14- A.A.; Soc. Bact; Am. Dental Asn. (research cmm); Acad. Stomatol. (pres, 30); Path. Soc. Phila; Physiol. Soc. Phila; Int. Asn. Dental Research (pres, 34). Factors influencing kinds and numbers of bacteria in the mouth.
- Appuhn, Prof. William E(rnest) F(red)**, 8419 86th St, Woodhaven, L. I, N. Y. *Mathematics*. Brooklyn, N. Y. Nov. 30, 96. E.E. Polytech. Inst. Brooklyn, 18; A.M. Columbia, 30. Instr. math, Stevens Inst. Tech, 19-21, asst. prof, 21- Ensign, U.S.N.R; capt, Special Res, U.S.A, 31- A.A; Math. Soc; Elec. Eng. Differential equations.
- Aradine, Dr. Paul W(illiam)**, University of Rochester, Rochester, N. Y. *Inorganic and analytical chemistry*. Bergen, N. Y. Jan. 25, 10. B.S. Rochester, 32, M.S. 34, Ph.D. 36. Asst. chem, Rochester, 32-36, instr, 36- Chem. Soc. Determination

mination of quartz in the presence of silicates; composition of fluoroboric acid.

Arant, Prof. F(rank) S(elman), 115 Samford Ave, Auburn, Ala. *Zoology, Entomology*. McKenzie, Ala, July 9, 04. B.S. Ala. Polytech, 26, M.S., 29; Iowa State Col. Instr. zool. and entom., Ala. Polytech, 26-30; teaching fellow, Iowa State Col, 30-31; asst. prof., Ala. Polytech, 31- Cotton and corn insects; methods of life history; rearing and mounting hook-worm larvae.

Arbuckle, Prof. H(oward) B(ell), Davidson, N. C. *Chemistry*. Lewisburg, W. Va, Oct. 5, 70. A.B. Hampden-Sydney Col, 89; fellow, 89-90, A.M., 90; Virginia; Ph.D. Hopkins, 98. Instr., Hampden-Sydney Col, 89-90; chem. and physics, Florida, 91-96; asst. chem., Hopkins, 96-98; chem. and biol., Agnes Scott Col, 98-06, prof. chem., 06-13; Davidson Col, 13-Chem. Soc. (pres, Ga. sect, 07); N. C. Acad. (pres, 16, 24). Artificial incubation; toxic effects of fertilizers on tobacco; variation of protein in corn; distillation of cellulose; viscosities of common lubricating oils; zinc spot in Marsh's test for arsenic; fatal cases of poisoning with sodium nitrite.

Arceneaux, George, U. S. Department of Agriculture, Houma, La. *Agronomy*. Lafayette, La, March 8, 95. Southwest. La. Inst.; B.S. Peabody Col, 20; Cornell, 27. Teacher and prin. high sch, La, 20-22; county agr. agent, Houma, La, 22-25; agronomist and assoc. manager, Scully Reclamation and Farming Project, La, 25-27; agronomist, sugar-plant sta. div. sugar plants, bur. plant indust., U. S. Dept. Agr, 28-A.A.; Soc. Agron.; Int. Soc. Sugar Cane Technol. (cmnt. technique field experiments). Sugar-cane variety and milling tests; field practices, sampling and maturity of sugar cane; theoretical sugar yield calculations; plot technique.

Arceneaux, Prof. T(homas) J(oseph), Highland Road, Baton Rouge, La. *Agronomy*. Lafayette, La, June 13, 08. B.S. Southwest. La. Inst., 29; M.S. Agr. and Mech. Col. Texas, 31; fellow, Iowa State Col, 32-34, Ph.D., 35. Instr. high sch, La, 29-32; asst. prof. agron., Southwest. La. Inst., 34-35; asst. prof., Louisiana, 35- Soc. Agron.; Genetic Asn.; La. Acad. Crop breeding; physiology of crop plants.

Archer, R(obert) S(amuel), Republic Steel Corp, Chicago, Ill. *Metallurgy*. Denver, Colo, June 20, 95. B.Ch.E., 16; M.S., 17. Research engineer, Detroit Edison Co, 16-17; research metallurgist, Aluminum Castings Co, 19-20; Aluminum Co. of Amer, 20-30; director metal, A. O. Smith Corp, 30-34; chief metallurgist, Chicago dist., Republic Steel Corp, 34- Bur. Aircraft Production, U.S.A., 17-18. Min. and Metal. Eng.; Soc. Metals (v. pres, 34, pres, 35); Soc. Test. Mat.; British Inst. Metals. Annealing of malleable castings; metallurgy of aluminum alloys and of steel.

Archer, Prof. V(incent) W(illiam), University of Virginia, Charlottesville, Va. *Roentgenology*. Chicago, Ill, Aug. 3, 95. B.S., Virginia, 20, M.D., 23. Instr. roentgenol., Virginia, 24, asst. prof., 26-28; assoc. prof., 28-34, prof., 34-. Bronze medal, science exhibit, Am. Med. Asn, 30, certificate merit, 34. A.A.; Roentgen Ray Soc; Radiol. Soc. N. Amer; Am. Med. Asn.; South. Med. Asn. Hypertrophic pyloric stenosis; roentgen demonstration of intestinal ascariasis; osteochondritis dissecans; x-ray treatment of infections; massive collapse of the lung; unusual condition of the duodenum; ascariasis; radiology.

Archer, Dr. W(illiam) Andrew, U. S. Department of Agriculture, Washington, D. C. *Botany*. Torreon, Mex, Nov. 7, 94. B.S., N. Mex. Col, 20; Ph.D. Michigan, 26. Asst. biologist, N. Mex. Col, 21; asst. bot. Michigan, 21-25; instr. Oberlin Col, 25-26; asst. plant pathologist, U. S. Dept. Agr, 26-29; head dept. bot. and plant path., Escuela de Agr. Medellin, Colombia, 30-31; explorer, Colombian jungles, 31-34; plant explorer, div. plant explor. and introd., bur. plant indust., U. S. Dept. Agr., Mex, S. and Cent. Amer, 34- Economic botany.

Archibald, Prof. E(benzer) H(enry), University of British Columbia, Vancouver, B. C. Can. **Chemistry*. Brookvale, N. S. Sept. 27, 73. B.Sc., Dalhousie, 97, M.Sc., 98; A.M., Harvard, 00, Ph.D., 02. Demonstrator chem., McGill, 02-04; instr., Syracuse, 04-06; asst. prof., 06-09; assoc. prof., 09-12, prof., 12-15; asst. prof., British Columbia, 15-17; assoc. prof., 17-20; prof. and head dept., 20-27; prof. anal. chem., 27-Chem. Soc; fel. Royal Soc. Can; fel. Royal Soc. Edinburgh. Conductivity of salt solutions; freezing-point of dilute solutions; atomic weight of caesium, rubidium, potassium and platinum; the electric conductivity of organic bodies dissolved

in the liquefied halogen hybrids; basic properties of oxygen; compounds of the halogen acids and organic substances containing oxygen; separation of platinum from iridium; separation of iron manganese by means of nitrosophenylhydroxylation; phase relationships of magnesium and sodium sulfates; pure inorganic substances.

Archibald, Dr. E(dgar) S(pinney), Central Experimental Farm, Ottawa, Ont, Can. *Agriculture*. Yarmouth, N. S. May 12, 85. B.A. Acadia, 05, D.Sc., 30; B.S.A., Toronto, 08; LL.D. Manitoba, 28. Prof. agr., N. S. Agr. Col, 09-12; Dom. animal husbandman, Cent. Exp. Farm, Can. Dept. Agr, 12-19, director exp. farms, 19- Can. Soc. Tech. Agr. (pres, 31); Can. Geog. Soc. Agricultural economics.

Archibald, Dr. Edward William, 3106 Westmount Blvd, Montreal, Que, Can. *Surgery*. Montreal, Que, Aug. 5, 72. B.A. McGill, 92, M.D., 96; Montpellier; Freiburg; hon. Ph.D. Paris. Surgeon and later chief surgeon, Royal Victoria Hosp, 04-; from demonstrator to prof. surg. and director dept., McGill, 02- Trudeau medal, Nat. Tuber. Asn, 36; Henry Jacob Bigelow gold medal, Boston Surg. Soc, 37. Fel. Surg. Asn; Asn. Thoracic Surg; fel. Col. Surg; Tuber. Asn; Clin. and Climat. Asn; Soc. Clin. Surg. (consultant); Interurban Surg. Soc; fel. N. Y. Acad. Med; hon. fel. Phila. Col. Med; hon. fel. Phila. Col. Surg; Royal Col. Surg. Can; Can. Med. Asn; hon. fel. Royal Col. Surg; cor. mem. Soc. surg. de Paris; Reale Accad. Med. di Rome. Pancreatitis; cerebral injuries; thoracic surgery; intestinal and pulmonary tuberculosis.

Archibald, Prof. J(ohn) G(eddie), North Amherst, Mass. *Chemistry*. Cavendish, P. E. I, Can, June 11, 94. B.S.A., Ont. Agr. Col, 16; M.S. Mass. Col, 24. Asst. chemist, N. S. Agr. Col, 16-20; research chemist, Int. Nickel Co, Copper Cliff, Ont, 20; asst. research prof. chem., Exp. Sta, Mass. State Col, 21-34, animal husbandry, 34-36, research prof, 36- Animal nutrition.

Archibald, Prof. Ralph G(eorge), Columbia University, New York, N. Y. *Mathematics*. Sackville, N. B. Can, May 23, 01. B.A. Manitoba, 22; fellow, Toronto, 23-25, M.A., 24; fellow, Chicago, 25-27, Ph.D., 27; Göttingen, 30-31. Demonstrator physics, Manitoba, 21-22; lecturer math, Wesley Col. (Can), 22-23; assoc. Columbia, 27-28, asst. prof., 28- Math. Soc; Math. Asn. Theory of numbers; linear algebras; algebraic numbers.

Archibald, Prof. Raymond Clare, Brown University, Providence, R. I. **Mathematics*. South Branch, N. S. Can, Oct. 7, 75. B.A. Mt. Allison, 94, teacher's diploma in violin, conservatory of music, 94, artist's diploma, 95. LL.D., 23; A.B. Harvard, 96, A.M., 97, 97-98; Berlin, 98-99; Ph.D. Strassburg, 00; Paris, 09-10; Rome, 22; hon. D.Univ. Padua, 22. Teacher math, Mt. Allison Ladies' Col, 94-95, prof, 00-07; Teacher math, Mt. Allison Ladies' Col, 94-95, prof, 00-07; prof. and head dept., Acadia, 07-08; instr., Brown, 08-11, asst. prof, 11-17, assoc. prof, 17-23, prof, 23- Librarian and head prof, 11-17, assoc. prof, 17-23, prof, 23- Librarian and head violin dept, Mt. Allison Ladies' Col, 00-07. Ed. in chief, 'Am. Math. Monthly,' 19-21, co-editor, 17-18; assoc. ed, 'Rev. semestrielle publ. math'; 'Isis,' 24-35. A.A. (sec'y, A, 24-27, chairman and v. pres, 29, v. pres, L, 37); Math. Soc. (librarian, 21- ed. board, 'Bull.' 14-20, councilor, 18); Math. Asn. (councilor, 16, 23-30, v. pres, 21, pres, 22); Hist. Sci. Soc. (trustee, 24-); fel. Am. Acad; British Asn; London Math. Soc; British Math. Asn; Edinburgh Math. Soc; Math. Verein; Soc. math. de France; Circolo Mat. di Palermo; Unione Mat. Ital; for. fel. Masarykova Acad, Prague; hon. mem. Soc. de Stiinte din Cluj, Roumania; hon. mem. Polish Math. Soc. The cardioid and some of its related curves; mathematical instruction in France; training of teachers of mathematics in secondary schools of foreign countries; restoration of Euclid's book on division of figures; bibliography of Simon Newcomb; biography and bibliography of Benjamin Peirce; Egyptian mathematics; history of mathematics.

Archibald, Dr. Raymond C(lare), Shell Development Co, Emeryville, Calif. *Chemistry*. Canning, N. S. Can, June 20, 07. B.S. California, 28, M.S., 31, Ph.D., 34. Research chemist, inst. exp. biol, California, 28-32; Shell Develop. Co, 34- Physical chemistry.

Archibald, Dr. R(eginald) M(ac Gregor), Banting Institute, 100 College St, W. Toronto, Ont, Can. *Pathological chemistry*. Syracuse, N. Y. March 2, 10. B.A. British Columbia, 30, M.A., 32; Ph.D. Toronto, 34. Asst. British Columbia, 30-32; Toronto, 32-33, fellow pathological chem, 33- Organic and bio chemistry; lipase activation; sugar of normal urine.

- Ardagh, Prof. E(dward) G(owan) R(ußell)**, University of Toronto, Toronto, Ont., Can. *Chemical engineering*. B.A.Sc., Toronto, 01. Assoc. prof. chem. eng. and later prof. applied chem., Toronto. Soc. Chem. Indust. (chairman, Toronto branch, 18-20, past asst. ed. 'Abstracts'); fel. Can. Inst. Chem.; fel. Royal Soc. Can. Natural gases; activated carbon; distillation of acetate of lime; assay of zinc ores; iodometric and colorimetric determinations; mechanism of iron corrosion; adsorption by precipitated barium sulfate; hydrozone and osazone reactions; removal of thiophene from benzene.
- Arenson, Prof. Saul B(ryan)**, 917 Dana Ave, Cincinnati, Ohio. *Chemistry*. Lincoln, Nebr., June 21, 95. Ph.C. B.S., A.M. Nebraska, Ph.D., 24. Instr. chem., Nebraska, 19-24; *inorg. chem.*, Cincinnati, 24-26; asst. prof., 26-30; assoc. prof., 30- Instr. M.O.T.C. and research chemist, C.W.S., 18. A.A.; Chem. Soc. (sec'y-treas., Nebr. sect, 21-24, v. pres. Cincinnati sect, 30). Physico-organic chemistry; electromotive forces of organic oxidation-reduction reactions; zeolites.
- Arentz, Fred B**, U. S. Industrial Alcohol Co., Newark, N. J. *Chemistry*. Ocala, Fla., Aug. 27, 92. B.S., Rochester, 14. Asst. chemist, Art in Buttons, Inc., Rochester, N. Y., 15-16; indust. research fellow, Columbia, 16-17; research and develop. chemist, U. S. Indust. Alcohol Co., 17-26, supt. Newark div., 26- Chem. Soc. Organic chemistry.
- Areyl, Prof. Leslie B(rainherd)**, 303 E. Chicago Ave, Chicago, Ill. *⁵Zoology, Anatomy. Camden, Maine, Feb. 15, 91. A.B., Colby Col., 12, hon. Sc.D., 37; Ph.D., Harvard, 15; LL.D., Chicago, 34. Austin teaching fellow, Harvard, 13-15; instr. anat., med. sch., Northwestern, 15-16; assoc. prof., 17-19; prof. micros., 19-24; Robert L. Rea prof. anat. and chairman div., 24- Investigator, Bur. Fisheries, 16-24. Asn. Anat. (exec. cmt., 30-34); Soc. Zool. (treas., 25-30, sec'y., 28). Experimental anatomy; physiology of the sense organs and sensory behavior; mammalian histology and embryology.
- Argue, Dr. G(eorge) H(erbert)**, Fraser Paper, Ltd., Madawaska, Maine. *Physical chemistry*. Crystal City, Man., Can., April 22, 05. B.Sc., Alberta, 31, M.Sc., 32; Nat. Research Council Can. scholar, McGill, 34-35, Ph.D., 35. Research chemist, Fraser Co., 35-36; div. chemist, Fraser Paper, Ltd., 37- Can. Pulp and Paper Asn. Gaseous reactions under high pressure; adsorption of cellulose; printing.
- Arguelles, A(ngel) S(evero)**, Bureau of Science, Manila, P. I. *Chemistry, Soils*. Manila, P. I., Aug. 2, 88. Chicago, 05-06; B.S., Illinois, 09. Asst. chemist and chemist, Bur. Science, P. I., 10-22, chief div. soils and fertilizers, 23-29, asst. director, 30-34, director, 34- Bur. chem. and soils, U. S. Dept. Agr., 19-20; acting director, Nat. Museum, 29-30. Lecturer, Nat. Univ., 22-24; professorial lecturer, Philippines, 23-24. Mem. Coordination Board on Agr. Activities, 22; Rubber Cmt., 26; v. chairman, Nat. Research Council, 34-37, chairman, 37-; chairman, Indust. Cmt. and Soil Surv. Cmt., 34-; mem. Educ. Surv., 35- A.A.; Philippine Soc. Tech. Agr. (pres., 26-29); P. I. Sci. Soc. (pres., 27); Philippine Research Inst. (sec'y., 30). Philippine soils; fertilizers; galvanized iron roofing in the Philippines.
- Ark, Dr. P(eter) A(lexander)**, 1319 Henry St, Berkeley, Calif. *Plant pathology*. Blagoveschensk, Russia, May 16, 99. A.B., California, 30, Ph.D., 34. Bacteriologist, health center, Monterey County, Calif., 30; asst. plant path., *California*, 30-34, assoc. Exp. Sta., 34-35, junior plant pathologist, 35- Phytopath. Soc. Phytobacteriology; the relation of insects to bacterial plant diseases.
- Arkin, Prof. Aaron**, 7701 Phillips Ave, Chicago, Ill. *Internal medicine*. Libau, Latvia, Sept. 6, 88. B.S., Chicago, 09, fellow, 09, 11-12. M.D., 12, Ph.D., 13; A.M., Wisconsin, 10. Instr. pharmacol., Wisconsin, 09-10; inst. infectious diseases, Chicago, 10-12, Sprague Mem. Inst., 13-14; prof. path. and bacter. sch. med., West Virginia, 14-22; intern and roentgenologist, 1st med. clinic, Vienna, 22-25; assoc. prof. med., Rush Med. Col., Chicago; prof. and chairman dept., Cook County Grad. Sch. Chief bacteriologist and pathologist, State Hygienic Lab., W. Va., 14-17. Attending physician, Cook County Hosp.; Mt. Sinai Hosp.; director, Chicago Lab., A.A.; Am. Med. Asn.; Physiol. Soc.; Asn. Path. and Bact.; Soc. Pharmacol.; Pub. Health Asn.; Soc. Bact.; Radiol. Soc. N. Amer.; Chicago Path. Soc.; Chicago Tuber. Soc.; Vienna Path. Soc.; Int. Asn. Med. Mus. Syphilis of the bowel; catalytic activity of blood and tissue; phagocytosis; immune reactions; sodium salts of iodoxybenzoic acid; rat bite fever; right-sided aorta; hypernephroma; lymphogranuloma; bronchus carcinoma; periarteritis nodosa; pulmonary tuberculosis; gastro-intestinal lesions.
- Arllit, Prof. Ada Hart**, University of Cincinnati, Cincinnati, Ohio. *Psychology*. New Orleans, La., July 28, 90. A.B., Tulane, 13; Ph.D., Chicago, 17. Fellow, Sprague Mem. Inst., Chicago, 17; assoc. educ. psychol., Bryn Mawr Col., 17-23; psychologist, Cent. Clinic, Cincinnati, 23-25; prof. child care and training and head dept., Cincinnati, 25- A.A.; Psychol. Asn.; S. Soc. Philos. and Psychol. Educational and animal psychology; mental tests; child psychology.
- Arlyton, Prof. A(lexander) V**, Dakota Wesleyan University, Mitchell, S. Dak. *Biology*. Roland, Iowa, 80. B.S., St. Olaf Col., 09; M.S., Wisconsin, 18; Ph.D., Nebraska, 31. Head dept. biol., Wartburg Col., 12-13; asst., Wisconsin, 17-18; Cartage Col., 18-19; Iowa, 19-22; head dept., Dakota Wesleyan, 22-29; asst., Nebraska, 29-30; head dept., Sterling Col., 30-31; prof. and head dept., Dakota Wesleyan, 31- Summer, South Dakota, 32. Exec. cmt., Upper Miss. Conservation Conf., 35-36. S. Dak. Acad. (pres., 33). Regeneration of animal fragments; ecology of the mole; bird life of South Dakota; pitfalls in teaching science; new factor in lymph flow; functions of blood.
- Armbruster, Dr. Marlon H(elen)**, U. S. Steel Corp., Kearny, N. J. *Chemistry*. Folsomdale, N. Y., March 17, 10. A.B., Mt. Holyoke Col., 30; scholar, Bryn Mawr Col., 30-31, fellow, 31-33. A.M., 32. Huff fellow, 33-34. Ph.D., 34. Asst. chem., Barnard Col., Columbia, 34-35; physical chemist, research lab., U. S. Steel Corp., 35- Chem. Soc. Chemical thermodynamics; electrochemistry; physico-chemical properties of metals; surface chemistry.
- Armes, Prof. Henry P(ercy)**, University of Manitoba, Winnipeg, Man., Can. *Chemistry*. Nottingham, Eng., Sept. 27, 84. B.Sc., Leeds, 05; Ph.D., Strassburg, 09. Demonstrator chem., Manitoba, 09-10, lecturer, 10-14, asst. prof., 14-28, assoc. prof., 28- Fel. Can. Inst. Chem. Organic chemistry.
- Arms, Dr. B(urdett) L(oomis)**, Farmington, Maine. *Public health*. Springfield, Vt., Sept. 27, 69. M.D., Vermont, 05. Bacteriologist, lab., Board Health, Boston, 06-08, asst. director, 08-10, director, 10-13; lecturer munici. lab. methods, Mass. Inst. Tech., 10-13; state bacteriologist, Oregon, 13-14; prof. prev. med., Texas, 14-16; state bacteriologist, Ala., 16-17; director div. diagnostic labs., State Board Health, Fla., 17-25; state health officer, 25-29; director, Cooperative Health Union, 29- Am. Med. Asn.; Pub. Health Asn.; Asn. Sch. Physicians. Laboratory studies of diphtheria, tuberculosis, glanders and hookworm.
- Armstrong, Prof. Alice H(all)**, 52 Curve St, Waltham, Mass. *Physics*. Waltham, Mass., Dec. 8, 97. A.B., Wellesley Col., 19; A.M., Radcliffe Col., 23. Ph.D., 30. Asst. Stdards, 19-20, asst. physicist, 20-22; instr. physics, Wellesley Col., 25-26; asst. biophys., Rockefeller Inst., 27-29; lab. asst., Huntington Hosp., Boston, 29-30; asst. prof. physics, Wellesley Col., 30-36, assoc. prof., 36- Fel. Physical Soc. X-ray spectroscopy.
- Armstrong, Dr. Beulah (May)**, University of Illinois, Urbana, Ill. *Mathematics*. Sterling, Kans., Nov. 18, 95. A.B., Baker, 17; A.M., Kansas, 18; fellow, Illinois, Ph.D., 21. Instr. math., Illinois, 21-31, assoc., 31- Math. Soc.; Math. Asn. Mathematical induction in group theory.
- Armstrong, Dr. Charles**, U. S. Public Health Service, Washington, D. C. *⁶Pathology, Medicine. Alliance, Ohio, Sept. 25, 86. B.S., Mt. Union Col., 10. Sc.D., 33; M.D., Hopkins, 15. Sch. supt., Ohio, 10-11; intern, New Haven Gen. Hosp., 15-16; asst. surgeon, U. S. Pub. Health Service, 16-20, passed asst. surgeon, 20-24, surgeon, 24- Botulism; influenza; dengue fever; tetanus following vaccination; experimental syphilis; pasteurization; pollen-extracts; psittacosis; post-vaccination encephalitis; poliomyelitis; lymphocytic chorio-meningitis.
- Armstrong, Dr. Clairette P**, 51 E. 90th St, New York, N. Y. *Psychology*. A.B., Barnard Col., Columbia, 08, A.M., Columbia, 09; Ph.D., N. Y. Univ., 31. Psychol. extern, Bellevue Hosp., 23-24, chief psychologist, 24-26; Boston Psychopathic Hosp., 26; psychologist, Children's Court, New York, 26-33. Domestic Relations Court, 33- Chief child welfare cmt., Am. Red Cross Cmt., Montenegro, 19-20. A.A.; Psychol. Asn.; Sociol. Soc.; Asn. Applied Psychol. (pres., 31-34); Eu-

genics Research Assn; Popul. Assn; assoc. fel. N. Y. Acad. Med; fel. N. Y. Acad. (sec'y, psychol. sect, 32). Clinical psychology; juvenile delinquency.

Armstrong, Dr. Donald B(udd), 1 Madison Ave, New York, N. Y. *Public health*. Bangor, Pa, Dec. 19, 86. Ph.B, Lafayette Col, '08; hon. Sc.D, '23; A.M., M.D., Columbia, '12; M.S., Mass. Inst. Tech, '13. Dept. social welfare, Ass't. Improving Condition of the Poor, '13-'16; exec. officer, Framingham Community Health and Tuber. Demonstration, '16-'23; Nat. Health Council, '21-'24; sec'y tech. board, Milbank Mem. Fund, '22-'24; asst. sec'y welfare div, *Metropolitan Life Ins. Co*, '24-'28; fourth v. pres, '29-'31, third v. pres, '31— Lecturer, Teachers Col, Columbia; Col. City of N. Y.; Univ. and Bellevue Hosp. Med. Col; Simmons Col; N. Y. Sch. of Social Work. Sec'y and pres, Nat. Health Council. A.A; fel. Pub. Health Assn. (chairman, sociol. sect, health inst, '22, pres, N. Y. sect); Am. Med. Assn; Tuber. Assn. (director); N. Y. Tuber. and Health Assn. (v. pres); N. Y. Acad. Med. House flies in relation to diarrhoeal disease among infants; control of tuberculosis.

Armstrong, Dr. George M(iller), Clemson Agricultural College, Clemson, S. C. *Botany*. Appleton, S. C., Nov. 13, 93. B.S., Clemson Col, '14; A.M., Wisconsin, '17; Ph.D., Washington (St. Louis), '21. Asst. Wisconsin, '15-'17; instr. bot, Clemson Col, '17-'18; asst. pathologist, bur. plant indust, U. S. Dept. Agr., '18-'19; instr. Shaw Sch. Bot. Washington (St. Louis), '21-'22; asst. prof, '22-'24; head div. boll weevil control, *Clemson Col*, '24-'28, head div. bot. and bacter, '28— A.A; Bot. Soc; Assn. Plant Path; Soc. Plant Physiol; S. C. Acad. Physiology in fungi; fruiting in cotton; development of cotton fibers.

Armstrong, Dr. John Maxwell, Central Experimental Farm, Ottawa, Ont, Can. *Agronomy*. St. Marys, Ont, Feb. 24, 99. B.Sc., Saskatchewan, '29. M.Sc., '31; Nat. Research Council, student, McGill, '31-'32. Ph.D., '33. Asst. agron., Saskatchewan, '29-'30; Nat. Research Council, Can., '30-'32; cyto geneticist, forage crops div, Cent. Exp. Farm, Ottawa, '33— Instr. McGill, '32-'33. Can. Soc. Tech. Agr. Wheat breeding for rust resistance; cytology of wheat crosses; cytology of *Matthiola incana*; seed production in alfalfa; hybridization of *Triticum* and *agropyron*.

Armstrong, Dr. Phillip Brownell, University of Alabama School of Medicine, University, Ala. *Anatomy*. Ruth erford, N. J., March 26, 98. B.S., Mass. Col, '21; M.D., Cornell, '26. Asst. anat. med. col. Cornell, '25-'27; instr. '27 '30, asst. prof, '30-'37; prof. sch. med., Alabama, '37. Gen. Educ. Board fellow, '34-'35. Assn. Anat.; Harvey Soc. Embryology; relation of developing structure to the function in the heart and kidney; metabolism of developing embryos.

Armstrong, Dr. Robert T(hexton), Massachusetts Institute of Technology, Cambridge, Mass. *Chemistry*. Chadron, Nebr, Dec. 27, 09. B.S., Mass. Inst. Tech, '31. Ph.D., '35. Asst. chem., Mass. Inst. Tech, '30-'35; instr. org. chem, '35— Chem. Soc. Organic chemistry; absorption spectra; photochemistry.

Armstrong, Dr. Samuel T(reat), Hillbourne Farms, Katonah, N. Y. *Neuropsychiatry*. St. Louis, Mo, Nov. 2, 59. Ph.B, St. Louis, '79, Ph.D., '86; M.D., Washington (St. Louis), '79. U. S. Marine Hosp. Service, '81-'90; neur. dept, N. Y. Polyclinic, '91-'94; chief surgeon, Dept. Puerto Principe, '98-'00; 3rd dist, S. Luzon, '00-'01; med. dept, Wash. Life Ins. Co, '01-'05; gen. med. supt, Bellevue and allied hosp., '05-'08; med. director, Hillbourne Farms, '10— A.A; Psychiat. Assn; Am. Med. Assn; N. Y. Acad. Med; N. Y. Acad. Functional nervous conditions.

Armstrong, Dr. Wallace D(avid), University of Minnesota, Minneapolis, Minn. *Physiological chemistry*. Celeste, Texas, July 8, 05. A.B., Texas, '26; fellow, N. Y. Univ, '28. M.S., '28; Ph.D., Minnesota, '32. Tutor, Texas, '26-'27; Nat. Research Council asst, '27-'28; research chemist, The Texas Co, '28-'29; asst. med., Minnesota, '29-'33; instr. physiol. chem, '33— Chem. Soc; Int. Assn. Dental Research. Analysis for fluorine; biological rôle of fluorine; nitrogen compounds in petroleum; synthesis of choline derivatives; composition of teeth.

Arnason, Dr. Thomas J(ohann), University of Saskatchewan, Saskatoon, Sask., Can. *Genetics, Cytology*. Brown, Man, Nov. 25, 05. B.Sc., Saskatchewan, '31. M.Sc., '32; fellow, Wisconsin, '32-'34; Ph.D., '34. Instr. biol, Saskatchewan, '34— A.A; Bot. Soc. Location of genes in wheat chromosomes; extent of correspondence of chromosomes of maize and annual teosinte.

Arnaud, Joseph J(ohn), 2220 Hall Place, N. W., Washington, D. C. *Mathematics, Physics*. New York, N. Y., Sept. 22, '70. B.S., Col. City of N. Y., '89; N. Y. Univ. Prof. math, Cooper Union, '03-'11; asst. U. S. Naval Observatory, '12-'18; master computer, tech. staff, ordnance dept, U. S. War Dept, '18-'22; physicist, Bur. Standards, '22-'24; consulting physicist and mathematician, '24— patents. Lecturer, Marquette, '26-'29. A.A; Math. Assn. Differential equations; image curvature as a function of diaphragm position; ballistics; calculus of operations; new methods of interpolating, integrating and differentiating functions known only by tabulated values; logarithmic solution of multinomial algebraic equations of any degree.

Arndt, Dr. Charles H(omer), Clemson Agricultural College, Clemson, S. C. *Plant physiology*. Jonestown, Pa, Oct. 14, 92. A.B., Lebanon Valley Col, '14; M.S., Purdue, '16; Ph.D., Pennsylvania, '21. Prof. biol, Lebanon Valley Col, '16-'17; instr. bot, Agr. and Mech. Col, Texas, '17-'18; inspector, bur. plant indust, U. S. Dept. Agr, '18-'19; instr. plant path. and physiol, Pennsylvania, '22-'25; director, Coffee Exp. Sta, Port au Prince, Haiti, '25-'30; assoc. botanist, Exp. Sta, Clemson Col, '30— Harrison fellow, Pennsylvania, '21-'22. A.A; Bot. Soc; Phytopath. Soc; Soc. Plant Physiol. Ionic requirements of plants; translocation; seedling diseases of cotton.

Arner, Dr. William J(oseph), 1607 Watova Road, Toledo, Ohio. *Physical chemistry*. Allentown, Pa, Dec. 28, 98. Met.E, Lehigh, '21. M.S., '26; Ph.D., Chicago, '30. Research chemist, Libbey Owens Ford Glass Co, '31— Radioactivity; linseed oil; atomic disintegration of aluminum; moisture content of nitro-cellulose plastic; safety glass.

Arnim, Dr. Sumpter Smith, 63 Trumbull St, New Haven, Conn. *Pathology*. Hallettsville, Texas, Oct. 9, 04. A.B., Rice Inst, '26; D.D.S., Northwestern, '30; Rockefeller Foundation fellow, Yale, '30-'35. Asst. attending surgeon dentistry, New Haven Hosp, '35— Dental Assn; Int. Assn. Dental Research. The relation of dietary alterations to dental changes.

Arnold, Dr. Bion Joseph, 231 S. La Salle St, Chicago, Ill. *Electrical engineering*. Casnovia, Mich, Aug. 14, '61. Nebraska, '79-'80, E.E., '80, hon. D.Eng, '11; B.S., Hillsdale Col, '84, M.S., '87, hon. Ph.M., '89, hon. diploma, '93; Cornell, '88-'89; hon. Sc.D., Armour Inst. Tech, '07. Indust. positions, '84-'88; Thomson-Houston Elec. Co, '89-'93; pres, Arnold Eng. Co, '96— consulting engineer to revise street railways, City of Chicago, '02-'06; chairman board supervising engineers, Chicago Trac-tion Co, '07— chief subway engineer. Consulting engineer, Pub. Service Cmn, N. Y., and prin. cities of U. S. and Can; Naval Consulting Board, Medal, Trans-Miss. Expos, '98; La. Purchase Expos, '04; diploma, Pan-Am. Expos, '01; Long-streth medal, Franklin Inst, '03; Washington award, '29. Del. Int. Elec. Cong, Paris, '00, chairman exec. cmt. and v. pres, St. Louis, '04. Lieut. col, A.S., '17-'19, col, R.C.A.S. A.A; hon. mem, Elec. Eng, (pres, '04); Civil Eng; Mech. Eng; Eng. Educ; hon. mem. West. Soc. Eng, (pres, '06). The magnetic clutch; storage batteries; power plants; railway design and construction for single phase, alternating and direct current; traffic needs of large cities; aerial torpedoes.

Arnold, Dr. Chester Arthur, University of Michigan, Ann Arbor, Mich. *Paleobotany*. Leeton, Mo, June 25, 01. B.S., Cornell, '24, Ph.D., '29. Instr. and asst. prof. bot. and curator fossil plants, Michigan, '28— A.A; Bot. Soc; Paleont. Soc; Mich. Acad. Fossil plants of the Devonian, Carboniferous and Miocene periods.

Arnold, Prof. Erie Anderson, 19075 Meredith Ave, Euclid, Ohio. *Physical chemistry*. Cleveland, Ohio, April 1, '96. B.S., Case, '19; M.S., Illinois, '24; Ph.D., Western Reserve, '31. Develop. engineer, Nat. Carbon Co, '19-'22; asst, Illinois, '22-'24; instr. chem, Case, '24-'31, asst. prof. anal. chem, '31-'37, assoc. prof. chem, '37— Chem. Soc; Soc. Test. Mat; Faraday Soc. Reaction velocity and catalysis.

Arnold, Dr. Harold W(illfred), 2530 W. 18th St, Wilmington, Del. *Chemistry*. Sterling, Nebr, April 18, II. A.B., Wittenberg Col, '31; Ph.D., Ohio State, '36. Chemist, exp. sta, E. I. du Pont de Nemours and Co, '36— Carbohydrates.

Arnold, Prof. Henry J, 705 N. Fountain Ave, Springfield, Ohio. *Psychology*. Sterling, Nebr, Feb. 11, '87. A.B., Nebraska, '17; A.M., Iowa, '24; Ph.D., Ohio State, '29. Prin, Wartburg Acad, '15-'23; instr. psychol, Iowa, '23-'25; Ohio State, '27-'28; asst. prof, Wittenberg Col, '25-'29, assoc. prof,

- 29-34, prof., 34- Oberlaender Trust fellow, 32. Pres, Ohio Conf. Adult Educ., 32- Psychol. Asn; Ohio Acad. Educational psychology; educational measurements; adult education.
- Arnold, Prof. Herbert E(lly)**, Wesleyan University, Middletown, Conn. Mathematics. Brooklyn, N. Y., March 13, 96. B.S., Wesleyan, 21, A.M., 23; Ph.D., Yale, 28. Asst. prof. math., Wesleyan, 22-36, assoc. prof., 36- A.A.; Math. Soc.; Math. Asn. Algebraic geometry.
- Arnold, Prof. Herbert J(ullus)**, Teachers College, Columbia University, New York, N. Y. Science education. Woodside, N. Y., Jan. 31, 05. B.S., Col. City of N. Y., 26; A.M., Columbia, 27, Ph.D., 36. Teacher, pub. schs, N. Y., 23-27; tutor geol., Col. City of N. Y., 27-28; teacher science and math, Lincoln Sch., Teachers Col., Columbia, 28-32, instr. nat. sciences, 32-36, asst. prof., 36- Assoc., New Col., Columbia, 33-36. A.A.; Asn. Research Sci. Teaching; N. Y. Miner. Soc. Science education; geology.
- Arnold, Prof. Jerome Howard**, State University of Iowa, Iowa City, Iowa. Chemical engineering. Montevideo, Minn., April 14, 07. B.S., Minnesota, 27; Iowa State Col., 27; Minnesota, 27-28; Sc.D., Mass. Inst. Tech., 31. Asst. chem., Minnesota, 27-28; instr. chem. eng., Mass. Inst. Tech., 30-31; fellow, Minnesota, 31-33; prof. chem. eng., Linsly Inst. Tech., 33-36; asst. prof., North Dakota, 36-37; Iowa, 37- Chem. Soc.; Chem. Eng. Diffusion; psychrometry; theory of the liquid state.
- Arnold, Prof. John G(eorge), Jr.**, 2328 Lowerline St., New Orleans, La. Parasitology. Cincinnati, Ohio, Oct. 16, 09. A.B., Ohio State, 30; A.M., Wesleyan, 32; Ph.D., N. Y. Univ., 34. Asst. biol., Wesleyan, 30-31; teaching fellow, N. Y. Univ., 32-34; prof. and head dept., Loyola (La), 34-, director dept. med. technol., 35- Summers, asst., State Conservation Dept. Biol. Surv., N. Y., 31, 32; instr., Col. City of N. Y., 34. A.A.; Soc. Parasitol.; Micros. Soc.; New Orleans Soc. Plant Science. Fish and rabbit helminths.
- Arnold, John W(illiam)**, Western Union Telegraph Co., 60 Hudson St., New York, N. Y. Engineering. Paulding, Ohio, Sept. 13, 99. A.B., Illinois, 21, A.M., 23; Columbia, N. Y. Univ. Asst. math., Illinois, 21-23; eng. asst., West. Union Tel. Co., 23- Major, C.A. Res. A.A.; Radio Eng.; Math. Soc. Apparatus design; transmission theory; magnetic materials; earth potentials.
- Arnold, Dr. Lionel K(enneth)**, 2519 Hunt St., Ames, Iowa. Chemical engineering. Bristow, Iowa, Dec. 30, 95. A.B., Ellsworth Col., 20; B.S., Iowa State Col., 21, M.S., 26, Ph.D., 30. Instr., Ellsworth Col., 22; asst. and relief foreman, Corn Products Ref. Co., Ill., 22-25; asst. chief chemist, Iowa Valley Operating Co., 25; asst. chem. eng., Iowa State Col., 26-27, eng. exp. sta., 27-32, assoc., 32- Tech. consultant, 'Paper Trade,' Chicago, 27. Chem. Soc.; Chem. Eng. Production of paper and lumber substitutes from cornstalks; manufacture of refined corn sugar; fighting methods for fires involving chemicals.
- Arnold, Prof. Lloyd**, 1817 W. Polk St., Chicago, Ill. Bacteriology, Public health. Kimmundy, Ill., July 8, 88. A.B., Texas Christian, 08, A.M., 18; M.D., Vanderbilt, 19; München, Göttingen and Tübingen, 11-14. Asst. anat., Tulane, 08-10, physiol., 15-16; director lab., City Hosp., Nashville, 19-20; asst. med., med. sch., Vanderbilt, 19-20; asst. prof. bacter., Loyola Col. (Ill.), 21-22; prof. path., bacter. and prev. med., 22-25; bacter. and prev. med., col. med., Illinois, 25-; bacteriologist, State Dept. Pub. Health, Ill., 26- Director lab., Mercy Hosp., 21-25; pathologist, Misericordia Hosp., 21-25. A.A.; Soc. Bact.; Asn. Path. and Bact.; Am. Med. Asn.; Chicago Path. Soc.; Chicago Soc. Int. Med. Classification of streptococci; Twort-d'Herelle's phenomenon of bacteriophagy; gastro-intestinal bacterial flora.
- Arnold, Dr. Luther B(ishop), Jr.**, Fairville, Pa. Chemistry. Duluth, Minn., Aug. 9, 07. A.B., Carleton Col., 29; A.M., Harvard, 30, Ph.D., 33. Asst., Harvard, 33; research chemist, E. I. du Pont de Nemours and Co., 33- Chem. Soc. Gas reaction kinetics; textile processing.
- Arnold, Dr. Norman K(iefer)**, Dartmouth College, Hanover, N. H. Zoology. East Hampton, Conn., Sept. 4, 06. B.S., Wesleyan, 28; Ph.D., Yale, 32. Asst., Yale, 29-31; instr. zool., Dartmouth Col., 32- Summer, instr., Marine Biol. Sta., Isles of Shoals, New Hampshire, 34. A.A. Experimental embryology.
- Arnold, Dr. Orlan M(cGrew)**, Rensselaer Polytechnic Institute, Troy, N. Y. Physical and colloid chemistry. York, Nebr., May 14, 04. A.B., Grinnell Col., 28; Ph.D., Wisconsin, 34. Asst. and instr. chem., Wisconsin, 28-35; instr. chem. and chem. eng., Walker lab., Rensselaer Polytech. Inst., 35- Chem. Soc. Electrical dispersion of conductance and dielectric constant with high frequency currents; structure and behavior of proteins; viscosity; adsorption.
- Arnold, Dr. Ralph**, 417 S. Hill St., Los Angeles, Calif., and 120 Broadway, New York, N. Y. *Paleontology, Geology. Marshalltown, Iowa, April 14, 75. Throop, 94 96; A.B., Stanford, 99, A.M., 00, Ph.D., 02; Sc.D., Pittsburgh, 21; D.Eng., Southern California, 25. Asst. miner., Stanford, 99; instr. chem. and physics, Hoit's Sch., Menlo Park, Calif., 99-00; field asst., mining surv., Wash. Sch. Mines, 00; asst. geol., Stanford, 00-02; aid, U. S. Geol. Surv., 03-05, paleontologist, 05-08, geologist, 08-09; consulting geologist and engineer, 09- Temporary field asst., U. S. Geol. Surv., 00-03; chief oil, gas and mines sect., Bur. Int. Revenue, 17-19. Lecturer, Chicago, 14; Harvard and Mass. Inst. Tech., 16. Summer, lecturer, Columbia, 25. Geol. Soc.; Paleont. Soc.; Soc. Econ. Geol.; Seismol. Soc. (chairman, South. Calif. sect., 24); Min. and Metal. Eng. (chairman, southwest. sect., chairman, petro. cmt., 19-22); Min. and Metal. Soc. (councilor, 18-); Asn. Petrol. Geol.; Astron. Soc. Pacific; Cooper Ornith. Club; LeConte Geol. Soc. (sec'y, 01); Geol. Soc. of Am. Univ. (pres., 02); Geol. Soc. Wash. (sec'y, 07); Biol. Soc. Wash.; Wash. Acad.; Geol. Soc. London; London Malacol. Soc.; Royal Geog. Soc. Pleistocene and Tertiary paleontology and stratigraphy of the western coast of North America; geology, paleontology and technology of the California oil fields and Coast Ranges; Tertiary and Quaternary Pectens of California; the Santa Clara Valley, Puente Hills and Los Angeles oil districts; geology and oil resources of the Summerland district and of the Santa Maria oil district of Santa Barbara County; Santa Cruz folio, California; the McKittrick-Sunset oil region; oil resources of the world; taxation of mines; petroleum in the United States and possessions.
- Arnold, Prof. S(amuel) T(omlinson)**, Brown University, Providence, R. I. Chemistry. Fall River, Mass., Aug. 92. A.B., Brown, 13, A.M., 14, Ph.D., 16. Instr. chem., Brown, 16-17; asst. prof., 17-22; assoc. prof., 22-30; prof., 30-, dean undergraduates, 29- Chem. Soc. (sec'y, R. I. sect., 17, v. chairman, 18-21, chairman, 21-24); Providence Eng. Soc. Analytical and industrial chemistry.
- Arnold, Weld**, California Institute of Technology, Pasadena, Calif. Astronomy, Geography. New York, N. Y., June 9, 95. A.B., Harvard, 18; diploma, Royal Geog. Soc. Austin teaching fellow astron., Harvard, 19-21; instr. sch. surv., Am. Geog. Soc., New York, 23-31; geog. surv. and field astron., sch. geog., Harvard, 31-36; astrophys. lab., Calif. Inst. Tech., 36- Topographer, 7th Hamilton Rice exped., north Brazil, 24-25; Harvard eclipse exped., Sumatra, 25-26; U. S. Naval Observatory eclipse exped., Tonga, 30. A.A.; Astron. Soc.; Am. Geog. Soc.; Horol. Inst.; Soc. Mil. Eng.; Inst. Aeronaut. Sci.; fel. Royal Astron. Soc.; Royal Geog. Soc. Maps; surveying; improvement in present methods of latitude and longitude determination in the field.
- Arnold, Dr. William A(rchibald)**, Hopkins Marine Station, Stanford University, Pacific Grove, Calif. Physiology. Douglas, Wyo., Dec. 6, 04. B.S., Calif. Inst. Tech., 31; Ph.D., Harvard, 35. Sheldon fellow biol., Harvard, 35-36; Gen. Educ. Board fellow, Hopkins Marine Sta., Stanford, 36- Photosynthesis of green plants.
- Arnold, Dr. William S(hannon)**, 511 Nottingham Road, Ten Hills, Baltimore, Md. Chemistry. Baltimore, Md., July 15, 97. Hopkins; Maryland; M.S., 22, fellow, 23, Sc.D., 30. Chief chemist, C. M. Pitt and Sons Co., 20-, director, 27- A.A.; Chem. Soc.; fel. Inst. Chem.; fel. Am. Int. Acad.; Md. Acad. (academician with medal, 19, chairman, food chem., 22-24, governor, 26-, senator, 28-). Food chemistry.
- Arnold, Dr. L(eslie) Earle**, 515 Delaware Ave., S. E., Minneapolis, Minn. Physiological chemistry. Micanopy, Fla., June 22, 09. Ph.G., B.S., Florida, 30; Ph.D., Minnesota, 34. Asst. physiol. chem. and biophys., Minnesota, 31-34; instr. physiol. chem., 34- Hemoglobin determination; high resistance electromotive force measurements; irradiation of methylene blue; irradiation of proteins.
- Arnquist, Dr. W(arren) N(elson)**, Box 2038, Pittsburgh, Pa. Physics. New Richmond, Wis., Aug. 12, 05. B.S., Whitman Col., 27; Ph.D., Calif. Inst. Tech., 30. Asst. prof. physics,

Ala. Polytech, 30-34, assoc. prof., 34-35; physicist, *Gulf Research and Develop. Co.*, 35—Teaching fellow, Calif. Inst. Tech. Physical Soc. Scattering of electrons by gases.

Arnspliger, Dr. V(arney) C(lyde), 217 Van Cortlandt Park Ave., Yonkers, N. Y. Technical education. Grayson Co., Texas, May 23, 96. Austin Col., 15; A.B., Texas Christian, 17; Chicago; Ph.D., Columbia, 33. Teacher, high sch., Okla., 19-27, sch. supt., 27-29; director research, *Erpi Picture Consultants*, 29—Lecturer, Teachers Col., Columbia. Auditory and visual perception; effectiveness of sound films in instruction; psychology of sound film presentation; production of scientific films.

Arnstein, Dr. Karl, 817 Delaware Ave., Akron, Ohio. Aero-nautics. Prague, Czechoslovakia, March 24, 87. Karl Ferdinand's and Tech. Univ., Prague, 10, Dr.Tech.Sci., 12; hon. D.Ing., Tech. Univ. Aachen, Germany, 26. Dept. bridges and structures, Tech. Univ., Prague, 09-11; chief engineer in charge struct. research, Ed. Zublim and Co., Strasbourg, Alsace, 11-14; chief constructor and in charge theoret. and exp. struct. research, *Luftschiffbau Zeppelin*, 15-24; chief engineer and director research develop., *Goodyear Zeppelin Corp.*, 24—Sub-cmt. on airships, Nat. Advisory Cmt. Aeronautics. Fel. Inst. Aeronaut. Sci. Applied mechanics; theory of structures; performance of aircraft; aerodynamics applied to airships and large structures.

Arny, Prof. A(lbert) C(edric), 2117 Dudley St., St. Paul, Minn. Agriculture. Washington Co., Minn., Nov. 4, 77. B.S.A., Minnesota, 09, M.S., 17. Asst. prof. agr., Minnesota, 09-16; assoc. prof., 16-, asst. agriculturist, Exp. Sta., 09-25; assoc. agronomist, 26—Soc. Agron.; Soc. Plant Physiol. Agronomy; forage and pasture crops; flax improvement; crop rotation.

Arny, Dr. H(enry) V(inecome), 115 W. 68th St., New York, N. Y. Pharmacy. Philadelphia, Pa., Feb. 28, 68. Ph.G., Phila. Col. Pharmacy, 89, Ph.M., 19; Ph.D., Göttingen, 96. Prof. pharmacy, Western Reserve, 97-11; chem. col. pharmacy, Columbia, 11-37, dean, 30-37; retired. A.A.; Pharmaceut. Asn. (councilor, 30); Chem. Soc.; Franklin Inst. Pharmaceutical chemistry; revision of the United States Pharmacopoeia and of the national formulary.

Aronovsky, Dr. S(amuel) I(saac), 222 11th St., Ames, Iowa. Biochemistry. Kovno, Lithuania, May 30, 00. B.S., Minnesota, 21, Chem.E., 22, Ph.D., 29. Chemist in charge control and exp. work, Northwest Paper Co., Cloquet, Minn., 22-27; Cloquet Wood Products fellow, Minnesota, 27-35; Northwest Paper Co. res. fellow, Inst. Paper Chem., Lawrence Col., 35-37; assoc. chemist, agr. by-products lab., bur. chem. and soils, U. S. Dept. Agr., 37—Chem. Soc. Chemistry of the pulping processes.

Aronson, Prof. Joseph D(avid), Henry Phipps Institute, University of Pennsylvania, Philadelphia, Pa. Medicine. Russia, Jan. 12, 87. M.D., Medico-Chirurg. Col., Phila., 08. Prof. bacter. and path., med. dept., Arkansas, 11-14; asst., Bur. Health Lab., Phila., 14-17; asst. prof. bacter., Henry Phipps Inst., Pennsylvania, 20—Chief lab., Base Hosp., Fort Sill and No. 85, 17-19. A.A.; Assn. Path. and Bact.; Soc. Bact.; Assn. Immunol.; Path. Soc. Phila. Experimental pathology and bacteriology; tuberculosis.

Arps, Prof. George F(rederick), 216 E. Lane Ave., Columbus, Ohio. Psychology. Cary, Ill., Jan. 23, 74. A.B. Stanford, 04; A.M., Indiana, 05; Ph.D., Leipzig, 08. Assoc. prof. educ. and psychol., Indiana, 08-10; asst. prof. psychol., Illinois, 10-12; prof., Ohio State, 12-, dean col. educ., 20—Major, Sanit. C., 18-19. A.A.; Psychol. Asn. (councilor, 20-23). Sensations of pressure; attention and rhythm; the influence of intensity on the acoustic perception of depth; awareness as an efficiency factor; visual discrimination; color induction; regeneration.

Arrington, Dr. Ruth E(velyn), 333 Cedar St., New Haven, Conn. Sociology. Salem, Mass., Sept. 2, 99. A.B., Radcliffe Col., 20; Ph.D., Columbia, 32. Research assoc., Child Develop. Inst., Columbia, 30-31; asst., Inst. Human Relations, Yale, 30-32, research assoc., 32—A.A.; Sociol. Soc.; Statist. Asn.; Am. Acad. Reliability of observations of human behavior; time sampling methods; social behavior patterns in children.

Arsem, William C(ollins), Schenectady, N. Y. Chemistry. Chelsea, Mass., May 1, 80. B.S., Mass. Inst. Tech., 01. Chem. engineer, Gen. Elec. Co., 01-18; pres. and treas., Org. Products Corp., 16-21; pres., Indust. Tech. Corp., 18—practising research and consulting engineer. Chem. Soc. (pres. east. N. Y. sect., 15-17); Electrochem. Soc.; Chemists' Club. Electro-chem-

istry; organic chemistry; electric furnaces; catalysis; metallurgy; insulating materials; paints and varnishes; sugars; synthetic resins; carbon; foods.

Arthur, Dr. John M(orris), Boyce Thompson Institute, Yonkers, N. Y. Plant physiology, Biochemistry. Paris, Ill., Nov. 12, 93. B.S., Chicago, 19, Ph.D., 26. Asst. plant physiol., Iowa State Col., 16-17; asst. physiologist, Exp. Sta., Maryland, 17-18; asst. plant physiol., Chicago, 19-21; biochemist, Boyce Thompson Inst., 21—Sanit. C. U.S.A., 18-19. A.A.; Bot. Soc.; Chem. Soc.; Optical Soc.; Torrey Bot. Club; Am. Inst. Effects of light and carbon dioxide pressure on growth of plants.

Arthur, Dr. J(oseph) C(harles), Lafayette, Ind. *Botany. Lowville, N. Y., Jan. 11, 50. B.S., Iowa State Col., 72, M.S., 77, Sc.D., 20; Hopkins, 78-79; Harvard, 79; Sc.D., Cornell, 86; Bonn, 96, Purdue, 31; LLD., Iowa, 16. Instr. bot., Minnesota and Wisconsin, 79-82; botanist, N. Y. Exp. Sta., Geneva, 84-87; prof. bot., Purdue, 87-88, veg. physiol. and path. and botanist, Exp. Sta., 88-15, emer. prof. bot., 15-Speaker, Int. Cong. Arts and Sciences, St. Louis, 04. A.A. (sec'y, F., 86; asst. gen. sec'y, 87, v. pres., 95); Soc. Nat.; Bot. Soc. (pres., 02, 19); Torrey Bot. Club; Philos. Soc.; Am. Acad.; Ind. Acad. (pres., 93); Iowa Acad.; Acad. Nat. Sci. Phila.; Deuts. Bot. Gesell.; Russian Bot. Soc.; Cong. Int. Bot. (mem. cmt. nom. crypt., 05-30). Development of plant rusts; the connection of aerial and telial stages of heteroecismal Uredinales.

Arthur, Dr. M(ary) Grace, 35 North Grotto, St. Paul, Minn. Psychology. St. Paul, Minn., May 22, 83. B.S., Hamline, 17; A.M., Minnesota, 19, Ph.D., 24. Psychol. examiner and teacher, pub. schs., Minn., 17-20, psychologist, 20-23; teaching fellow psychol., Minnesota, 23-24; psychologist, *Child Guidance Clinic*, St. Paul, 24—Psychol. Asn. Relation of mental age to elementary school achievement; construction of point scales for the measurement of intelligence; relation of intelligence quotient to position in family; construction of tests for reading disability; stability of the intelligence quotient.

Artschwager, Dr. Ernst, U. S. Department of Agriculture, Washington, D. C. Botany. Linkuhnen, Germany, July 9, 89. B.S., Colorado, 15; Ph.D., Cornell, 18. Sci. asst., bur. plant indust., U. S. Dept. Agr., 16-17; asst. plant physiol., Cornell, 18-20; assoc. pathologist and later pathologist, bur. plant indust., U. S. Dept. Agr., 20—Collaborator, bur. plant indust., U. S. Dept. Agr., 17-20. A.A.; Bot. Soc.; Wash. Acad. Plant anatomy and cytology of sugar beet and sugar-cane.

Artz, Prof. Neal E(lsworth), Syracuse University, Syracuse, N. Y. Organic chemistry. Lancaster, Ohio, June 18, 01. A.B., Ohio Wesleyan, 23; M.S., Syracuse, 26, Ph.D., 30. Teacher, high sch., Ohio, 23-25; instr. org. chem., Syracuse, 25-26, physiol. chem., 26-30, asst. prof., 30—Chem. Soc. (sec'y, Syracuse sect., 28-34, chairman, 34-). Chemistry of inositol and phytin.

Arveson, M(aurice) H(enshaw), 7721 Kingston Ave., Chicago, Ill. Chemistry. Antigo, Wis., Nov. 28, 02. A.B., Lawrence Col., 24; Wisconsin; Chicago; Northwestern. Asst. instr., Lawrence Col., 20-24; chemist, Standard Oil Co. Ind., 24-30, physicist, 30-31, patent adviser, 31-35, tech. adviser, 35—Chem. Soc.; Soc. Rheol. Flow of plastics.

Arvin, Prof. Martin J(oseph), Boston College, Boston, Mass. Physics. Montgomery, Ind., April 9, 02. M.S., Illinois, 30, Ph.D., 34. Sci. ed., A Century of Progress Expos., Board Educ. and Recreation Cmn., Chicago, 34-35; prof. math, Morgan Park Junior Col., 36-37; physics, Boston Col., 37—Band spectrum of sodium potassium; district statistics in Chicago.

Asbury, R(obert) S(umner), 538 Bigham Road, Pittsburgh, Pa. Chemistry. Portland, Maine, Aug. 20, 04. B.S., Brown, 28; M.S., Mass. Inst. Tech., 30. Asst., research lab. applied chem., Mass. Inst. Tech., 28-31; research chemist, coal research lab., Carnegie Inst. Tech., 31—Chem. Soc. Coal constitution; solvent treatment of bituminous coals; high pressure gas reactions.

Asch, Dr. S(olomon) E(liot), 439 W. 123rd St., New York, N. Y. Psychology. Warsaw, Poland, Sept. 14, 07. A.B., Col. City of N. Y., 28; A.M., Columbia, 30, Ph.D., 32. Asst., Columbia, 30-31; instr. psychol., Brooklyn Col., Col. City of N. Y., 31-Summer, Gen. Educ. Board field trip, Hopi reservation, 36; research fellow, Bellevue Psychiat. Hosp., New York, 37. Assoc. Psychol. Asn. Psychology of thinking and learning; social behavior; intellectual development.

Asdell, Prof. S(ydney) A(rthur), Cornell University, Ithaca, N. Y. *Physiology*. Bramhall, Cheshire, Eng, Aug. 23, 97. B.A., Cambridge, 22, M.A., 26, Ph.D., 25. Asst., animal nutrition inst., Cambridge, 22-28; lecturer nutrition and physiol., Massey Col., New Zealand Univ., 28-30; asst. prof. *animal physiol.*, Cornell, 30-36, prof., 36- Int. Educ. Board fellow, 26-27. A.A.; Asn. Anat.; Soc. Exp. Biol.; Soc. Animal Production; London Physiol. Soc. Reproduction and lactation in mammals.

Aseenjo, Conrado F(ederico), University Club, Madison, Wis. *Chemistry*. San Juan, P. R., Dec. 6, 08. Chem.E., Rensselaer Polytech., 33. Asst. chem., Columbia Sch. Trop. Med., Puerto Rico, 33-35; asst. chemist, Insular Dept. Agr., P. R., 35-36; instr. chem., Columbia Sch. Trop. Med., Puerto Rico, 36-Guggenheim Mem. Foundation fellow, Wisconsin, 37-38. A.A.; Soc. de Quimicos de P. R.; Britton Stahl Bot. Club P. R. Determination of the vitamin content of plant and animal products; nutritional chemistry; plant chemistry.

Ash, Lieut. Col. J(ames) Earle, Army Medical Museum, Washington, D. C. *Pathology*. Philadelphia, Pa., Sept. 8, 84. M.D., Pennsylvania, 05; Army Med. Sch., 16-17. Instr. path., Harvard Med. Sch., 13-16; Army Med. Sch., 26-30; curator, Army Med. Museum, 28-31; assoc. prof. gross path., sch. med., Georgetown, 29-32; Sternberg Gen. Hosp., Manila, P. I., 32-34; Letterman Gen. Hosp., 34-37; curator, Army Med. Museum, 37- Asn. Path. and Bact.; Am. Med. Asn.; Col. Physicians; Asn. Mil. Surg.; Wash. Soc. Path. (sec'y and treas., 28-31); Int. Asn. Geog. Path.; Int. Asn. Med. Mus.

Ash, Prof. Roy P(hillip), Box 1066, Williamsburg, Va. *Biology*. Clarksburg, W. Va., Jan. 11, 07. A.B., Marietta Col., 30; A.M., Brown, 32, Ph.D., 35. Asst. prof. biol., Col. of William and Mary, 35- Va. Acad. Relations between certain heterophile antibodies and antigens; spermatoxins.

Ashbrook, Dr. Donald S(inclair), 40 Worth St., New York, N. Y. *Chemistry*. Philadelphia, Pa., 80. B.S., Pennsylvania, 02, Ph.D., 04. Gen. supt., Joseph Bancroft and Sons Co., Del.; v. pres., Bradford Dyeing Asn., Bradford, R. I.; consulting textile chemist. A.A.; Chem. Soc.; Asn. Textile Chem. and Colorists; British Textile Inst.; British Soc. Dyers and Colorists. Textile chemistry.

Ashbrook, Frank G(etz), 36 Winston Drive, Bethesda, Md. *Biology*. York, Pa., Oct. 20, 92. B.S., Pa. State Col., 14. Investigator, bur. animal indust., U. S. Dept. Agr., 14-18, supt. cattle shipments, French High Cmn., 19-21, biologist in charge div. fur resources, bur. biol. surv., 21- Lieut., U.S.A., 18-19. Fur farming; rabbits for food and fur.

Ashby, Dr. Carl T(oliver), Servel, Inc., Evansville, Ind. *Physical chemistry*. Vale, Ark., June 26, 05. A.B., Texas, 29. A.M., 31, Ph.D., 34. Tutor chem., Texas, 29-32, instr., 33-34; research engineer, Servel, Inc., 34- Chem. Soc. Extent and heat of adsorption of ammonia and the methylamines on various adsorbents; absorption refrigeration.

Ashby, Wallace, 3746 Jocelyn St., N. W., Washington, D. C. *Agricultural engineering*. Des Moines, Iowa, Aug., 23, 90. B.S., Iowa State Col., 13, A.E., 24. Instr., Iowa State Col., 13-14; barn architect, U. S. Dept. Agr., 14-17; agr. engineer and supt. land develop. operation, Duluth and Iron Range R. R., 19-28; assoc. agr. engineer, div. agr., bur. pub. roads, U. S. Dept. Agr., 28-31, chief div. structures, bur. agr. eng., 31-C. Eng., 17-19, capt. Agr. Eng. Farm structures; land development; farm machinery.

Ashby, Dr. Winifred (Mayer), St. Elizabeth's Hospital, Washington, D. C. *Bacteriology, Immunology*. London, Eng., 79. B.S., Chicago, 03; M.S. Washington (St. Louis), 05; Ph.D., Minnesota, 21. Research, div. exp. bacter., Mayo Foundation, Minnesota, 21-23, div. med., Mayo Clinic, 23-24; med. bacteriologist, St. Elizabeth's Hosp., 24- A.A.; Soc. Bact.; Soc. Immunol. Physiology of the blood; blood destruction; mechanism of variation in fragility of blood corpuscles; blood volume; fluctuations in metabolism; colloidal gold.

Ashcraft, Dr. D(erwin) W(illoughby), 26 Brevoort Road, Columbus, Ohio. *Physiology*. Norwich, Conn., Feb. 16, 96. D.V.M., Ohio State, 23, M.S., 28, Ph.D., 32. Instr. vet. anat., Ohio State, 24-30, physiol., 27-37, asst. prof. pharmacol. and physiol., col. vet. med., 37- Vet. Med. Asn.; Ohio Acad. Physiology of the digestive system; decerebration of the domestic fowl; effects of feeding upon the hydrogen ion concentration of the intestinal contents of domestic fowls.

Ashcraft, Prof. T(homas) B(ryce), 34 Pleasant St., Waterville, Maine. *Mathematics*. Marshville, N. C., Nov. 27, 82. A.B., Wake Forest Col., 06; Ph.D., Hopkins, 11. Prin. high sch., N. C., 06-07; assoc. prof. math., Colby Col., 11-13, prof. 13- Math. Soc.; Math. Aen. Quadratic involutions on the plane rational quartic.

Ashdown, Prof. Avery A(llel), Massachusetts Institute of Technology, Cambridge, Mass. *Chemistry*. North Collins, N. Y., Oct. 28, 91. A.B., Rochester, 14, A.M., 16; Grasselli fellow, Mass. Inst. Tech., 23-24, Ph.D., 24. Asst. biol., Rochester, 15-16; instr. chem., 16-20; asst. org. chem., Mass. Inst. Tech., 21-23, Moore fellow to Switzerland, 24-25, research assoc. org. chem., 25-30, instr., 30-34, asst. prof., 34-, master grad. house, 33- Acting city chemist, Rochester, 19-20. A.A.; Chem. Soc.; Hist. Sci. Soc.; Deuts. Chem. Gesell. Organic chemistry.

Ashe, Dr. Benjamin I., 889 Lexington Ave., New York, N. Y. *Internal medicine*. Sept. 1, 00. B.S., Col. City of N. Y., 20; M.D., Cornell, 24. Intern., N. Y. Post-Grad. Hosp., 24-26, res. physician, 26; instr. med., N. Y. Post-Grad. Med. Sch., Columbia, 27-30; assoc., 30-33; instr. clin. med. med. col., Cornell, 33-36; asst. prof., N. Y. Post-Grad. Med. Sch., Columbia, 36-Chief clinic, metabolic div., N. Y. Post-Grad. Hosp., 28-, asst. attending physician and assoc. attending physician, 30-, chief diagnostic clinic; Willard Parker Hosp., 29-31; adj. asst. visiting physician, Reconstruction Hosp., 30-33; asst. visiting physician, Bellevue Hosp., 33- A.A.; Am. Med. Asn.; fel. Col. Physicians. Measles; hypoglycemia; hemoglobin percentage and red blood cell count, transfusion of blood and anemia in Bright's disease; diabetes mellitus; average food intake.

Asher, Prof. E(ston) J(ackson), University of Kentucky, Lexington, Ky. *Psychology*. London, Ky., June 25, 01. A.B., Kentucky, 23, A.M., 24. Instr. psychol., Texas, 24-28; Kentucky, 28-29, asst. prof., 29- Psychologist, bur. home econ. U. S. Dept. Agr., 31. Psychol. Asn. Mental measurements; statistics; juvenile delinquency; child psychology.

Ashford, Dr. Theo(dore) A(skounes), 6107½ Ellis Ave., Chicago, Ill. *Chemistry*. Greece, Feb. 27, 08. B.S., Chicago, 32, M.S., 34, Ph.D., 36. Chemist, Rapid Roller Co., 30-32; teacher, high schs., Ill., 32-36; instr. chem., Chicago, 36-Chem. Soc. Organo-metallic compounds; coordination compounds; chemical education.

Ashley, Dr. Geo(rge) H(all), The Capitol, Harrisburg, Pa. ^{**}*Geology*. Rochester, N. Y., Aug. 9, 66. M.E., Cornell, 89; A.M., Stanford, 92, Ph.D., 94. Paleontologist, Ward's Nat. Science Estab., Rochester, N. Y., 89-91; asst. geologist, Ark. Geol. Surv., 91-93; teacher, high schs., Calif., 94-96; asst. state geologist, Ind., 96-00; prof. biol. and geol., Col. of Charleston, 00-03; asst. geologist, U. S. Geol. Surv., 01-05, geologist, 05-12, administrative geologist, 12-19; state geologist, Pa., 19-Prof. pharmacog., Med. Col. State of S. C., 01-03; acting prof., Vanderbilt, 17; state geologist, Tenn., 10-12. Mem. juries awards, S. C. I. and W. I. Expos., 02. A.A.; Geol. Soc.; Min. and Metal. Eng.; hon. mem. S. C. Pharmacut. Asn.; Geol. Soc. Wash.; cor. mem. Ind. Acad.; hon. mem. Tenn. Acad.; Pa. Acad. (pres. 37). Geology of coal; sources of power.

Ashley, Prof. R(aymond) Harman, 11 University Ave., Canton, N. Y. *Chemistry*. London, Eng., March 29, 81. B.S., Rutgers, 03, M.S., 06; A.M., Yale, 05, Ph.D., 06. Instr. and asst. prof. chem., Maine, 13-16; prof. and head dept., premed. sch., Tufts Col., 16-29; St. Lawrence, 29- Lecturer, Forsyth Dental Infirmary, Boston, Mass. Chem. Soc. Analytical and organic chemistry; chemical calculations.

Ashley, Dr. Warren C(otton), 505 King Ave., Columbus, Ohio. *Organic chemistry*. Yorkville, Ill., Dec. 25, 04. B.S., Illinois, 29, M.S., 30, Ph.D., 35; fellow, Iowa State Col., 31. Org. chemist, Eastman Kodak Co., 34; research org. chemist, Battelle Mem. Inst., 35- Chem. Soc. Coal briquetting; synthetic resins and plastic compositions.

Ashley-Montagu, Prof. M(ontague) F(rancis), 477 First Ave., New York, N. Y. *Anthropology, Anatomy*. London, Eng., June 28, 05. B.A., Cambridge, 24, M.A., 26; Ph.D., London, 26, Columbia, 36. Research, dept. vert. paleont., Am. Museum Nat. Hist., 27-28; Inst. Reale di Etnol. e Antrop., Firenze, 28-29; curator physical anthropol., Wellcome Hist. Med. Museum, London, 29-30; lecturer, New Sch. for Social Research, 31-32; research assoc., col. dentistry, N. Y. Univ., 31-33, asst. prof. anat., 31-, lecturer physical anthropol., grad. sch.,

34— Hon. research assoc, British Museum Nat. Hist. London, 25–26. Morris Chaim prize, 34. A.A.; Anthropol. Asn.; Asn. Physical Anthropol.; Ethnol. Soc.; Soc. Mammal; Hist. Sci. Soc.; fel. Royal Anthropol. Inst. Gt. Britain and Ireland; cor. mem. Soc. Ital. d'Anthrop. e di Etnol. Physical and cultural anthropology; growth; morphology; comparative anatomy of primates; reproduction; comparative psychology; ethnology.

Ashman, Dr. George C(romwell), Bradley Polytechnic Institute, Peoria, Ill. *Chemistry*. Frankfort, Ind., Aug. 19, 69. B.S., Wabash Col., 95, A.M., 06; M.S., Chicago, 05, Ph.D., 08. Asst. chem., Wabash Col., 95–96; instr., high sch., Ind., 96–01; State Nor. Sch., Ill., 01; from instr. to prof. chem., Bradley Polytech. Inst., 02–03. A.A.; Chem. Soc.; Cent. Am. Sci. and Math. Teachers; Ill. Acad. Determination of the radium emanation in the atmosphere; preparation of urano-uranic oxide and a standard of activity; the specific radioactivity of thorium and its products.

Ashman, Prof. Richard, Louisiana State University School of Medicine, New Orleans, La. *Physiology*. Philipsburg, Pa., Aug. 13, 90. Litt.B., Rutgers, 15; M.S., Tulane, 20, Ph.D., 25. Asst. zool., Rutgers, 16–17; physiol., Illinois, 17–18; instr., Tulane, 18–24; asst. prof., 24–30; Vanderbilt, 30–31; prof. physiol. sch. med., Louisiana, 31–. A.A.; Physiol. Soc.; Soc. Exp. Biol. Conductivity and excitability of cardiac muscles; electrocardiography; pulse wave velocity.

Ashton, Fred(erick) W(illiam), 7206 Langley Ave., Chicago, Ill. *Chemistry*. Saguache, Colo., July 27, 87. A.B., Washington (Seattle), 12, M.S., 15, teacher's life diploma, 22. Chemist, Wash. Geol. Surv., 12–13; from instr. to prof. chem., Philippines, 15–21; teacher, high sch., Wash., 21–22; research chemist, Portland Cement Asn., Chicago, 22–23; petrographer and research assoc., Portland Cement Asn., Bur. Standards, 23–29; assoc. chemist, 29–30; director chem., L. D. Caulk Co., Del., 30–32; state soils analyst and soil surveyor, Wash., 34–35; field clerk, U. S. Dept. Agr., 35, asst. agr. and project manager soil conservation service, 35–36; petrographer, Universal Atlas Cement Co., Buffington, Ind., 36—Teaching fellow, Washington (Seattle), 12–15. Petrography; optical microscopical properties of organic compounds and of substances related to Portland cement; physical and chemical properties of dental materials.

Ashworth, Dr. Ural S(tephen), University of Missouri, Columbia, Mo. *Biochemistry*. Walla Walla, Wash., Sept. 11, 05. A.B., Missouri, 29, Ph.D., 33. Asst. agr. chem., Missouri, 29–34, research instr., 34—Alexander Brown Coxe fellow, Yale, 35–37. Chem. Soc. Endogenous nitrogen metabolism and energy metabolism during growth.

Asimow, Dr. Morris, Carnegie-Illinois Steel Co., 208 S. La Salle St., Chicago, Ill. *Physical metallurgy*. Milwaukee, Wis., Nov. 27, 06. B.S., California, 27, M.S., 31, Ph.D., 35. Instr., California, 30–36; metallurgist, Carnegie-Ill. Steel Co., 36—Soc. Metals; Mech. Eng. Drawing and machinability of metals; plasticity.

Asmundson, Prof. Vigfus S(amundur), College of Agriculture, University of California, Davis, Calif. *Poultry husbandry*. Reykjavik, Iceland, Sept. 24, 95. B.S.A., Saskatchewan, 18; M.S.A., Cornell, 20; Ph.D., Wisconsin, 30. Instr. poultry husbandry, British Columbia, 20–21; asst. prof., 21–27; assoc. prof., 27–32; assoc., California, 32–33; asst. prof., col. agr., 33–. A.A.; Poultry Sci. Asn.; Genetic Asn.; Soc. Exp. Biol.; Can. Soc. Tech. Agr.; World's Poultry Sci. Asn.; Genetics of poultry; formation of the hen's egg.

Assmuth, Rev. Joseph, S.J., Fordham University, New York, N. Y. *Biology*. Bockwitz, Germany, Feb. 21, 71. Leipzig, 06; Ph.D., Berlin, 10. Prof. zool., Bombay Univ., India, 10–16; biol., Fordham, 24–. A.A.; Micros. Soc.; N. Y. Zool. Soc.; Deuts. Zool. Gesell.; Deuts. Entom. Gesell.; Bombay Soc. Nat. Hist. (managing cmt., 11–15). Termites; termitophilous insects.

Astin, Dr. Allen V(arley), 4441 Harrison St., N. W., Washington, D. C. *Physics*. Salt Lake City, Utah, June 12, 04. A.B., Utah, 25; Ph.D., N. Y. Univ., 28. Teaching fellow physics, N. Y. Univ., 25–28; nat. research fellow, Hopkins, 28–30; research assoc., Bur. Standards, 30–32; assoc. physicist, 32–36; physicist, 36—Physical Soc. Dielectric constants of conducting liquids; dielectric properties of insulating liquids; internal combustion engine ignition; radio-meteorography.

Aston, Prof. John G(eldart), 1000 W. Beaver Ave., State College, Pa. *Chemistry*. Barrow-in-Furness, Eng., Dec. 30, 02.

B.S., California, 23, M.S., 24, Ph.D., 26. Research assoc., Harvard, 26–28; instr., Northwestern, 28–29; physical chem., Pa. State Col., 29–31; asst. prof. chem., 31–35; assoc. prof., 35–36; prof. org. chem., 36—Chem. Soc. Organic and physical chemistry; organic nitrogen compounds; low temperature thermal data on organic compounds.

Astrachan, Prof. Max, 602 Phillips St., Yellow Springs, Ohio. *Mathematics*. Rochester, N. Y., March 30, 09. A.B., Rochester; A.M., Brown, 30, Ph.D., 35. Instr. math., Brown, 29–35; Antioch Col., 35–37; asst. prof., 37– Math. Soc.; Math. Asn. Summability of Fourier series.

Attack, Dr. F(rederic) W(illiam), Dye and Chemical Co., Kingston, Ont., Can. *Chemistry*. Boston, Lincolnshire, Eng., Jan. 3, 92. B.Sc., London, 12; M.Sc.Tech., Manchester, 12, D.Sc., 21. Staff, faculty technol., Manchester, 11–15; director research, British Alizarine Co., 19–21; v. pres., E. C. Klipstein Co., New York, 22–23; pres., Dye and Chem. Co. of Can., 23–; pres., Indust. Processes Develop., Ltd., 26—Consulting chemist, Kingston. Chem. Soc.; fel. Inst. Chem. London. Dye-stuffs; organic and analytical chemistry.

Atanasoff, Prof. John V(incent), 3439 Woodland St., Ames, Iowa. *Mathematical physics*. Oct. 4, 03. B.S., Florida, 25; M.S., Iowa State Col., 26; Ph.D., Wisconsin, 30. Instr. math., Iowa State Col., 26–29; Wisconsin, 29–30; asst. prof., Iowa State Col., 30–36; assoc. prof., 36—Physical Soc.; Math. Soc. Quantum theory.

Atchison, Prof. Clyde S., Washington and Jefferson College, Washington, Pa. *Mathematics*. Carnegie, Pa., June 28, 82. A.B., Westminster Col. (Pa.), 03, LL.D., 34; fellow, Hopkins, 06–07; Ph.D., 07. Instr. math., Williams Col., 07–11; asst. prof., 11–12; prof. and head dept., Washington and Jefferson Col., 12–Summers; prof., West Virginia, 22, 24; eng. dept., Erie Ry., 05, 06, 11, 12; auditor, U. S. Shipping Board, 18. A.A. (councilor, 33–); Math. Soc.; Math. Asn. (chairman, Allegheny Mt. sect., 33–35). Geometry; rational curves; mathematics of ceramics and cement.

Atchley, Prof. Dana W(inslow), 262 Oakwood Road, Englewood, N. J. *Medicine*. Chester, Conn., July 8, 92. B.S., Chicago; M.D., Hopkins, 15. Instr. med., Hopkins, 19–21; assoc., 21–25; asst. prof., col. physicians and surg., Columbia, 25–28; assoc. prof., 28–. A.A.; Am. Med. Asn.; Am. Physicians; Soc. Clin. Invest.; Soc. Exp. Biol.; Harvey Soc. Physiological chemistry; chemical problems in internal medicine; edema; nephritis.

Atchley, Dr. F(loyd) O(wen), 547 E. State St., Alliance, Ohio. *Parasitology*. Alliance, Ohio, Oct. 11, 08. B.S., Mt. Union Col., 30; Sc.D., Hopkins, 34. Asst. protozool., Hopkins, 34–35. Micros. Soc. Protozoology; intestinal protozoa.

Athy, Dr. L(awrence) F(erdinand), 612 McFadden Drive, Ponca City, Okla. *Geology*, Geophysics. Bryan, Ohio, June 1, 98. B.S., Denison, 19; Ph.D., Chicago, 25. Research geologist, Marland Oil Co., 25–28; asst. supt., geophys. dept., Continental Oil Co., Ponca City, 28–30, supt., 30– Summers, Ill. Geol. Surv., 23, 24. A.A.; Asn. Petrol. Geol.; Soc. Explor. Geophys.; Okla. Acad. Geology and mineral resources of the Herscher quadrangle in Illinois; compaction of sediments; physical properties of rock and their relation to petroleum geology and geophysics; applied geophysics.

Atkeson, Prof. F(lloyd) W(arnick), Kansas State College, Manhattan, Kans. *Dairy husbandry*. Butler, Mo., Nov. 28, 93. B.S. (Agr.), Missouri, 18; M.S., Kans. State Col., 29. Asst. dairy husbandry, Kans. State Col., 18–20; field rep., southwest states. Am. Jersey Cattle Club, 20–21; prof. dairy husbandry and head dept., Idaho, and dairy husbandry, Exp. Sta., 21–35; Kans. State Col., 35– Summer, instr., Mo. Nor. Sch., Cape Girardeau, 18. Accredited judge, Am. Jersey Cattle Club and Holstein Friesian Asn. Amer.; mem. cmt. official inspectors of Holstein and Jersey cattle for type. Soc. Animal Production; Dairy Sci. Asn. (chairman, west. div., 25); Genetic Asn. Cooperative cream pools; proved bulls for herd improvement; sterilization of dairy utensils; home-grown grains and by-products feeds; inheritance of wrytail and umbilical hernia in cattle; vitamin A in pasture plants; water requirements of cattle; mastitis and curd tension of milk.

Atkins, Prof. C(yrill) F(itzgerald), 301 Beattys Ford Road, Charlotte, N. C. *Organic chemistry*. Barbados, B. W. I., July 15, 99. B.S., Tufts Col., 24; M.S., Iowa, 25, Ph.D., 35. Prof. chem., Negro Agr. and Tech. Col. N. C., 26–29; Wiley Col.

29-31; *J. C. Smith Univ.*, 31- Chem. Soc. Relative activity of alcoholic and phenolic hydroxides; rearrangement of formyl radical in o-aminophenols.

Atkins, Prof. Kenneth N (oel), Hovey Lane, Hanover, N. H. *Bacteriology*. Middletown, Conn, Dec. 25, 86. Ph.B, Westleyan, 08, A.M, 10; Chicago, 10-13; A.M, Dartmouth Col, 28. Asst. bacteriologist, State Board Health, Conn, 08-10; state bacteriologist, Ga, 13-15; instr. bacter, *Dartmouth Med. Sch.*, 15-18, asst. prof, 18-28; prof, 28- Bacteriologist, Mary Hitchcock Hosp, 16- Bacteriological technique.

Atkinson, Prof. A(lbert) A(lgernon), Athens, Ohio. *Physics, Electrical engineering*. Nelsonville, Ohio, March 7, 67. B.S, Ohio (Athens), 91, M.S, 95; Michigan, 92-93. Sch. supt, Ohio, 91-92; assoc. prof. physics, *Ohio (Athens)*, 93-95, prof. physics and elec. eng, 95-, dean col. applied science, 36- A.A; Physical Soc; Elec. Eng; Eng. Educ; Ohio Acad. The relative actinic power of the spectrum colors; surface tension and osmotic pressure; deposition of copper and silver; elongation of nickel in transverse magnetic fields.

Atkinson, Pres. Alfred, University of Arizona, Tucson, Ariz. *Agriculture*. Seaforth, Ont, Can, Oct. 6, 79. Ont. Agr. Col, 99-02; B.S.A, Iowa State Col, 04, Sc.D, 20; M.S, Cornell, 12. Asst. agron, Exp. Sta, Iowa State Col, 02-04; prof, Mont. State Col, 04-19, pres, 19-37; *Arizona*, 37- State food administrator, Mont, 17-19. A.A; Soc. Agron; Genetic Asn; Asn. Land-Grant Cols. and Unive. (pres, 36). Dry farming; soil moisture control and nitrate formations; crops.

Atkinson, Dr. Edward R(edmond), Trinity College, Hartford, Conn. *Organic chemistry*. Boston, Mass, Feb, 15, 12. B.S, Mass. Inst. Tech, 33, Ph.D, 36. Teaching fellow chem, Mass. Inst. Tech, 33-36; instr. org. chem, *Trinity Col. (Conn)*, 36- Chem. Soc; Asn. Textile Chem. and Colorists. Isomerism of fluorenones; diazonium compounds; history of chemistry.

Atkinson, Prof. Ernst A(lbert), Montana State University, Missoula, Mont. *Psychology*. Adrian, Mo, July, 94. A.B, Denver, 20; A.M, Montana, 22. Asst. prof. psychol, *Montana*, 22-33, assoc. prof, 33-34, prof, 34- Psychol. Asn. Abnormal psychology; nature of the functional disorder; mental hygiene.

Atkinson, F(redrick) C(ornellius), 213 E. South St, Indianapolis, Ind. *Chemistry*. Newton, Ala, Jan. 13, 81. B.S, Ala. Polytech, 02, M.S, 03. Exp. Sta, Clemson Col, 03; asst. dist, assoc. chemist and chemist, South, Cotton Oil Co. and other companies, 03-12; chief chemist, *Am. Hominy Co*, 13- consulting chemist and engineer. Chem. Soc. (v. pres, Ind. sect, 13, pres, 16-18, councilor, 15, 16, 19, 20); Soc. Chem. Indust; Electrochem. Soc; Oil Chemists Soc; Asn. Eng. (director, Indianapolis chap, 23); Ind. Eng. Soc. (director, 24); Scientech Club (pres, 21, director, 22-26). Biological and industrial chemistry; cereals and cereal products; destructive distillation; nitrocellulose lacquers; incandescent lamps; colors; process development.

Atkinson, Dr. H(ammond) J(ohnson), Central Experimental Farm, Ottawa, Ont, Can. *Soils*. Newcastle, N. B, June 15, 05. B.A, New Brunswick, 25; M.S, McGill, 26, Ph.D, 34. Asst. chemist, Bathurst Co, Bathurst, N. B, 26-28; instr. pulp and paper, Edmundston Vocational Sch, Edmundston, N. B, 28-29; chemist, Restigouche Co, Campbellton, N. B, 30; asst, Macdonald Col, McGill, 30-35; soil investigator, trail smelter smoke project, *Nat. Research Council Can*, 35- Assoc. Can. Inst. Chem. Food chemistry; soil chemistry; microbiology.

Atkinson, Prof. H(arry) V(ictor), University of South Dakota, Vermillion, S. Dak. *Pharmacology*. Van Wert, Ohio, Feb. 12, 87. B.S, Ohio State, 11; Ph.D, Illinois, 22. Commercial chemist, 11-14; instr. physiol. chem, med. sch, Northwestern, 14-17; physiol, med. col, Cornell, 17-18; pharmacol, col. med, Illinois, 20-22; assoc. prof. sch, med, Texas, 22-24, prof, 24-26; assoc. prof. col. med, Iowa, 26-28; prof. physiol. and pharmacol, *South Dakota*, 28- U.S.A, 18-19. Soc. Pharmacol. Changes in the chemical composition of blood under the influence of drugs; toxicity of alcohols; gastro-intestinal movements.

Atkinson, Mrs. Lenette R(ogers), 123 S. Pleasant St, Amherst, Mass. *Botany*. South Carver, Mass, March 30, 99. A.B, Mt. Holyoke Col, 21; A.M, Wisconsin, 22, Ph.D, 25. Asst. bot, Wisconsin, 21-25; Cmn. Relief Belgium fellow, Belgium, 25-27; acting prof. bot, Mt. Holyoke Col, 27-28; private research. Cytology of pteridophytes.

Atkinson, R(alph) W(aldo), General Cable Corp, Perth Amboy, N. J. *Electrical engineering*. Smithland, Iowa, June 16, 87. B.S, Iowa State Col, 06, E.E, 11. Eng. apprentice, Westinghouse Elec. and Mfg. Co, 06-08; asst. chief engineer, Standard Underground Cable Co, 08-24, chief elec. engineer, 24-30; director high tension labs, *Gen. Cable Corp*, 31- Mem. cmt. on elec. insulation, Nat. Research Council. A.A; Soc. Test. Mat; Standards Asn; fel. Elec. Eng. (sec'y, Pittsburgh sect, 11, mem, exec. cmt, 12, standards cmt, research cmt); assoc. Inst. Elec. Eng. Gt. Britain. Current carrying capacity of electric power cables; properties of insulating materials; dielectric field in electric power cables; oil-filled cables and accessories; control of dielectric field in cable joints and terminals; signal cables.

Atkinson, Robert, Hampton Institute, Hampton, Va. *Mathematics*. Passaic, N. J. Feb, 1, 00. B.S, Haverford Col, 21, A.M, 23; fellow, N. Y. Univ, 23-24. Provident Mutual Life Ins. Co, 24-25; teacher math, col. div, *Hampton Inst*, 25- Math. Asn; Franklin Inst; Va. Acad. Remedial courses in mathematics for college freshmen.

Atkinson, Prof. Robert d'E(scourt), 1201 Raritan Ave, New Brunswick, N. J. *Physics*. Rhayader, Wales. B.A, Oxford, 22, fellow, 23-26, M.A, 25; Rockefeller traveling fellow, Germany, 26-28; Ph.D, Göttingen, 28. Demonstrator, Clarendon lab, Oxford, 22-26; asst. physik. inst, Tech. Hochschule, Berlin-Charlottenburg, 28-29; asst. prof. physics, *Rutgers*, 29-33; assoc. prof, 33- Chief asst, Royal Observatory, Greenwich, 37- Mem. Harvard Observatory eclipse exped, Siberia, 36. A.A; Physical Soc. Atomic and nuclear physics; astrophysics.

Atkinson, Dr. Robert G(eorge), 4800 Forbes St, Pittsburgh, Pa. *Chemical engineering*. Allegheny Co, Pa. B.S, Pittsburgh, 29, Ph.D, 34. Chem. engineer, Pure Oil Co, 34-36; research chem. engineer, U. S. Bur. Mines, 36- Chem. Soc. Petroleum refining; coal carbonization.

Atkinson, Prof. W(illiam) Bryce, 1494 Marin Ave, Berkeley, Calif. *Analytical and inorganic chemistry*. Campbell, Calif, April 16, 04. B.S, California, 26, M.S, 27. Instr. chem, San Francisco, 27-29; asst. prof, 29-33; assoc. prof, 33- Micro-chemical analysis; equilibria in solutions; solubilities in non-aqueous solvents.

Atkinson, Prof. W(illiam) R(udolph), Southwestern, Memphis, Tenn. *Psychology*. Clarksville, Tenn, Sept. 17, 94. B.S, Peabody Col, 19, Ph.D, 27; A.M, Columbia, 20. Prof. psychol, *Southwestern (Tenn)*, 22- Assoc. Psychol. Asn; S. Soc. Philos. and Psychol; Tenn. Acad. Relation of intelligence and mechanical speeds to learning ability; color preference with variations in hue, chroma and value.

Atkisson, Col. Earl J(ames), U.S.A, Sanger, Calif. *Chemistry, Engineering*. Broken Bow, Nebr, Aug. 12, 86. Grad. U. S. Mil. Acad, 08; M.E, Cornell, 11; grad, Army Eng. Sch, 12. Director elec. and mech. eng, Army Eng. Sch, 13-15; supt, Gatun Locks, Gatun, C. Z, 17; commanding officer, first gas regiment, 17-19; with Peace Cmn. and div. engineer, First U. S. Div, 19; senior instr. eng, Inf. Sch, 19-20; commanding officer, Edgewood Arsenal, 20-23; asst. mil. attaché, Am. Embassy, London, 23-25; staff, headquarters, Ninth Corps Area, Presidio of San Francisco, 25-26; col, U.S.A, retired, 26- D.S. medal. Elec. Eng; Chem. Soc.

Atlas, Dr. Meyer, 2760 Grand Concourse, New York, N. Y. *Zoology*. New York, N. Y, Dec. 13, 07. B.S, Col. City of N. Y, 28; A.M, Columbia, 30, Ph.D, 35. Asst. zool, Columbia, 30-34; instr. biol, Col. City of N. Y, 34-35. Experimental embryology; temperature and rate of development; respiration during development.

Atlee, Prof. H(arold) B(enje), 119 S. Park St, Halifax, N. S, Can. *Obstetrics*. Picton, N. S, Nov. 24, 90. M.D, Dalhousie, 11. Demonstrator anat, *Dalhousie*, 21-23, prof. obstet. and gynec, 23- Can. Med. Asn; fel. Royal Col. Surg. Can; N. S. Med. Soc; fel. Royal Col. Surg. Edinburgh. Gynecology.

Atsatt, Prof. Sarah R(ogers), University of California at Los Angeles, Los Angeles, Calif. *Zoology*. Mattapoisett, Mass, 88. A.B, Pomona Col, 10; M.S, California, 12, Ph.D, 31. Mills Col, 12-15; Calif. State Nor. Sch, Los Angeles, 15-19; California at Los Angeles, 19-27; assoc. prof. biol, Scripps Col, 27-33; asst. prof. zool, *California at Los Angeles*, 33- A.A; Soc. Ichthyol. and Herp. Reptiles; physiology.

Attix, Dr. J(ames) C(onner), 2355 N. 13th St, Philadelphia, Pa. *Chemistry, Metallurgy*. Near Kenton, Del, Feb.

ATTRIDGE — ATWOOD

28. **70.** B.S., Lafayette Col., 95, M.S., 98; D.D.S., Medico-Chirurg. Col. Phila., 01, M.D., 04; Pharm.D., Temple, 12. Asst. chem., Lafayette Col., 95-96; Pa. State Col., 96; chemist, various iron and steel works, 96-98; asst. chem. and metal, Medico-Chirurg. Col. Phila., 98-01; supt., St. Ignace Furnace, Mich., and Goshen Furnace, Va., 01-03; prof. chem. and toxicol., Temple, 04—Am. Med. Asn.; Phila. Roentgen Ray Soc.; Phila. Clin. Soc. Volatile combustible matter in coal and coke; poisons; poisoning by permanganate of potash; utilization of fine ore and flux dust in the blast furnace; hippuric acid secreted and excreted in certain infections; blood pressure instruments; diabetes; ivy poisoning; administration of salicylates.

Attridge, Dr. M(ildred) C(ampbell) (Mrs. W. L.), Royal Ontario Museum of Zoology, Toronto, Ont., Can. Zoology; B.A., British Columbia, 26, M.A., 28, Nat. Research Council Can. bursar, 28-29; student, Toronto, 30-32, Ph.D., 33. Asst. zool., British Columbia, 26-28, instr., 29-30; asst. biol., Toronto, 32-33; Royal Ont. Museum Zool., 33—Summers, Pacific Biol. Sta., Nanaimo, B. C., 27-31; asst., Oceanogr. Inst., Woods Hole, 32. Marine invertebrate zoology; taxonomy and life history of marine copepods of Strait of Georgia, British Columbia.

Attwood, Prof. Stephen S(tanley), 1411 Wells St., Ann Arbor, Mich. Electrical engineering. Cleveland, Ohio, May 29, 97. B.S.E., Michigan, 18, M.S., 23. Engineer, Packard Motor Car Co., 19-20; instr. elec. eng., Michigan, 20-25, asst. prof., 25-33, assoc. prof., 33—Mem. cmt. on elec. insulation, Nat. Research Council, 33; Ensign, U.S.N., 18-19. Elec. Eng. (cmt. on electrophysics, 32-); Eng. Educ. Electric arcs and surges; insulation; electrical theory.

Atwater, Helen W(oodard), Mills Bldg., Washington, D. C. Home economics. Somerville, Mass., May 29, 76. B.I., Smith Col., 97. Personal ed. asst. to Prof. W. O. Atwater, Wesleyan, 97-04; expert, sci. asst. and in charge ed. work, office home econ., U. S. Dept. Agr., 09-23; ed., "Jour. Home Econ.", 23—Chairman, Women's Joint Congressional Cmt., 26-28. Exec. chairman food production and home econ. dept., women's cmt., Council Nat. Defense. A.A.; Home Econ. Asn.

Atwater, Dr. Reginald M(yers), 50 W. 50th St., New York, N. Y. Public health. Canon City, Colo., Aug. 6, 92. A.B., Colo. Col., 14; John Harvard fellow, Harvard, 16-18, M.D., 18; C.P.H., Hopkins, 20, Dr.P.H., 21. Med. house officer, Peter Bent Brigham Hosp., Boston, 18-19; assoc. prof. hygiene, col. med., Hunan-Yale, China, 21-25; instr. prev. med. and hygiene, Harvard Med. Sch., 25-27; commissioner health, Dept. Health, Cattaraugus County, N. Y., 27-35; exec. sec'y. governing council and sec'y. all standing cmts., Pub. Health Asn., 35—Instr. sch. pub. health, Harvard, 25-27. Mem. advisory council, Milbank Mem. Fund., N. Y., 27-35; mem. tuber. cmt., Governor's Health Cmn., 30. A.A.; fel. Pub. Health Asn.; fel. Am. Med. Asn. Preventive medicine; public health administration; epidemiology of pneumonia and acute rheumatic fever.

Atwell, E(rnest) A(llyne), 52 Willard Ave., Ottawa, Ont., Can. Plant pathology. Barbados, B. W. I., March 17, 99. B.S.A., McGill, 23, M.Sc., 25. Investigator plant disease, Can. Dept. Agr., 23-27; asst. to timber pathologist, forest products labs., Can. Dept. Interior, Ottawa, 27—A.A.; Phytopath. Soc.; Mycol. Soc.; Can. Soc. Tech. Agr.; Can. Phytopath. Soc. Timber pathology; blue stain in softwoods.

Atwell, Prof. Wayne J(asón), 24 High St., Buffalo, N. Y. **Anatomy, Embryology. Fairfield, Nebr., Oct. 19, 89. A.B., Nebr. Wesleyan, 11; A.M., Michigan, 15, Ph.D., 17; M.D., Buffalo, 34. Asst. histol., Michigan, 13-14; instr. anat., 14-18; prof., Buffalo, 18—A.A.; Asn. Anat. (exec. cmt., 37-); Asn. Study Int. Secretions; Soc. Exp. Biol.; Soc. Zool.; assoc. Buffalo Acad. Med. Development and physiology of the hypophysis; human embryology; Golgi apparatus.

Atwood, F(rancis) Clarke, 68 Maple St., Newton, Mass. Chemistry. Salem, Mass., May 7, 93. B.S., Mass. Inst. Tech., Mass. Inst. Tech., 14-16; res. engineer, Exolon Co., 16-17; junior partner, Kalmus, Comstock and Westcott, Inc., 17-25; v. pres., Bonnar-Atwood, Inc., 25—chief chemist, Craftex Co., 27-34; v. pres. and director research, Atlantic Research Associates, 31-, pres., 36—Am. Paint Jour. award, 31. A.A.; Chem. Soc.; fel. Inst. Chem.; Electrochem. Soc.; Nat. Paint, Varnish and Lacquer Asn.; Federation Paint and Varnish Production Club (pres., 33); Acoustical Soc.; Soc. Rheol.;

New Eng. Paint and Varnish Production Club (pres., 30). Paint; casein; machinery; apparatus; motion pictures; proteins; building materials.

Atwood, Horace, Stuart, Fla. Agriculture. Summer Hill, N. Y., Aug. 1, 68. B.S.A., Cornell, 91, M.S.A., 97. Asst. agr., Exp. Sta., West Virginia, 97-14, chief poultry research dept., 18-33, emer. prof., 33—A.A.; fel. Poultry Sci. Asn.; Int. Asn. Poultry Husbandry. Feeding; soil fertility; breeding; egg weight in domestic fowl.

Atwood, Prof. Rollin S(alisbury), Golf View, Gainesville, Fla. Geography. Chicago, Ill., June 19, 03. B.S., Chicago, 24; A.M., Clark, 25, Ph.D., 28. Teacher, high sch., N. J., 25-26; asst. prof. econ. geog., Florida, 28-29, assoc. prof., 29-35, prof., 35-, asst. dean col. commerce and journalism, 30-32. Acting director, Inst. Inter-Am. Affairs, Fla., 30-; research assoc., Carnegie Institution, 31-32. Summers, prof., Bucknell, 26, 28; acting dean col. business admin., Florida, 35. Prof. in charge, Clark Transcontinental field trip, 29. Nat. Council Geog. Teachers. Economic geography; cotton industry of England; social science; Latin America.

Atwood, Dr. Wallace W(alter), Clark University, Worcester, Mass. *³Physical geography. Chicago, Ill., Oct. 1, 72. B.S., Chicago, 97, Ph.D., 03. Instr. physiog., Lewis Inst., Chicago, 97-99; geol., Chicago Inst., 99-00; director, 00; asst. physiog., Chicago, 01-02; assoc., 02-03; instr. geol., 03-08; asst. prof. physiog. and gen. geol., 08-10; assoc. prof., 10-13; prof. physiog., Harvard, 13-20; pres. and prof. physical geog., Clark, 20-, director grad. sch. geog., 21—Asst. geologist, U. S. Geol. Surv., 01-09; geologist, 09—Trustee, Children's Museum, Boston, 14; director, Children's Museum, Cambridge, 15-; mem. Nat. Parks Advisory Board. A.A.; Am. Geog. Soc.; Asn. Geog. (pres., 33); Geol. Soc.; Antig. Soc.; Council Geog. Teachers (pres., 20); Nat. Parks Asn. (pres., 29-33); Am. Acad.; Pan. Am. Inst. Geog. and Hist. (pres., 32-35); Ill. Acad.; Chicago Acad.; Chicago Geog. Soc.; for. mem. Swedish Anthropol. and Geog. Soc. (diploma, 29); hon. mem. Mex. Acad. Glaciation; ancient glaciers among the Rocky Mountains; structural and economic geology; coal resources of Alaska; physiography of San Juan Mountains; the new geography; series of wall maps.

Atwood, Prof. Wallace W(alter), Jr., Clark University, Worcester, Mass. Geology, Geography. Chicago, Ill., June 7, 60. B.S., Chicago, 26; A.M., Clark, 27, Ph.D., 30; fellow, Zurich, 28-29; Paris, 29-30. Asst. chief, branch research and educ., Nat. Park Service, 30-32; asst. prof. physiog. and regional geog., Clark, 32—A.A.; Asn. Geog.; Geophys. Union (cmt. on glaciers, 31; assoc. ed., Econ. Geog., 36-); Am. Geog. Soc.; Forestry Asn. (director, 37); Geol. Soc. Wash. Physiography; Eocene glaciation in southwestern Colorado and in the Cevennes of southern France; physiography of the Causes and Cevennes of southern France; glacial history of an extinct volcano, Crater Lake National Park; erosional history of Wind River Range, Wyoming; Pleistocene glaciers of Wyoming and Colorado; Crater Lake and Yosemite.

Atwood, Col. W(illiam) G(reene), 213 Fall Creek Drive, Ithaca, N. Y. Engineering. Fredonia, N. Y., Aug. 4, 72. C.E., Cornell, 92. Chief engineer, L. E. and W. Ry., 09-14; asst. dist. engineer, bur. valuation, Interstate Commerce Cmn., 14-17; manager rail transportation, Am. Relief Admin., Europe, and Am. transportation rep., Supreme Econ. Council, Paris, 19; tech. adviser, Kingdom of Serbs, Croats and Slovenes, 20; director cmt. on marine piling investigations, Nat. Research Council, 22-24; consulting engineer, 24—Lecturer, Cornell. Ry. explorer and builder, 97-09. C.Eng., 17-19, col. U.S.A., 18—Civil Eng.; Ry. Eng.; Soc. Mil. Eng. Wood preservation; cement uses; marine structures; rail and water terminals.

Atwood, Prof. W(illiam) H(enry), State Teachers College, Milwaukee, Wis. Biology. Grand View, S. Dak., March 21, 86. A.B., Hope Col., 12; A.M., Washington (St. Louis), 16; M.S., Wisconsin, 16. Teacher, high sch., Ill., 12-17; prof. science, State Teachers Col., Milwaukee, 17—Marquette Dental Col., 19-22. Cent. Asn. Sci. and Math. Teachers (chairman, gen. science sect., 26). Civic, economic and educational biology; comparative vertebrate dissection; the anatomy of snakes.

Atwood, Prof. W(infred) M(cKenzie), 214 N. Seventh St., Corvallis, Oregon. Botany. Aurelia, Iowa, July 25, 83. A.B., Cornell Col. (Iowa), 07, A.M., 10; M.S., Chicago, 11, fellow, 12-13, Ph.D., 13. Prof. plant physiol., Oregon State Col., 13-

- A.A.; Bot. Soc. Delay of germination of seeds; respiration of fruits.
- Aub, Dr. Joseph C(harles)**, Collis P. Huntington Memorial Hospital, Boston, Mass. *Medicine*. Cincinnati, Ohio, May 13, 90. A.B., Harvard, 11, M.D., 16. Intern, Mass. Gen. Hosp., 14-15; asst. physician, Russell Sage Inst. Path., 15-16; res. physician, Mass. Gen. Hosp., 16-17; instr. physiol, *Harvard Med. Sch.*, 19-20; asst. prof., 20-24; med., 24-28; assoc. prof., 28-; physician in chief, *Collis P. Huntington Mem. Hosp.*, 28- Assoc. physician, Mass. Gen. Hosp., 23-28; consultation board, 33-; senior assoc. physician, Peter Bent Brigham Hosp., 28- Am. Med. Asn.; Physiol. Soc.; Am. Physicians; Soc. Endocrinol. (pres., 31); Soc. Clin. Invest.; Soc. Exp. Biol.; Am. Acad. Clinical medicine; metabolism; glands of internal secretion; inorganic salts; cancer.
- Aubel, Prof. C(liff) E(rrett)**, Kansas State College, Manhattan, Kans. *Animal husbandry*. Sharon, Pa., Dec. 10, 90. B.S., Pa. State Col., 15; fellow, Kans. State Col., 16-17, M.S., 17; Ph.D., Minnesota, 35. Instr. and prof. *animal husbandry*, Kans. State Col., 19-28; assoc. prof., 28-31; asst., Minnesota, 31-32; assoc. prof., *Kans. State Col.*, 32- A.A.; Soc. Animal Production; Kans. Acad. Animal nutrition; minerals and vitamins; live stock production; animal genetics; inheritance of fecundity; importance of vitamins in rations; effects of low phosphorus rations; minimum requirements of phosphorus.
- Auchter, Dr. E(ugene) C(urtis)**, U. S. Department of Agriculture, Washington, D. C. *Horticulture*. Elmwood, N. Y., Sept. 14, 89. B.S.A., Cornell, 12, M.S., 18, Ph.D., 23. Asst. pomol., Cornell, 11; instr. hort. and asst. horticulturist, West Virginia, 12-14; asst. prof. hort., 14-17; assoc. prof., 18; prof. and head dept., Maryland, and horticulturist, *Exp. Sta.*, 18-28; prin. horticulturist, *bur. plant industr.*, U. S. Dept. Agr., 28-; asst. chief, 35-38; chief, 38- A.A.; Soc. Hort. Sci. (pres., 26); Pomol. Soc.; Soc. Plant Physiol.; Phytopath. Soc.; Genetic Asn.; hon. fel. Royal Hort. Soc. Orchard survey; apple and peach culture; pruning; fertilization of orchards; fruit pollination; fruit spur growth; biennial bearing of apple trees; cross transfer of mineral nutrients; effect of light on plants; culture, fertilization and propagation of dates, avocados and other subtropical plants.
- Auchy, George**, 3309 Disston St., Philadelphia, Pa. *Chemistry*. Pottstown, Pa., April 23, 62. Lafayette Col., 78-82. Chemist, Durham Iron Works, 82-86; Nashua Iron and Steel Co., 94-97; Keystone Saw Works, 97-11; *private research polit. econ.*, 11- Chemical analysis of iron and steel; properties of iron and steel; industrial depressions.
- Aude, Prof. H(erman) T(hedor) R(endtorff)**, 50 Broad St., Hamilton, N. Y. *Mathematics*. Herning, Denmark, May 20, 80. M.S., Colgate, 07. Assoc. prof. math., Carnegie Inst. Tech., 16-20; *Colgate*, 20-26, prof., 26- Math. Soc.; Math. Asn.
- Audreith, Prof. L(udwig) F(rederick)**, University of Illinois, Urbana, Ill. *Inorganic chemistry*. Vienna, Austria, Feb. 23, 01. B.S., Colgate, 22; Ph.D., Cornell, 26. Fellow, Cornell, 26-28; assoc. inorg. chem., Illinois, 28-35; asst. prof., 35- Nat. research fellow, Univ. Rostock. Chem. Soc.; Ill. Acad. Non-aqueous solvents; nitrogen compounds; electrodeposition from non-aqueous solvent; reactions in liquid ammonia.
- Auer, Prof. John**, St. Louis University School of Medicine, St. Louis, Mo. **Physiology, Pharmacology*. Rochester, N. Y., March 30, 75. B.S., Michigan, 98; M.D., Hopkins, 02. Fellow, Rockefeller Inst., 03-05; asst., 05-06; instr. physiol, Harvard Med. Sch., 06-07'; assoc. mem., Rockefeller Inst., 08-21; prof. pharmacol. and director dept. sch. med., St. Louis, 21- House officer, Hopkins Hosp., 02-03. Major, M.R.C., 17-22. A.A.; Physiol. Soc.; Soc. Pharmacol. (sec'y., 12-17, pres., 24-27); Am. Physicians; Soc. Exp. Biol.; Harvey Soc.; St. Louis Acad. Anaphylaxis; motor phenomena of the gastro-intestinal tract; respiration; functional effects of epinephrin, magnesium salts, antiseptics and war gases; blood; bladder and kidney.
- Aughanbaugh, J(ohn) E(dward)**, State Department of Forests and Waters, Mt. Alto, Pa. *Forestry*. Jersey Shore, Pa., Nov. 30, 00. B.S., Pa. State Col., 26; M.F., Cornell, 28. Research forester, div. research, Pa. Dept. Forests and Waters, 27- Soc. Foresters; Pa. Forestry Asn. Mensuration; silviculture.
- Augustine, Prof. D(onald) L(eslie)**, 1464 Beacon St., Waban, Mass. *Helminthology*. Kasson, Minn., Jan. 1, 95. B.S., Macalester Col., 18; Sc.D., Hopkins, 23. Adj. prof. biol., Macalester Col., 19-20; asst. helminthol., Hopkins, 20-23; director field hookworm research lab., int. health div., Rockefeller Foundation, Andalusia, Ala., 23-24; instr. helminthol., *Harvard Med. Sch.*, 24-25; asst. prof., 25- Hookworm investigations, U. S., West Indies, Cent. Amer. and Egypt, 21-27. A.A.; Soc. Parasitol.; Royal Soc. Trop. Med. and Hygiene. Biology of free-living stages of hookworm; hookworm disease; prenatal infection with parasitic worms; trichinosis; filariasis.
- Aull, Prof. W(illiam) B(arre)**, Clemson College, S. C. *Bacteriology*. Newberry, S. C., March 24, 87. B.S., Clemson Col., 07. Asst. to botanist, *Clemson Col.*, 11-15, asst. prof. bacter., 15-17, assoc. prof., 17-, v. dean res. teaching, sch. agr., 36- A.A.; fel. S. C. Acad.
- Ault, Prof. E(ugene) Stanley**, Purdue University, Lafayette, Ind. *Mechanical engineering*. Baltimore, Md., June 9, 98. B.E., Hopkins, 20; M.E., Cornell, 21, M.M.E., 24. Instr. machine design, Cornell, 20-24; mech. eng., Rice Inst., 24-27; asst. prof. machine design, Lehigh, 27-30; engineer, West. Elec. Co., Baltimore, Md., 30; assoc. prof. machine design, Case, 30-37; prof., *Purdue*, 37- Asst. West. Elec. Co., New York, 21; asst. engineer, Pa. Power and Light Co., Allentown, 22; statistician, Adirondack Power and Light Co., Schenectady, N. Y., 23; asst. engineer bridge dept., Houston, Texas, 25-27. Mech. Eng. (sec'y., chairman, Cleveland sect.); Eng. Educ. Machine design fundamentals; production; management; hardness of metals; stress analysis; education.
- Aungst, Prof. R(euben) H(arper)**, 175-47 114th Ave., St. Albans, N. Y. *Chemistry*. Suedberg, Pa., April 17, 79. B.S., Pa. State Col., 05, M.S., 19. Instr. chem., Pratt Inst., 06-14; prof., *Adelphi Col.*, 14-
- Aurin, Fritz L(ove)**, Southland Royalty Co., Ponca City, Okla. *Geology*. Prescott, Ark., Dec. 18, 91. A.B., Oklahoma, 14, A.M., 15. From geol. chemist to asst. director, Okla. Geol. Surv., 15-18; geologist, Empire Gas and Fuel Co., 18-19; asst. chief geologist, Marland Oil Co., 19-23; chief geologist, 23-28; *Southland Royalty Co.*, 28-, v. pres. and director. Geol. Soc.; Asn. Petrol. Geol.; Kans. Geol. Soc. General petroleum geology, especially structure and stratigraphy.
- Ausemann, Dr. Elmer R(ex)**, 2201 Carter Ave., St. Paul, Minn. *Agronomy*. Cherokee, Kans., Jan. 22, 95. B.S., Kans. State Col., 23; M.S., State Col. Wash., 24; Ph.D., Minnesota, 32. Junior agronomist, U. S. Dept. Agr., North. Great Plains field sta., N. Dak., 25-28; asst. agronomist, 28-29, assoc. agronomist, *Exp. Sta., Minnesota*, 29- A.A.; Soc. Agron.; Genetic Asn. Plant breeding and genetics; plant breeding with wheat for the development of stem rust resistant varieties.
- Austin, Dr. Arthur Everett**, 270 Commonwealth Ave., Boston, Mass. *Biochemistry*. Boston, Mass., April 11, 61. A.B., Bowdoin Col., 83, A.M., 87; M.D., Harvard, 87. Prof. med. chem. and toxicol., med. sch., Tufts Col., 93-06; assoc. prof. physiol. chem., dept. med., Virginia, 06-07; prof. chem. and toxicol., med. branch, Texas, 08; asst. prof. and prof. theory and practise of med., med. sch., *Tufts Col.*, 08-09, emer. prof., 29- Col. Physicians; Gastro-Enterol. Asn. Diseases of the digestive tract; diatherapy.
- Austin, Prof. Charles Reuben**, Pennsylvania State College, State College, Pa. *Metallurgy*. Manchester, Eng., Oct. 8, 94. B.Sc., Manchester Col. Tech., 18, M.Sc., 20; Ph.D., Wales, 23. Asst. metal. chem., Widnes, Eng., 18-19; metal, Victoria Univ., 19-20; Univ. Col., Wales, 20-24; Nat. Physical Lab., London, 24-27; chief research metallurgist, Nat. Tube Co., Pittsburgh, 27-30; section engineer, research labs., Westinghouse Elec. and Mfg. Co., 30-34; assoc. prof. metal, Pa. State Col., 34-37, prof., 37- Lecturer, Carnegie Inst. Tech., 29-34. Soc. Metals; British Inst. Metals; Iron and Steel Inst. Gt. Britain; fel. Inst. Chem. Gt. Britain and Ireland. Phase equilibria of ternary alloys; hydrogen decarburization of steels; properties and heat treatment of steels; pressure welding; annealing of metals and alloys; controlled heat treating atmospheres; high temperature alloys; creep of metals.
- Austin, C(hester) R(onald)**, Battelle Memorial Institute, Columbus, Ohio. *Ceramics*. Bellefontaine, Ohio, 07. B.Cer.E., Ohio State, 28, Dry Press Elec. Porcelain Mfg. fellow, 28-29, M.S., 29. Senior research engineer, eng. exp. sta., Ohio State, 29-33; ceramic engineer, *Battelle Mem. Inst.*, 33- Ceramic Soc. (sec'y., cent. Ohio sect., 35, chairman, 36). Properties of shales and clays; scum preventatives for brick; de-airing of clay products; kiln firing; production of sewer-pipe.

Austin, C(lift) F(ay), 665 Kalamazoo St., South Haven, Mich. *Horticulture*. South Haven, Mich., Oct. 23, 73. B.S. Mich. State Col., 99. Asst. horticulturist, Ala. Exp. Sta., 00-02; assoc. prof. hort., Maryland, 02-04; chief dept. hort., Estacion Cent. Agron., Cuba, 04-09; asst. administrator, Cent. Nueva Luisa Sugar Estate, 09. Soc. Hort. Sci.; Pomol. Soc.; Genetic Asn. Fruit and vegetable culture.

Austin, F(rank) E(ugene), The Austin Workshops, Hanover, N. H. *Electrical engineering*. Amesbury, Mass., 73. B.S. Dartmouth Col., 95, fellow, 96-97. E.E., 15. Prof. elec. eng., Dartmouth Col., 02-28, mech., Thayer Sch., 18; physics, Norwich, 06-08, elec. eng., 08-14, head dept., 14-28; director, *The Austin Workshops*, 28-. Eng. Educ. Hydraulics; mechanical engineering; automatic mapper; transformers; alternating currents; direct currents; induction coils; battery engineering; magnetism; ant., cricket and spider houses.

Austin, Dr. J(ames) B(liss), U. S. Steel Corp., Kearny, N. J. *Physical chemistry*. Washington, D. C., July 16, 04. Ch.E., Lehigh, 25; Ph.D., Yale, 28. *Physical chemist, research lab., U. S. Steel Corp.*, 28-. Chem. Soc.; Optical Soc.; Ceramic Soc. Emission spectra of organic compounds; chemical thermodynamics; thermal expansion measurements on metals and refractories.

Austin, Prof. J(ames) Harold, University of Pennsylvania, Philadelphia, Pa. *Medicine*. Philadelphia, Pa., Sept. 22, 83. B.S. Pennsylvania, 05, M.D., 08. Assoc. research med., sch. med., Pennsylvania, 11-14; assoc. med. and asst. physician, univ. hosp., 12-17; asst., Rockefeller Inst., 19-20; assoc., 20-21; prof. research med., sch. med., Pennsylvania, 22-. Ed., *Jour. Clin. Investigation*, '26-35. A.A.; Am. Med. Asn.; Am. Physicians; Am. Path. and Bact.; Soc. Exp. Biol.; Soc. Clin. Invest. (secy.), 24-26; Soc. Chem.; Col. Physicians Phila. Nephritis; physiology of the spleen; blood chemistry.

Austin, Dr. Janet Evans (Mrs. James Bliss Austin), 633 Maye St., Westfield, N. J. *Chemistry*. St. Louis, Mo., May 30, 03. A.B., Mt. Holyoke Col., 25, fellow, 25-27, A.M., 27; Ph.D., Yale, 29. Asst. chem., Mt. Holyoke Col., 25-27; Yale, 27-29; instr., Mt. Holyoke Col., 29-30; private research, 30-. Abstracter, *'Chem. Abstracts'*. Organic chemistry; ultra-violet absorption spectra and synthesis of hydantoins and pyrimidines.

Austin, Dr. J(oseph) Perry, Abbott Laboratories, North Chicago, Ill. *Botany*. Waukegan, Ill., May 5, 08. B.S. Michigan, 31. F. C. and Susan Eastman Newcombe fellow, 32-35, M.S., 33, Ph.D., 35. Asst. bot., Michigan, 27-32; junior agr. aide, Wis. nursery, soil conservation service, U. S. Dept. Agr., 36; tech. asst., biol. div., Abbott Labs., 36-. Bot. Soc.; Mich. Acad. Plant physiology; photoperiodism.

Austin, Lloyd, Institute of Forest Genetics, Placerville, Calif. *Forestry*. Westfield, Mass., Aug. 25, 98. B.S. California, 20. Asst. pomol., California, 20-25; director, *Inst. Forest Genetics*, 25-. A.A.; Soc. Foresters; Soc. Hort. Sci.; Pomol. Soc.; Calif. Bot. Soc. Forest genetics; pines and timber; walnuts; sources of forest tree seeds; hybridization; progeny tests and x-ray experiments with pines; nursery cultural and ecological tests of seedbed competition, irrigation and fertilization.

Austin, Prof. Mary L(ellah), 666 Washington St., Wellesley, Mass. *Protozoology*. Austinburg, Ohio, 90. A.B., Wellesley Col., 20, A.M., 22; Ph.D., Columbia, 27. Asst. and custodian zool., Wellesley Col., 20-22; asst., Barnard Col., Columbia, 25-26, lecturer, 26-28; instr., Wellesley Col., 28-31, asst. prof., 31-. Exchange prof., Isabella Thoburn Col., Indiana, 32-33, 35-36. Attempts to prolong the life cycle of *Uroleptus mobilis* and factors inducing conjugation; *Trachelius ovum*.

Austin, Dr. O(liver) L(uther), Jr., Wellfleet, Cape Cod, Mass. *Ornithology, Ecology*. Tuckahoe, N. Y., May 24, 03. B.S., Wesleyan, 26; Ph.D., Harvard, 31. Asst. biologist, biol. surv., U. S. Dept. Agr., 30-35. Ornith. Union; Ecol. Soc.; Soc. Mammal; Northeast Bird Banding Asn. (councilor, 29-). Zoogeography; the distribution and origin of the avifauna of Newfoundland Labrador.

Austin, Dr. Paul R(olland), E. I. du Pont de Nemours and Co., Wilmington, Del. *Organic chemistry*. Monroe, Wis., Dec. 9, 06. A.B., Wisconsin, 27; fellow, Northwestern, 27-28, M.S., 29; Ph.D., Cornell, 30. Asst. chem., Cornell, 28-30; nat. research fellow, Illinois, 30-32; research chemist, Rockefeller Inst., 32-33; exp. sta., E. I. du Pont de Nemours and Co., 33-. Chem. Soc. Organometallic compounds; hormones of the anterior pituitary; dye intermediates; synthetic resins.

Austin, Dr. Richard S(isson), Cincinnati General Hospital, Cincinnati, Ohio. *Pathology*. Providence, R. I., April 18, 85. Ph.B., Brown, 07; M.D., Harvard, 11. Asst. path., Boston City Hosp., 11-13; instr. bacter., Harvard Med. Sch., 13-15; asst. prof. path., Rush Med. Col., Chicago, and pathologist, Children's Mem. Hosp., 15-20; prof. path., col. med., Cincinnati, and pathologist, Cincinnati Gen. Hosp., 20-. A.A.; Asn. Path. and Bact.; Soc. Exp. Path.; Am. Med. Asn.; Chicago Path. Soc.; Chicago Inst. Med. Bacteriology; tuberculosis in children; experimental tuberculosis; hereditary syphilis; arteriosclerosis.

Austin, Prof. Russell H(ayden), Box 478, Siloam Springs, Ark. *Agriculture*. Clinton, Mo., Feb. 20, 92. B.S.A., Arkansas, 17; M.S., Mich. State Col., 25, Ph.D., 28. Instr. agron. and asst. agronomist, Arkansas, 17-24; asst., Mich. State Col., 24-26; asst. prof. agron., Tennessee, 27-30; soils and chemist, state soils lab., Wisconsin, 30-32; prof. chem. and agron., Bryan Mem. Univ., 32-35; William Jennings Bryan Univ., 35; agr., John Brown Univ., 35-. Soc. Agron.; Int. Soc. Soil Sci. Solubility of phosphorus in soils; salt treatments and soil reactions; fertilizers and soils and the composition of plants; exchangeable bases of soils by types.

Austin, Dr. Stanley (William), McGregor, Iowa. *Plant physiology*. Freeland Park, Ind., Dec. 5, 05. A.B., Iowa, 29. M.S., 30, Ph.D., 33. Foreman, *Erosion Control Works Camp, McGregor*, 34-. A.A.; Soc. Plant Physiol.; Iowa Acad. Plant growth and reproduction.

Austin, William E(phralm), 2446 University Ave., New York, N. Y. *Chemistry*. New York, N. Y., Sept. 18, 96. B.S. Col. City of N. Y., 16. Chief chemist and v. pres., *Harris and Rechard Fur Dyers, Inc.*, 28-. A.A.; Chem. Soc.; Leather Chem. Asn.; Tech. Asn. Fur Indust. (pres, 29). Fur dressing, dyeing and bleaching; dyes; dye intermediates.

Austrian, Prof. Charles Robert, 1417 Eutaw Place, Baltimore, Md. *Medicine*. Baltimore, Md., 85. A.B., Hopkins, 04, M.D., 09. Asst. instr. and assoc. med., Hopkins, 10-14; assoc. clin. med., 15-23; assoc. prof., 23-. Am. Physicians; Am. Path. and Bact.; Soc. Clin. Invest.; Clin. and Climat. Asn.; Med. and Chirurg. Faculty Md. (councilor). Bacteriology; immunology; internal medicine; infectious diseases; tuberculosis; etiology of angio-neurotic edema.

Auten, Dr. John Thompson, U. S. Forest Service, Columbus, Ohio. *Forestry*. White Hall, Ill., Nov. 6, 87. B.S., Illinois, 16; M.S., Iowa State Col., 23, Ph.D., 29. Soil analyst, Iowa State Col., 20-23; prof. soils and chem., Pa. State Forest Sch., 23-29; silviculturist, *Cent. States Forest Exp. Sta., U. S. Forest Service*, 29-. Soc. Foresters; Soil Sci. Soc. (chairman, forest soil cmt., 34-). Organic phosphorus of soils; soils of Mont Alto state forest; litter in forest practise; base exchange calcium and magnesium of forest soil profiles; porosity and water absorption of forest soils; soil profile.

Auten, Prof. Mary, Ashland College, Ashland, Ohio. *Biology*. Rawson, Ohio, Feb. 10, 98. A.B., Bluffton Col., 20; A.M., Ohio State, 22, Ph.D., 33. Adj. prof. biol., Randolph-Macon Woman's Col., 22-27; asst. prof., Ohio Northern, 27-30; prof., Bluffton Col., 30-33; asst. prof., *Ashland Col.*, 33-34, assoc. prof., 34-. A.A.; Limnol. Soc.; Ohio Acad. Entomology; embryology.

Avedikian, Dr. S(ouren) Z(acharia), Edgewood Arsenal, Edgewood, Md. *Chemical engineering*. Sivas, Armenia, July 3, 11. A.B., Columbia, 32, A.M., 33, Ph.D., 34. Asst. anal. chem., Columbia, 32-33; consulting, research in and development of chem. processes, 33-36; chem. engineer, munitions develop. div., *Edgewood Arsenal, Chem. Warfare Service*, 36-. Lecturer, Columbia, 35. Chem. Soc.; Chem. Eng.; Electrochem. Soc.; Armenian Sci. Asn. (chairman, membership cmt., 35, v. pres., 36). Process development and plant design; chlorine; aluminum; bleaching of flour; bleaching and treatment of tobacco; sulfuric acid, nitric acid and nitrates; barium and its compounds; manufacture of organic chemicals; chemical warfare agents.

Avens, Dr. Alfred W(illiam), N. Y. State Agricultural Experiment Station, Geneva, N. Y. *Agricultural chemistry*. Water Mill, N. Y., March 31, 01. B.S., Colgate, 23, M.S., 26; Ph.D., Cornell, 35. Instr. chem., Colgate, 23-26; asst. chem., Cornell, 26-30, instr., 30-35; research asst., *N. Y. Exp. Sta., Geneva*, 36-. Chem. Soc. Qualitative analysis; chemical and physical properties of insecticides and fungicides.

- Avent, Prof. Jos(eph) E(mory)**, University of Tennessee, Knoxville, Tenn. *Educational psychology*. Wake Co., N. C., 78. A.B., North Carolina, 01; A.M., Columbia, 13, Ph.D., 25. Sch. supt., N. C., 01-12; prof. educ., Va. State Teachers Col., 13-21; pres., Martha Washington Col., 22-23; *prof. educ. psychol., Tennessee*, 23- Beginning teaching; the excellent teacher; excellences and errors in teaching methods and in classroom management; standard testing reduced to lowest terms.
- Averell, James L(awrence)**, Ozark National Forest, Russellville, Ark. *Forestry*. Oakland, Calif., Jan., 22, 03. B.S., California, 24, 31-33; Forest Products fellow, Yale, 25-26. M.F., 26; Am-Scandinavian Foundation fellow, 26-27; fellow, Royal Forest Acad., Stockholm, 27. Junior forester, Lake States Forest Exp. Sta., U. S. Forest Service, 27-30, asst. silviculturist, South. Forest Exp. Sta., 30-31, asst. forest supervisor, Ozark Nat. Forest, 35- Soc. Foresters. Microtechnique for woody tissues; silviculture of Connecticut hardwoods; ecology and management of northern swamp forests.
- Averill, Dr. Harold P(aul)**, Aberdeen, Md. *Chemistry*. Du Bois, Pa., Aug., 25, 03. B.S., Pittsburgh, 24, M.S., 26, Ph.D., 27. Asst., Pittsburgh, 24-27; *assoc. chemist, Chem. Warfare Service*, 28- Food stuffs; chemistry of fats; destruction of war gases.
- Averill, Prof. Lawrence A(ugustus)**, Massachusetts State Teachers College, Worcester, Mass. *Psychology*. Alma, Maine, May 1, 91. A.B., Clark, 13, A.M., 14, Ph.D., 15. *Prof. psychol., Mass. State Teachers Col., Worcester*, 15- Pres., Child Guidance Clinic, Worcester, 28- A.A.; Psychol. Asn.; Asn. Applied Psychol.; Asn. Col. Teachers Educ. Mental hygiene; adolescent and educational psychology.
- Averitt, S(axe) D(abney)**, University of Kentucky, Lexington, Ky. *Chemistry*. Caledonia, Ky., July 31, 71. B.S., Bethel Col. (Ky.), 93; M.S., Kentucky, 00. Teacher, private schs., 95-97; instr., Decatur Baptist Col., 00-01; asst. chemist, *Exp. Sta., Kentucky*, 01-06, chemist, 06- A.A.; Chem. Soc. (sec'y, Lexington sect., 21, pres., 22); Ky. Acad. Soils; insecticides; waters.
- Avers, H(enry) G(odfrey)**, U. S. Coast and Geodetic Survey, Washington, D. C. *Geodesy*. Elmore, Ohio, March 6, 86. A.B., George Washington, 13. Geod. computer, *U. S. Coast and Geod. Surv.*, 08-24, chief mathematician, *div. geod.*, 24- A.A.; Math. Asn.; Civil Eng.; Astron. Soc.; Geophys. Union; Wash. Acad. (treas., 30); Philos. Soc. Wash.; Wash. Soc. Eng. Precise leveling.
- Avery, A(mos) G(eer)**, Carnegie Institution, Cold Spring Harbor, L. I., N. Y. *Genetics*. Ledyard, Conn., Feb., 18, 02. B.S., Conn. State Col., 25, M.S., 26. *Assoc. geneticist, sta. for exp. evolution, Carnegie Institution*, 26- Genetics of Datura.
- Avery, Prof. Bennett Franklin**, American University of Beirut, Beirut, Lebanese Republic. *Anatomy*. Vassar, Mich., Sept. 21, 01. B.S., Michigan, 23, M.D., 25. Rockefeller fellow, 25-26. M.S., 26; Rockefeller fellow, Chicago, 29-30. Adj. prof. *anat. med. sch., American Univ. Beirut*, 26-29, *assoc. prof.*, 30- Cell metabolism; cell injury by bacteria.
- Avery, Prof. George S(herman), Jr.**, Connecticut College, New London, Conn. *Botany*. Benton Harbor, Mich., Aug., 03. B.S., Tulane, 24; M.S., Dartmouth Col., 26; Ph.D., Wisconsin, 27. Instr. bot., Duke, 27-29, asst. prof., 29-31; *prof. Conn. Col.*, 31- Nat. research fellow, 30-31. A.A.; Bot. Soc. (sec'y, 37-); Soc. Plant Physiol.; Torrey Bot. Club; Deuts. Bot. Gesell. Plant morphology; anatomy of grasses, tobacco and cotton; phytohormones and growth; precipitation reactions.
- Avery, Prof. George True**, 401 E. Laurel St., Ft. Collins, Colo. *Psychology*. Georgetown, Colo., April 17, 80. A.B., Colorado, 15; A.M., Harvard, 17; Ph.D., Stanford, 24. Head dept. English, high sch., Colo., 15-17; asst. prof. *educ. and psychol., Colo. State Col.*, 17-19, *assoc. prof.*, 19-32, *prof.*, 32-, *director summer session*, 19- Acting prof., San Jose State Teachers Col., Calif., 23-24. Summers, *assoc. prof.*, Colorado, 16, 17. A.A.; Psychol. Asn. (pres., Rocky Mt. branch, 34); Nat. Educ. Asn. (v. pres., 36); Colo. Psychol. Asn.; Colo. Child Study Asn. (pres., 29); Colo. Soc. Mental Hygiene (director); Colo. Educ. Asn. (pres., 33). Comparative and animal psychology; college administration; heredity and environment; administration in vocational and general education; Stanford-Binet and Herring-Binet examinations; intelligence of eleven year old children; congenital behavior; the preschool child.
- Avery, Dr. Oswald T(hodore)**, Rockefeller Institute, New York, N. Y. **Bacteriology*. Halifax, N. S., Can., Oct., 77. A.B., Colgate, 00, hon. Sc.D., 21; M.D., Columbia, 04; LLD, McGill, 35. Assoc. director dept. bact., Hoagland Lab., 07-13; from assoc. to mem., *Rockefeller Inst.*, 13- J. Mather Smith prize, Columbia; John Phillips mem. medal, Col. Physicians; Paul Ehrlich gold medal, Nat. Acad. A.A.; Soc. Bact.; Asn. Path. and Bact. (pres., 34); Soc. Exp. Path.; Soc. Exp. Biol.; Asn. Immunol. (pres., 30); Pub. Health Asn.; Soc. Clin. Invest.; Am. Physicians; Harvey Soc.; N. Y. Acad. Med.; Acad. royale de Méde Belg.; Det. Norske Videnskaps Akad. Oslo. Bacteriology and immunology of respiratory diseases.
- Avery, Dr. Priscilla**, University of California, Berkeley, Calif. *Botany*. Redlands, Calif., June 12, 99. B.S., California, 26, M.S., 29, Ph.D., 30. Asst. genetics, *California*, 27-28, teaching fellow zool., 27, preparator bot., 28-34, *cytologist, bot. garden*, 34- A.A. Genetics; cytology.
- Avey, Prof. H(arry) T(hompson)**, 2729 N. Stowell Ave., Milwaukee, Wis. *Mechanical engineering*. Blockton, Iowa, Jan. 10, 79. B.M.E., Iowa State Col., 05; M.E., Cornell, 12. Teaching and gen. eng., Ewing Christian Col., 05-10, 12-19; asst. prof. mech. eng., exten. div., Wisconsin, 21-36, *assoc. prof.*, 36- Exp. steam turbines, Gen. Elec. Co., Schenectady, 05, steam turbine drafting room, Mass., 20. Mech. Eng.
- Avinoff, Prof. A(ndrey)**, Carnegie Museum, Pittsburgh, Pa. *Entomology*. Tulchin, Russia, Feb. 14, 84. LL.B., Moscow, 05; hon. Sc.D., Pittsburgh, 27; L.H.D., Washington and Jefferson Col., 34. Assoc. curator entom., Carnegie Museum, 22-26, director, 26-; *advisory prof. biol., Pittsburgh*, 28-; *assoc. prof. fine arts*, 29- Sci. explor., Pamir, 08; India and W. Tibet, 12. Gold medal, Imp. Geog. Soc. Russia, 17. A.A.; Asn. Mus. (counselor, 27, exec. cmt., 30). Lepidoptera; history of art.
- Axtmayer, Prof. Jos(eph) H(erman)**, Ponce de Leon Ave. No. 3, Santurce, P. R. *Chemistry*. New York, N. Y., Nov. 5, 93. B.S., Puerto Rico, 17; A.M., Columbia, 26, Ph.D., 27. Prin., high sch., P. R., 17-20; asst. prof. physics and chem., Puerto Rico, 20-23; prin., high sch., P. R., 23-24; prof. chem. and dean col. arts and sciences, Puerto Rico, 24-31, *assoc. prof. Columbia Sch. Trop. Med.*, 31- Asn. de Quimicos de P. R. (v. pres. and pres., 35-). Vitamin B complex; nutrition; multiple nature of vitamin B; vitamin A and B complex determinations in Puerto Rican vegetables; dietary studies.
- Ayers, Prof. William Stewart**, Columbia University, New York, N. Y. *Engineering*. Wilkes-Barre, Pa., Oct., 28, 73. M.E., Lehigh, 96. Sea-going engineer, Am. and Red Star Lines and U.S.N., 96-00; instr. machine design, Pratt Inst., 01-05; asst. prof. and assoc. prof. mech. eng., Pa. State Col., 05-10; chief engineer, Moran Co., Seattle, 10-11; prof. elec. eng. and mech. eng., N. S. Tech. Col., 11-16; re-educ. prin., dept. soldiers' civil rehabilitation, Govt. Can., 16-18; senior performance engineer, U. S. Shipping Board Emergency Fleet Corp., 18-19; chief estimator marine contracts and chief engineer in marine designing, drafting and testing, Pusey and Jones Co., Wilmington, 19-22; *assoc. prof. indust. eng.*, Columbia, 22-, sec'y faculty, sch. eng. Consulting engineer. Mech. Eng.; Elec. Eng.; Eng. Educ.; Management Asn.; N. S. Soc. Eng. (past pres.). Machine design; engineering problems; machine shop methods; pumps; estimating; power plants.
- Aycock, Dr. W(illiam) L(lloyd)**, Harvard Medical School, Boston, Mass. *Medicine*. Ga., Feb., 25, 89. M.D., Louisville, 14. Instr. bacter., N. Y. Post-Grad. Med. Sch., 15-19; director research lab., Dept. Pub. Health, Vt., 19-31; *assoc. Harvard Med. Sch.*, 23-26, *assoc. prof. prev. med. and hygiene*, 26- Prof. col. med., Vermont, 20-23; director research, Infantile Paralysis Cmn., Harvard. Fellow, Hopkins Hosp., 23. Am. Med. Asn.; Soc. Bact.; Pub. Health Asn. Acute anterior poliomyelitis.
- Ayer, Dean Fred(erick) E(ugene)**, Municipal University of Akron, Akron, Ohio. *Engineering education*. Sheshequin, Pa., Oct. 24, 76. C.E., Lafayette Col., 00. Draftsman, Pa. Steel Co., 00-02; Am. Bridge Co., Conn., 02-03; chief draftsman, N. J. Bridge Co., 03-04; field draftsman and office engineer, U. S. Reclamation Service, 04-06; from instr. to assoc. prof. civil eng. and asst. to dean eng. col., Cincinnati, 06-14; *dean col. eng. and commerce, Akron*, 14- Summers, draftsman, Pa. Steel Co., 98, 99; draftsman and timekeeper, Great Falls Iron Works, Mont., 04. Cmn. to survey Carnegie Inst. Tech.; Munic. Univ. Omaha. Civil Eng.; Eng. Educ.

- Ayer, Dr. James B(ourne)**, 319 Longwood Ave, Boston, Mass. *Medicine*. Boston, Mass., Dec. 28, 82. A.B., Harvard, 03, M.D., 07. Prof. neur., Harvard Med. Sch.; *neurologist*, Mass. Gen. Hosp. A.A.; Am. Med. Asn.; Am. Path. and Bact.; Neur. Asn. (pres, 30); Boston Soc. Psychiat. and Neur.
- Ayers, Joseph Williams**, C. K. Williams and Co., Easton, Pa. *Chemistry*. Easton, Pa., Jan. 6, 04. Ch.B., Cornell, 27. *Director research*, C. K. Williams and Co., 27—Chem. Soc. (exec. cmt., New York sect.); Chem. Eng.; Inst. Chem. Pigments; colors; fillers; molded plastics; rubber; paints; varnishes; lacquers; printing inks and paper.
- Ayers, Dr. Theodore T(homas)**, Yale University, New Haven, Conn. *Pathology*. Taylor, Pa., Aug. 4, 00. B.S., Pa. State Col., 24; Mass. Col., 24–26; A.M., Harvard, 29, Thayer fellow, 29–30, Ph.D., 30. Asst. bot., Mass. Col., 24; investigator, Exp. Sta., Mass. Col., 24–26; asst. plant pathologist, Exp. Sta., Maine, 26–27; asst., Harvard, 28–29; agent, div. forest path., bur. plant indust., U. S. Dept. Agr., 30—Fellow, Crop Protection Inst., Amherst, Mass., 34–35. Summer, field asst., div. forest path., bur. plant indust., U. S. Dept. Agr., R. I., 29. A.A.; *Phytopath. Soc.* Forest and plant pathology; mycology.
- Aylesworth, Dr. Evelyn (Berg)**, 4038 Suter St., Oakland, Calif. *Statistics, Economics*. Chicago, Ill., April 30, 00. A.B., California, 20, A.M., 22, Ph.D., 26. Asst. physics, California, 19–20, teaching fellow, 20–22; instr., Mill. Col., 22–24; asst. prof., 24–28; assoc. prof., 28–36; statist. research, *Forest and Range Exp. Sta., California, Berkeley*, 36—Instr., Dominican Col. (Calif.), 24–25. Summers, instr., California, 23, 24; asst. prof., 25, 27; assoc. prof., Calif. State Teachers Col., San Francisco, 29–31. *Economics; statistics*.
- Ayres, Arthur S(milley)**, 2751 Puuhonua St., Honolulu, Hawaii. *Chemistry*. San Francisco, Calif., Sept. 16, 01. B.S., California, 27. Asst. chemist, Exp. Sta., Hawaiian Sugar Planters' Asn., 27—Lieut., Ordnance R. C., 31—Phosphate fixation; sugar-cane; mineral composition; rates of absorption; losses through cropping; translocation of mineral nutrients.
- Ayres, Eugene (Edmond)**, 1164 Shady Ave., Pittsburgh, Pa. *Chemical engineering*. Summerton, S. C., March 28, 91. A.B., Swarthmore Col. Research chemist, E. I. du Pont de Nemours and Co., 13–14; chem. engineer, Sharples Specialty Co., 15–23; manufacturer org. chem., 24–28; asst. manager petrol. technol., Gulf Ref. Co., 29–33; staff chemist, *Gulf Research and Develop. Corp.*, 34—Centrifugal engineering; colloid chemistry; organic synthesis.
- Ayres, Dr. Fred D(onald)**, Northwestern University, Evanston, Ill. *Physical chemistry*. Kansas City, Mo., Dec. 25, 06. B.S., Florida, 29, M.S., 30; Ph.D., Northwestern, 35. Asst., Florida, 29; Northwestern, 30, instr. chem., 35—Chem. Soc. Thermochemistry; specific heats of aqueous solutions.
- Ayres, Dr. Gilbert B(allou)**, Massachusetts Institute of Technology, Cambridge, Mass. *Biochemistry*. Woonsocket, R. I., Dec. 14, 09. B.S., Mass. Inst. Tech., 31, Ph.D., 34. Asst. biol. and pub. health, Mass. Inst. Tech., 31–34; fellow physiol., Harvard Med. Sch., 34–36; Squibb fellow, 34–35, chemist, mem. foundation neuro-endocrine research, 34–36; research assoc. biol. and pub. health, Mass. Inst. Tech., 36—A.A.; Chem. Soc. Fermentation; enzymes; internal secretions; analytical methods; pharmaceuticals; peroxides.
- Ayres, Prof. Gilbert H(aven)**, 56 Forbes Ave., Northampton, Mass. *Chemistry*. Upland, Ind., Aug. 29, 04. A.B., Taylor, 25; Ph.D., Wisconsin, 30. Instr. chem., Taylor, 25–27; asst., Wisconsin, 27–30, instr., 30–31; asst. prof., Smith Col., 31–37. Assoc. prof., 37—Chem. Soc. Influence of hydrolysis temperature on some properties of colloidal ferric oxide; cataphoresis measurements on colloidal ferric oxide; influence of temperature on certain properties of zirconium oxide sols; colloidal chromic hydroxide; general chemistry.
- Ayres, Dr. H(iram) D(outhitt)**, Municipal University of Wichita, Wichita, Kans. *Physics*. College Hill, Ky., May 30, 78. A.B., DePauw, 02; A.M., Cornell, 04, Ph.D., 13. Asst. physics, DePauw, 02–03; instr., Ohio State, 04–05; physicist, Carnegie Institution, 05–10; chief physicist, B. F. Goodrich Rubber Co., 13–26; prof. physics, Wichita, 26—A.A.; Physical Soc.; Am. Physics Teachers. Coefficients of expansion of metals and indices of refraction of gases at low temperatures; elasticity of metals; rubber products.
- Ayres, Prof. Horace C(rookham)**, University of Nevada, Reno, Nev. *Mathematics*. Carlisle, Iowa, Feb. 7, 09. B.S., Washington (Seattle), 31; M.S., California, 31. Instr. math., Nevada, 35–36, asst. prof., 36—Math. Soc. Calculus of variations; differential equations.
- Ayres, Dr. Leonard P(orter)**, Cleveland Trust Co., Cleveland, Ohio. *Economics, Statistics*. Niantic, Conn., Sept. 15, 79. Ph.B., Boston, 02, A.M., 09, Ph.D., 10, D.C.S., 23; Columbia, 07–09; LL.D., Rochester, 30. Sch. supt., P. R., 03–04; San Juan, 04–06; gen. supt., P. R., and chief div. statist., 06–08; director div. statist. and div. educ., Russell Sage Foundation, 08–21; v. pres., *Cleveland Trust Co.*, 21—Lecturer, Boston, 09; N. Y. Univ., 12; Illinois, 13; Colorado, 13; Chicago, 20; director educ. surveys, various cities, 12–15. Statistician, Am. Peace Cmn; econ. adviser, Dawes Cmn, 24. Col. Gen. Staff, U.S.A., 17–19; chief statist. officer, War Dept. A.A. (v. pres., 16, 30); Statist. Asn. (pres, 26); Econ. Asn. (v. pres., 34).
- Ayres, Dr. Philip W(heelock)**, 3 Joy St., Boston, Mass. *Forestry*. Winterset, Iowa, May 26, 61. Ph.B., Cornell, 84; fellow, Hopkins, 87–88; Ph.D., 88; hon. Sc.D., New Hampshire, 26, Middlebury Col., 36. *Forester and consulting forester*, Soc. Protection N. H. Forests, 01—Ed., 'Manual of Mt. Sunapee,' 20. Medal, Scenic and Hist. Preservation Soc. N. Y., 35. Del., Int. Forestry Cong., Rome, 26. Soc. Foresters; Forestry Asn.; Appalachian Mt. Club (pres, 20–22).
- Ayres, Quincy C(lande)**, 914 Brookridge Ave., Ames, Iowa. *Civil and agricultural engineering*. Columbus, Miss., May 30, 91. Univ. of the South, 08–09; B.S., B.E., Mississippi, 12, C.E., 20. Surveyor and office engineer, drainage, flood control and hydroelec., Muscle Shoals, 12–16; drainage engineer, U. S. Dept. Agr., 16–17; asst. prof., civil eng., Mississippi, 19–20; agr. eng., Iowa State Col., 20–21; assoc. prof., 21—Director erosion control, Fed. Emergency Relief Admin., Iowa, 34. Summer, director, Erosion Control Works, Iowa, 33. Lieut., C. Eng., 17–19, lieut. commander, 36—Agr. Eng. (chairman, reclamation div., 28); Civil Eng. (pres, Iowa sect., 30); Eng. Educ.; Iowa Eng. Soc. (chairman, program cmt., 29–, v. pres., 34–36, pres, 36); Royal Soc. Arts London. Drainage engineering; soil erosion and flood control; land development; gully control.
- Ayres, Prof. W(illiam) L(eake)**, 1204 Henry St., Ann Arbor, Mich. *Mathematics*. Gatesville, Texas, June 26, 05. A.B., Southwestern (Texas), 23; Texas, 23–25; Ph.D., Pennsylvania, 27. Nat. research fellow, 27–29; asst. prof., math., Michigan, 29–33, assoc. prof., 33—Henry Russell prize, Michigan, 32. Math. Soc. (councilor, 37–); Math. Asn. Analysis situs; theory of sets and functions.
- B**
- Baade, Dr. Walter**, Mt. Wilson Observatory, Carnegie Institution, Pasadena, Calif. ^{*6}*Astronomy*. Schroettinghausen, Germany, March 24, 93. Univ. Münster; Ph.D., Göttingen, 19. Asst., Hamburger Sternwarte, 19–27; observator, 27–31; privat-dozent, Hamburg, 29–31; astronomer, Mt. Wilson Observatory, Carnegie Institution, 31—Stellar astronomy; nebulae.
- Babashian, Dr. V(ahan) S.**, Bethlehem, Pa. *Chemistry*. Marsavan, Asia Minor, Nov. 28, 76. B.A., Anatolia, 95; A.M., Brown, 03, Ph.D., 06. Instr. chem., Brown, 03–06; org. chem., Lehigh, 06–09; asst. prof., 09–11; assoc. prof., 11–22; prof., 22—Research chemist, E. I. du Pont de Nemours and Co., 19–20. Summer, instr., California, 09. C.W.S., U.S.A., 18–19. A.A.; Chem. Soc. Indanthrene colors; derivatives of thiophene.
- Babb, Cyrus C(ates)**, Granite Falls, N. C. *Hydraulic engineering*. Portland, Maine, June 18, 67. B.S., Mass. Inst. Tech., 90. Engineer, U. S. Geol. Surv., 90–02; U. S. Reclamation Service, 02–09; State Water Storage Cmn., Maine, and U. S. Geol. Surv., 10–16; consulting engineer, 16–28; senior hydraulic engineer, C. Eng., U.S.A., 29—assoc. water conservation, Nat. Resources Cmn., 36—Civil Eng.; Maine Asn. Eng. (pres, 11).
- Babb, Prof. M(aurice) J(effers)**, University of Pennsylvania, Philadelphia, Pa. *Mathematics*. Marshallton, Pa., Oct. 20, 70. B.S., Haverford Col., 05; Ph.D., Pennsylvania, 10. Prof. math., Dickinson Sem., 96–00; Beliefont Acad., 00–01; instr., Pa. State Col., 01–05; Pennsylvania, 05–10, asst. prof., 10–24, prof., 24—Math. Soc. History of mathematics; theory of numbers.
- Babb, M(yron) F(rancis)**, U. S. Department of Agriculture, Cheyenne, Wyo. *Horticulture*. New Sharon, Maine, April 23, 97. B.S., Maine, 26, M.S., 29; Mich. State Col., 30.

Instr. hort, Maine, 26-29, asst. prof, 29-30; instr. and asst. research, Mich. State Col, 30-31; agent in charge veg. investigations, *div. fruit and veg. crops and diseases, bur. plant indust., U. S. Dept. Agr.*, 31-37, assoc. physiologist, 37- Ethylene gas and the vitamin B content of celery; forcing of rhubarb and witloof; plants forcing and hardening off while in the seedling stage; vitamin content of forced witloof.

Babbitt, Prof. H(arold) E(aton), University of Illinois, Urbana, Ill. *Sanitary engineering*. East Orange, N. J. Jan. 7, 88. B.S. Mass. Inst. Tech, 11; M.S. Illinois, 17. Asst. sewage testing sta, Sanit. Dist, Chicago, 11-13; asst. engineer, State Board Health, Ohio, 13; from instr. to prof. sanit. eng. Illinois, 13- Civil Eng; Eng. Educ; Water Works Asn; Pub. Health Asn; Ill. Soc. Eng. (pres, 22, sec'y, 23-). Plumbing; sewage treatment; water works.

Babbitt, Dr. James A(ddison), 1912 Spruce St, Philadelphia, Pa. *Otolaryngology*. Waitsfield, Vt. Oct. 22, 69. A.B., Yale, 93; A.M., Haverford Col, 96; M.D., Pennsylvania, 98. Prof. and emer. prof. hygiene and physical educ, Haverford Col; prof. and emer. prof. clin. otolaryngol, sch. med, and assoc. prof. grad. sch. med, Pennsylvania. Laryngologist and aurist, Lankenau Hosp; laryngologist, Children's Hosp. of Mary J. Drexel Home; consulting otolaryngologist, Children's Hosp; Misericordia Hosp; Fitzgerald Mercy Hosp. Fel. Otol. Soc; fel. Laryngol. Asn; Laryngol. Rhinol. and Otol. Soc; Acad. Ophthalm. and Otolaryngol. Rhinology.

Babcock, Dr. Dale F(riend), 300 Winston Ave, Wilmington, Del. *Chemistry*. Minneapolis, Kans, Oct. 5, 06. B.S. Kans. State Teachers Col, 24; Ph.D. Illinois, 29. Asst. chem, Illinois, 26-29; chemist, exp. sta, E. I. du Pont de Nemours and Co, Wilmington, 29- Chem. Soc. Magnetic moment of iodine atom.

Babcock, Dr. Donald E(ric), 1361 Henry Ave, S.W. Canton, Ohio. *Physical chemistry, Metallurgy*. Canton, Ohio, Nov. 10, 07. A.B. Ohio State, 31. A.M. 33. Ph.D. 35. Asst. chem, Ohio State, 31-35; physical chemist, Republic Steel Corp, Massillon, Ohio, 35-36, physical chemist and metallurgist, Elec. Weld and Tube Mills, Youngstown, 36- Chem. Soc; Soc. Metals; Ohio Acad. Tetany; electro-organic reductions; nature of electrode reactions; corrosion; copper-iron alloys; resistance welding; colloid chemical aspects of iron carbon systems.

Babcock, Prof. Ernest B(rown), University of California, Berkeley, Calif. ***Plant genetics*. Edgerton, Wis, July 10, 77. B.S. California, 05, M.S. 11. Teacher biol. and nature study, Los Angeles Nor. Sch, 06-07; instr. plant path, California, 07-08, asst. prof, 08-09, agr. educ, 09-12, prof. genetics, 13- A.A.; Soc. Nat. (v. pres, 34); Genetics Soc; Genetics Asn; Bot. Soc; West. Soc. Nat; Calif. Bot. Soc; Calif. Acad; Deuts. Gesell. für Vererbungswissenschaft. Nature and mechanism of the germinal substance; genetics; taxonomy; evolutionary processes.

Babcock, Harold D(elos), Mt. Wilson Observatory, Carnegie Institution, Pasadena, Calif. ***Physics, Astronomy*. Edgerton, Wis, Jan. 24, 82. B.S. California, 07. Asst. physics, California, 05-06; lab. asst, Bur. Standards, 06-08; physicist, Mt. Wilson Observatory, Carnegie Institution, 09- Solar eclipse expds, 18, 23, 30, 32. Pacific div, A.A.S. prize, 29. Nat. Acad; A.A. (exec. cmt, Pacific div, 31-36); Physical Soc; Astron. Soc; Astron. Soc. Pacific (pres, 37); assoc. Royal Astron. Soc; Int. Astron. Union (pres, cmt. standards of wave-length, 24-28). Standard resistances; Zeeman effect; iron arc spectrum; standards of wave-length; pressure effect in iron spectrum; isotopes of oxygen; infra-red solar spectrum; diffraction gratings.

Babcock, Prof. H(arold) L(ester), Woodleigh Road, Dedham, Mass. *Herpetology*. Holliston, Mass, May 30, 86. Worcester Polytech, 05-06; M.D., Boston, 10; Berlin, 11. Curator reptiles and amphibians, Boston Soc. Nat. Hist; prof. otoi, sch. med, Boston. Mem. corp, Bermuda Biol. Sta. Soc. Ichthyol. and Herp; cor. mem. Zool. Soc. London. Turtles and snakes of New England.

Babcock, Dr. Harrlet (Mrs. H. Hobart), 15 Gramercy Park, New York, N. Y. *Psychology*. Westerly, R. I. Jan. 7, 77. B.S. Columbia, 22. A.M. 23. Ph.D. 30. Psychologist, Manhattan State Hosp, 23-26; chief psychologist, Bellevue Hosp, 26-28; private research, 29-; research, N. Y. Univ, 31-32; psychologist, Vocational Adjust. Bur, 34- A.A; assoc. Psychol. Asn; Acad. Polit. and Social Sci; Asn. Applied Psychol; N. Y. Acad. Measurement of mental deterioration; psychological testing in psychopathology; dementia praecox; the short

army scale in clinical practise; the mental functioning of exceptional children; functional psychoses.

Babcock, Dr. Marjorie E, University of Hawaii, Honolulu, Hawaii. *Psychology*. Hornell, N. Y. March 6, 99. A.B., Wells Col, 19; A.M., Hawaii, 27; Ph.D. Columbia, 32. Asst. Training Sch, Vineland, N. J. 19-21, 23-24; psychol. examiner, child study dept, Board Educ, Rochester, 21-22; asst. director psychol. clinic, Hawaii, 22-23, 24- Governor's Educ. Cmn, Hawaii, 30; Pan-Pacific Women's Conf, 28-30. Assoc. Psychol. Asn. Clinical psychology.

Babcock, O(rville) G(orman), P. O. Box 407, Sonora, Texas. *Entomology*. Denver, Colo. July 21, 85. B.S. Colo. Agr. Col, 10, 15; Colo. State Nor. Sch, 14. Entom. Exp. Sta, Md. Agr. Col, 10-12; Exp. Sta, Minnesota, 12-14; commercial fumigation, 14-15; U. S. Reclamation Service, 15-16; codling moth investigations, Exp. Sta, Colo. State Col, 16-17; asst. entomologist, bur. entom. and plant quarantine, U. S. Dept. Agr, 17- A.A; Entom. Soc. Amer; Asn. Econ. Entom. Insects affecting man and animals; economic status of corn bill-bugs in Minnesota; control of peach lecanium or terripin scale; sheep scab; goat lice; screw worm; blow flies; nose bot of sheep.

Babcock, Dean Rodney W(hittemore), 1928 Leavenworth St, Manhattan, Kans. *Mathematics*. Milton, Vt. July 22, 90. A.B. Missouri, 12; Pennsylvania; A.M., Wisconsin, 15. Ph.D. 24. Instr. math, Pennsylvania, 15-16; Wisconsin, 16-25; asst. prof, 25-29; prof, DePauw, 29-30; dean div. gen. science, Kans. State Col, 30- Math. Soc; Math. Asn. Applied mathematics; mathematical physics; motions of viscous fluids.

Babcock, Dr. S(idney) H(enry), Jr., Box 534, Davis, Calif. *Organic chemistry*. Atoka, Okla. April 4, 09. A.B. Vanderbilt, 30, M.S. 31; Ph.D. Illinois, 34. Asst. chem, Illinois, 34-36; instr. col. agr, California, 36- Chem. Soc. Stereochemistry; local anesthetics; monosaccharides.

Babcock, Dr. W(illiam) Wayne, 1720 Spruce St, Philadelphia, Pa. *Surgery*. East Worcester, N. Y. June 10, 72. Col. Physicians and Surg. Baltimore, 93; M.D., Pennsylvania, 95; Medico-Chirurg. Col. Phila, 00; hon. A.M., Gettysburg Col; LL.D, Temple, 32. Intern, St. Mark's Hosp, Salt Lake City; Polyclinic Hosp, Phila; Kensington Hosp for Women, Phila; chief surg. service, sch. med, Temple; surgeon, Phila. Gen. Hosp; prof. surg. and clin. surg. and chief dept, sch. med, Temple. Chief surg. service, U. S. Gen. Hosp, No. 6, 17-19. A.A; fel. Col. Surg; Asn. Obstet, Gynec. and Abdom. Surg. (v. pres, 27, pres, 34); Am. Med. Asn; fel. Therapeut. Soc. (pres, 17); Soc. chirurg. de Paris.

Baber, Dr. E(rl) A(rmitage), Longview Hospital, Cincinnati, Ohio. *Psychiatry*. Griggsville, Ill. May 3, 83. M.D. Louisville, 09. Supr. Dayton State Hosp, 11-23; Longview Hosp, 23- A.A; Psychiat. Asn; Am. Med. Asn; Fern Soc.

Bahly, Dr. Paul Peter, Cornell University, Ithaca, N. Y. *Zoology*. Mödling, Austria, July 25, 94. Ph.D. Vienna, 24. Asst. curator invert. zool, dept. entom, N. Y. State Col. Agr, Cornell, 24-25; curator, 25- A.A; Entom. Soc. Amer; Deuts. Entom. Gesell; Zool-Bot. Gesell. Wien. Entomology; Hymenoptera; Psammochorididae; color problem in bumblebees.

Babkin, Prof. B(oris) P(eter), McGill University, Montreal, Que, Can. *Physiology*. Koursk, Russia, Jan. 5, 77. M.D. Mil. Med. Acad. St. Petersburg, 04; D.Sc. London, 25. Asst. physiol, Inst. Exp. Med. St. Petersburg, 01-12; prof. animal physiol, Agr. Inst. Novo-Alexandria, 12-15; physiol. med. faculty, Odessa, 15-22; Dalhousie, 24-28; research prof, McGill, 28- Lecturer, Mil. Med. Acad, 01-12; Med. Research Council, London, 22-24. Physiol. Soc; fel. Royal Soc. Can; British Physiol. Soc. Conditioned reflexes; digestion; secretion; movements of the alimentary tract.

Babor, Dr. Joseph A, College of the City of New York, New York, N. Y. *Physical and industrial chemistry*. New York, N. Y. March 5, 95. B.S. Col. City of N. Y, 16; A.M. Columbia, 19. Ph.D. 24. From instr. to assoc. prof. chem, Col. City of N. Y, 16- Chem. Soc. General and elementary chemistry; concentration of dilute nitric acid; volatility of liquids.

Bach, Walter J(ohnston), Bach Agricultural Service, Weslaco, Texas. *Plant pathology*. Spokane, Wash, April 22, 99. B.S. State Col. Wash, 21. M.S. 22; Rufus J. Lackland fellow, Washington (St. Louis), 24-25. Junior pathologist, bur. plant indust, U. S. Dept. Agr, 22-27; plant pathologist, Exp. Sta, Agr. and Mech. Col. Texas, 27-37; Bach Agr. Service, 37- A.A; Phytopath. Soc. Fruit and truck crop diseases; citrus melanose and scab fungi; thread blight of citrus and poma-

- ceous fruits; *Phymatotrichum* root-rot as affecting fruit and truck crops; black-rot of cabbage; downy mildew of cucurbits; late blight of potatoes and tomatoes; storage of citrus fruits.
- Bacharach, Dr. George**, 507 W. 171st St., New York, N. Y. *Organic chemistry*. Berne, Switzerland, Oct. 88. Zurich; B.Sc., Geneva, 10, diplôme, 11; Sc.D., Fordham, 26. Teacher, schs, Switzerland, 11-20; chemist, U. S., 20-21; asst. prof. org. chem., Fordham, 21-28, prof., 28-31; chem., Brooklyn Col., Col. City of N. Y., 31- Summers, lecturer, Fordham. Fel. Inst. Chem.; Soc. chim. néerlandaise. Nitrations of aromatic compounds with metallic nitrates; action of pyridine in Perkin's synthesis of cinnamic acid; dibenzalacetone.
- Bachem, Prof. A(lbert)**, 1337 Winona St., Chicago, Ill. *Biophysics*. Bonn, Germany, Feb. 26, 88. Ph.D., Bonn, 10. Asst. prof., Bonn, 18-19; Frankfurt, 20-21; prof. biophys., col. med., Illinois, 24- Am. Cong. Physiotherapy. Soc. Exp. Biol.; Physiol. Soc. X-rays; ultra-violet; light penetration through skin; diathermy; relativity theory; physiotherapy; spectroscopy; acoustics.
- Bacher, Dr. Robert F(ox)**, Cornell University, Ithaca, N. Y. *Physics*. Loudonville, Ohio, Aug. 31, 05. B.S., Michigan, 26, Ph.D., 30. Nat. research fellow physics, Calif. Inst. Tech., 30-31; Mass. Inst. Tech., 31-32; Alfred Lloyd fellow, Michigan, 32-33; instr., Columbia, 34-35; Cornell, 35-. Physical Soc. Atomic spectra; hyperfine structure and nuclear moments; nuclear physics.
- Bache-Wilig, Prof. Sara**, 36 Prospect Ave., Northampton, Mass. *Mycology*. Bon, Norway, Oct. 4, 91. A.B. Smith Col., 18; M.S., Cornell, 19, 30-32; Sorbonne, 23-25. Asst. bot., Smith Col., 19-21; instr., 21-27; asst. prof., 27-31; assoc. prof., 34-. Bot. Soc.; Mycol. Soc.; Soc. mycol. de France; Soc. de Path. vég. et d'Entom. agr.; Soc. linn. de Lyon.
- Bachman, Dr. Cha(rle)s H(erbert)**, Hygrade Sylvania Corp., St. Marys, Pa. *Physics*. Cedar Falls, Iowa, Dec. 8, 08. B.S., Iowa State Col., 32, M.S., 33; fellow, 33-35, Ph.D., 35. *Physicist*, Hygrade Sylvania Corp., 35-. Radio Eng. Conduction of electricity in gases; spectroscopy.
- Bachman, Dr. G. B(ryant)**, Eastman Kodak Co., Rochester, N. Y. *Chemistry*. Kansas City, Mo., Aug. 18, 05. A.B., Colorado, 26; Munich, 29-30; Ph.D., Yale, 30. Instr. chem., Ohio State, 30-33; asst. prof., 33-36; research chemist, Eastman Kodak Co., 36-. Chem. Soc. Higher acetylenes and their derivatives; dehalogenation of bromo acids; polycyclic hydrocarbons.
- Bachman, Dr. George W(illiam)**, Columbia School of Tropical Medicine, San Juan, P. R. *Parasitology*. Germanstown, Ohio, May 12, 90. B.S., Heidelberg Col., 17; A.M., Columbia, 23; Ph.D., Chicago, 27. Prof. biol., Hopkins Col., China, 18-22, acting pres., 23-25; instr. parasitol., Chicago, 27-28; asst. sch. hygiene and pub. health, Hopkins, 28-29; assoc. prof. and prof., Columbia, 30-, acting director and director, Columbia Sch. Trop. Med., Puerto Rico, 31-. Ricketts prize, Chicago, 28. A.A.; Soc. Parasitol.; Soc. Trop. Med.; Acad. Trop. Med.; Royal Soc. Trop. Med. and Hygiene. Medical zoology; serology and immunity of parasites.
- Bachman, Prof. Gustav**, 2401 Humboldt Ave., S. Minneapolis, Minn. *Pharmacy*. Lemberg, Austria, Jan. 2, 78. Ph.C., Minnesota, 00, Pharm.M., 01, Pharm.D., 03. Asst. pharmacy, Minnesota, 03-05; instr., 05-15; asst. prof., 15-20; prof., 20-. Mem. revision comt., Nat. Formulary. Minn. Pharmaceutical Assn. (sec'y, 20-). Adulteration of drugs and chemicals.
- Bachman, Dr. Paul W(illiam)**, Victor Chemical Works, Nashville, Tenn. *Chemistry*. Newport News, Va., Aug. 28, 99. B.S., Hopkins, 23, Ph.D., 26. Research chemist, du Pont Co., 26-28; Gen. Chem. Co., Long Island City, 28-31; Victor Chem. Works, 31- du Pont fellow. Chem. Soc. Physical and inorganic chemistry; catalysis; phosphorus and phosphoric acid.
- Bachmann, Dr. Freda M**, Stout Institute, Menomonie, Wis. *Bacteriology*. Genoa, Ohio, Nov. 7, 78. A.B., Miami (Ohio), 07, A.M., 08; fellow, Wisconsin, 08-09, Ph.D., 12. Asst. bot. and plant path., Wisconsin, 09-12; asst. prof. bot. and bacter., Milwaukee-Downer Col., 12-14; instr. agr. bacter., Wisconsin, 14-24; prof. bacter., Stout Inst., 24-. A.A.; Soc. Bact.; Wis. Acad. Cytology; morphology and physiology of bacteria; yeast; molds.
- Bachmann, Prof. (Jean) G(eorge)**, 1088 Lullwater Road, Atlanta, Ga. *Physiology*. Mulhouse, Alsace, July 18, 77. M.D., Jefferson Med. Col., 07; M.S., Emory, 22. Res. physiologist and lecturer hygiene, Jefferson Hosp., 07-09; demonstrator physiol., Jefferson Med. Col., 09-10; prof., Atlanta Med. Col., 10-15; Emory, 15-. A.A.; Physiol. Soc.; fel. Col. Physicians; Ga. Acad. Venous pulse; action of strophanthus in heart block; interauricular time interval; distribution of vagus nerves to the sino-auricular junction of the mammalian heart; effects of sugars on respiratory exchange; metabolism of glucose and fructose.
- Bachmann, Prof. W(ermer) E(mmanuel)**, University of Michigan, Ann Arbor, Mich. **Chemistry*. Detroit, Mich., Nov. 13, 01. B.S.E., Michigan, 23, M.S., 24, Ph.D., 26. Instr. org. chem., Michigan, 25-28; Rockefeller Foundation fellow, Zurich, 28-29; asst. prof., Michigan, 29-35; assoc. prof., 35-. Guggenheim Mem. Foundation fellow, London and Munich, 35-36. Henry Russel award, 33. Chem. Soc. Organic chemistry; reduction by magnesium monohalide; free radicals; lycopene; Grignard reaction; pinacol-pinacolone rearrangement; phenanthrene derivatives; carcinogenic and oestrogenic compounds; penta-arylethanones.
- Baicalgalupi, Dr. Rimo (Charles)**, U. S. Forest Service, Berkeley, Calif. *Botany*. San Francisco, Calif., March 24, 01. A.B., Stanford, 23, A.M., 25; California, 26; Ph.D., Harvard, 31. Asst. Stanford, 23-24; teaching fellow, California, 26; instr. bot. and Italian, Mills Col., 25-28; research, Dudley herbarium, Stanford, 31-33; botanist, Calif. Forest Exp. Sta., U. S. Forest Service, 33-. A new genus of the saxifrage family; Saxifragaceae of the Pacific states; Perezia; taxonomy of Cuphea.
- Back, Dr. E(rnest) A(dna)**, U. S. Department of Agriculture, Washington, D. C. *Entomology*. Northampton, Mass., Oct. 7, 80. B.S., Mass. Col. and Boston, 04; Ph.D., Mass. Col., 07. Deputy state nursery inspector, Mass., 02-06; instr. entom., Mass. Col., 04-06, bot., 06-07; agent and expert, bur. entom., U. S. Dept. Agr., 07-10; entomologist, State Crop Pest Cmn., Virginia, and Exp. Sta., Va. Polytech, 10-12; fruit-fly investigations, bur. entom. and plant quarantine, U. S. Dept. Agr., Hawaii, Bermuda and Spain, 12-17; entomologist in charge stored product and household insect investigations, 17-. Entom. investigator, Cuba and Mex., 10-. A.A.; Asn. Econ. Entom.; Entom. Soc.; Entom. Soc. Wash. Biology and control of citrus white flies; fruit-flies in Hawaii; protection from insect attack of food and other stored agricultural and manufactured products; Asilidae.
- Back, Robert**, The Wahl Co., 3753 N. Fremont Ave., Chicago, Ill. *Engineering*. Chicago, Ill., Dec. 13, 89. B.S., Illinois, 13. U. S. Bur. Mines, 12-13; Haeger Potteries, Ill., 18-19; tech. engineer, The Wahl Co., 20-. Mech. Eng.; Ceramic Soc.; Chem. Soc. Leads for the mechanical pencil.
- Backus, Dr. Myron P(ort)**, University of Wisconsin, Madison, Wis. *Botany*. Madison, Wis., April 14, 08. A.B., Wisconsin, 28, A.M., 29, fellow, 29-31, Ph.D., 31. Nat. research fellow bot., N. Y. Bot. Garden and Columbia, 31-33; assoc. mycol., Boyce Thompson Inst., 33-34; instr. bot., Wisconsin, 34-. Summers, agent, U. S. Dept. Agr., 28; asst., Wisconsin, 29-31. Mycol. Soc.; Torrey Bot. Club. Mycology; plant pathology; morphology and cytology of fungi, especially Ascomycetes; cytology of Coccozymes himialis.
- Bacon, Prof. Arthur A(very)**, American University of Beirut, Beirut, Lebanese Republic. *Physics*. Laconia, N. H., Oct. 26, 75. A.B., Dartmouth Col., 97, A.M., 01. Tutor physics, Oberlin Col., 97-98; asst., Dartmouth Col., 98-00; instr. math. and astron., 00-01; prof. physics, Hobart Col., 03-19, sec'y and registrar, 07-17; prof. physics, American Univ. Beirut, 19-. A.A.; Physical Soc. Equilibrium of vapors at curved surfaces of liquids.
- Bacon, Prof. C(harles) S(unmer)**, 2333 Cleveland Ave., Chicago, Ill. *Medicine*. Spring Prairie, Wis., July 30, 56. Ph.B., Beloit Col., 78, hon. Sc.D., 25; M.D., Northwestern, 84. Prof. gynec., Chicago Polyclinic, 91-94, obstet., 95-; col. med., Illinois, 03-28, emer. prof., 28-. Consulting obstetrician and gynecologist, Munic. Tuber. Sanatorium, 15; Grant Hosp., 17-32; chief med. staff, Salvation Army Hosp., 25-. A.A.; Am. Med. Assn. (chairman, sect. obstet., 05); Col. Surg.; Asn. Obstet., Gynec., and Abdom. Surg.; Chicago Med. Soc. (pres., 03); Chicago Gynec. Soc. (pres., 01, 23); Inst. Med. Chicago. Pathology of pregnancy; tuberculosis.
- Bacon, Dr. Charles S(unmer), Jr.**, Agricultural and Mechanical College of Texas, College Station, Texas. *Geology*. Chicago, Ill., Dec. 13, 01. B.S., Chicago, 22, M.S., 23; Ph.D.,

Bacon, Vienna, 26. Petrol. geologist, Huasteca Petrol. Corp, Mex, 26-27; gas measurement dept, Pure Oil Co, Chicago, 27-28; instr. geol, Riverside Junior Col, 28-36; Agr. and Mech. Col. Texas, 36- A.A; Asn. Petrol. Geol. Geology of the Riverside area.

Bacon, Cha(rle)s V(incent), 117 Liberty St, New York, N. Y. Chemistry. New York, N. Y, March 24, 85. Grad, Cooper Union, 04, B.S, 19, Chem.E, 32; Columbia, 12; Chem.E, St. Mary Col, 19; N. Y. Univ; Polytech. Inst. Brooklyn. Consulting chemist and chem. engineer, 02- V. pres. and director, Oil Trades Asn. N. Y. Major, C.Eng, 17-19. Chem. Soc; fel. Inst. Chem.; Asn. Consulting Chem. and Chem. Eng. (trustee); Soc. Test. Mat; N. J. Chem. Soc; Int. Asn. Test. Mat. Experimental, analytical and industrial research; surveying and inspection of organic products; petroleum; fatty oils; process development and plant supervision; preparation of technical work for court testimony and presentation; marine work; transportation and handling of oils in bulk; operation of automotive and Diesel equipment.

Bacon, Dr. Charles W(alter), 4312 Yuma St, N. W, Washington, D. C. Chemistry, Plant physiology. Worcester, Mass, March 11, 86. A.B, Clark, 06, A.M, 07, Ph.D, 11. Asst. chem, Clark, 07-09; assoc. physiologist, bur. plant indust, U. S. Dept. Agr, 10-35, physiologist, 35- A.A; Chem. Soc. Tobacco curing; physiological plant diseases; biochemistry.

Bacon, Prof. Clara Latimer, 2316 N. Calvert St, Baltimore, Md. Mathematics. Hillsdale, Ill, Aug. 13, 66. A.B, Wellesley Col, 90; A.M, Chicago, 04; Ph.D, Hopkins, 11. Teacher, secondary schs, 90-97; instr. math, Goucher Col, 97-05, assoc. prof, 05-14, prof, 14-34, emer. prof, 34- A.A; Math. Soc; Math. Asn.

Bacon, Dr. Egbert K(ing), Union College, Schenectady, N. Y. Chemistry. Sault Ste. Marie, Mich, Aug. 20, 00. B.S, Michigan, 22, M.S, 23, Ph.D, 26. Astt. quantitative analysis, Michigan, 20-22, gen. chem, 22-26; instr. chem, Brown, 26-30; Union (N. Y), 30-32, astt. prof, 32- A.A; Chem. Soc. (secy-treas, R. I. sect, 29, east. N. Y. sect, 30-). Diffusion potentials; equivalent weight of gelatin; viscosity gelatin; lyophilic colloids.

Bacon, Dr. Franklin J(amies), Western Reserve University, Cleveland, Ohio. Pharmacognosy, Botany. New London, Wis, Nov. 11, 96. Ph.G, Wisconsin, 18, B.S, 20, fellow, 22-23, M.S, 23 Hollister fellow, 23-25, Ph.D, 25. Pharmacognosist, Eli Lilly and Co, 20-22; prof. pharmacog. and pharmacol. and head dept, Florida, 25-27; prof. pharmacog, Western Reserve, 27-36, bot, 36- A.A. Mentha; cultivation of medicinal plants.

Bacon, Frederick S(ayford), G. J. Esselen, Inc, Boston, Mass. Chemistry. Newton, Mass, Oct. 28, 93. A.B, Harvard, 15, A.M, 17. Research chemist, Fed. Dyestuff and Chem. Co, 17-18; Monsanto Chem. Co, 19; pres, Puritan Dye and Chem. Co, 20-25; research chemist, A. D. Little, Inc, 26-29; supervisor, Monsanto Chem. Works, 29-30; research chemist, Boston Blacking and Chem. Co, 30-37; G. J. Esselen, Inc, 37- Chem. Soc. (treas, northeast. sect, 35); Chem. Eng. Chemical development.

Bacon, Dr. Harold M(alle), Box 1144, Stanford University, Calif. Mathematics. Los Angeles, Calif, Jan. 13, 07. A.B, Stanford, 28, A.M, 29, Ph.D, 33. Acting instr. math, Stanford, 31-32, instr, 32-36, astt. prof, 36- Instr, Calif. State Teachers Col, San Jose, 35. Math. Soc. Diophantine approximations; statistics.

Bacon, Dr. Leslie R(andalph), 314 Clearbrook Ave, Lansdowne, Pa. Chemistry. Henniker, N. H, March 16, 03. B.S, New Hampshire, 24; M.S, N. Y. Univ, 25, fellow, 26-27, Ph.D, 27. Astt. chem, N. Y. Univ, 24-26; research chemist, Am. Doucet Co, 27-31; Phila. Quartz Co, 31- Instr, evening sch, Drexel, 36- Chem. Soc; Franklin Inst. Phase rule; water softening; silicate chemistry; viscosity.

Bacon, Dr. R(aymond) Charles, 45 W. High St, Bound Brook, N. J. Chemistry. Manila, P. I, Jan. 12, 08. B.S, Princeton, 30; Ph.D, Stanford, 33. Am-Scandinavian Foundation fellow, Copenhagen, 33-35; research chemist, Calco Chem. Co, 35- Chem. Soc; Inst. Chem. Colloid chemistry.

Bacon, Dr. Raymond F(oss), 500 Fifth Ave, New York, N. Y. **Chemistry. Muncie, Ind, June 29, 80. B.S, DePauw, 99, A.M, 00, hon. Sc.D, 19; fellow, Chicago, 01-04, Ph.D, 04; hon. Sc.D, Pittsburgh, 18. Instr. chem, DePauw, 99-00;

prof, Vincennes, 00-01; commercial chemist, Chicago, 04-05; chemist, Bur. Science, P. I, 05-10; asst. chemist, bur. chem, U. S. Dept. Agr, 10-11; senior fellow, Mellon Inst, 11-12, assoc. director, 12-14, director, 14-22; chem. engineer, 22- Assoc. mem, Naval Consulting Board. D.S. medal. Col. C. W.S. A.A; Chem. Soc; Electrochem. Soc; Chem. Eng; Min. and Metal. Eng; Ceramic Soc; Soc. Chem. Indust; London Chem. Soc; Soc. chim. de Paris; Soc. de Chim. indust. Industrial research of sulfur; petroleum.

Baden, Dr. M(artin) W(illiam), 1219 E. Ninth Ave, Winfield, Kans. Geology, Engineering. Independence, Kans, Nov. 25, 78. A.B, Southwestern Col; hon. Sc.D, Pittsburgh, 30. Mech. engineer, Winfield Ice and Cold Storage Co, 99-01; consulting elec. engineer, 01-04; mech. and elec. research, 04-14; petrol. engineer, Cowley County Gas Co, 14-15; field and consulting geologist and petrol. engineer, 15-18; chief geologist, oil companies, 18-; v. pres. and chief geologist, Trees Oil Co, 21- A.A; Asn. Petrol. Geol; Chem. Soc; fel. Am. Geog. Soc; Mech. Eng; Elec. Eng; Min. and Metal. Eng; Kans. Eng. Soc; Kans. Acad. Petroleum engineering; geo-physics; geochemistry; photoelectric colorimetric methods for chemical analysis.

Badertscher, A(mos) Edison, McCormick and Co, Baltimore, Md. Entomology. Dalton, Ohio, June 30, 98. A.B, Bluffton Col, 23; M.S, Rutgers, 30. Prin, high sch, S. Dak, 24-28; astt, Ohio State, 28-29; Rutgers, 29-31; chief entomologist, McCormick and Co, 31- Asn. Econ. Entom; Nat. Asn. Insecticide and Disinfectant Mfrs. (mem, standardization cmt. household insecticides). Insecticides; pyrethrum; rotenone; effect of soap on the toxicity of a pyrethrum product.

Badertscher, Dr. Darwin E(arl), Socony-Vacuum Oil Co, Paulsboro, N. J. Organic chemistry. Beaverton, Ohio, Sept. 10, 08. A.B, Indiana, 29; fellow, Pa. State Col, 30-33, M.S, 31, Ph.D, 34. Research chemist, Hercules Powder Co, 29-30; astt, Pa. State Col, 33-34; research org. chemist, research and develop. dept, Socony-Vacuum Oil Co, 34- Chem. Soc. Aliphatic Grignard reagents; organic chemical problems related to the petroleum industry.

Badertscher, Prof. J(acob) A, Bloomington, Ind. Histology. Bluffton, Ohio, Jan. 11, 79. Ph.B, Ohio (Athens), 09, Ph.M, 10; Ph.D, Cornell, 14. Asst. biol, Ohio (Athens), 08-09, instr, 09-10; astt. histol. and embryol, Cornell, 10-11, instr, 11-14; Anat, Indiana, 14-15, astt. prof, 15-17, assoc. prof, 17-21, prof, 21- A.A; Asn. Anat; fel. Ind. Acad. Muscle degeneration; the thymus; the ultimobranchial bodies; the pineal gland.

Badger, Dr. Richard M(cLean), 215 Highland Place, Monrovia, Calif. Physical chemistry, Physics. Elgin, Ill, May 4, 96. B.S, Calif. Inst. Tech, 21, Ph.D, 24. Fellow physical chem, Calif. Inst. Tech, 24-28; nat. research fellow, Germany, 28-29; astt. prof. chem, Calif. Inst. Tech, 29- Chem. Soc; Physical Soc. The free energy of hydrogen cyanide; absorption spectra in the infra-red; band spectra, binding forces and dissociation energies of homopolar molecules.

Badger, Prof. Walter Luclus, 1055 Cedar Bend Drive, Ann Arbor, Mich. Chemical engineering. Minneapolis, Minn, Feb. 18, 86. A.B, Minnesota, 07, B.S, 08, M.S, 09. Chemist, Great West Sugar Co, 09; instr. chem, Minnesota, 10; lab. asst, Bur. Standards, 10-12; prof. chem. eng, Michigan, 12- Director research, Swenson Evaporator Co, 17-29. Cmt. on heat transfer, div. eng, Nat. Research Council, 23-, exec. cmt, div. chem. and chem. technol, 30-31. Chem. Eng. (director, 24-26, 29-31, chairman, evaporator test code cmt, 22-33, mem. cmt. on chem. eng. educ, 30-35); Chem. Soc. Design of chemical machinery; evaporator design; heat transfer.

Badgley, Dr. Carl E(rgbert), University of Michigan, Ann Arbor, Mich. Surgery. Cayuga, N. Y, Oct. 8, 93. B.S, Michigan, 17, M.D, 19. Acting intern orthop, Michigan, 18-19, intern surg. service, 19-20, instr. surg, Univ. Hosp, Ann Arbor, 20-22; asst. prof, med. sch, Michigan, 24-27, assoc. prof, 28-29; surgeon in charge orthop. surg, Henry Ford Hosp, 29-32; prof. surg. in charge orthop. surg, Michigan, 32- Consulting orthop. surgeon, Henry Ford Hosp, 32- Fel. Col. Surg; Orthop. Asn; Cent. States Orthop. Asn; Mich. Orthop. Asn. Coalition of calcaneus and navicular; two stage transplantation of fibula in gap fractures of tibia; coxa vara; displacement of the upper femoral epiphysis; birth injuries; osteo-

myelitis of ilium; tuberculosis; pulmonary infarctions and embolism; septic hips.

Badollet, Marion Smith, 225 Belvidere Ave, Fanwood, N. J. Chemistry, Vincennes, Ind, Nov. 27, 95. B.S., Missouri, 20, M.S., 21; Chem.E., 26. Instr. chem., Pa. State Col., 21-23; research carbohydrate lab., U. S. Dept. Agr., 23-29; research asbestos products, Johns-Manville Corp., Manville, 29—Chem. Soc.; fel. Inst. Chem. Colloids in sugar manufacture; sugar refinery investigations; Tyndallometric studies on colloid removal by filtration; sugar technology.

Baechler, Dr. Roy H(erman), U. S. Forest Service, Madison, Wis. Chemistry, Fountain City, Wis., March 9, 97. B.S., Wisconsin, 21, M.S., 24, Ph.D., 27. Asst. chemist, Wilhoit Labs, Minneapolis, 21-22; junior chemist, Forest Products Lab., U. S. Forest Service, 22-27; asst. chemist, 27-35; assoc. chemist, 35-36; chemist, 36—Chem. Soc.; Wood Preservers Assn. Pharmacology; relation of chemical constitution to toxicity; wood preservatives; fire retardants.

Baehr, Dr. George, 110 E. 80th St, New York, N. Y. Pathology, Internal medicine. New York, N. Y., April 16, 87. M.D., Columbia, 08; Freiburg, 11-12; Vienna, 12-13. Assoc. path., Mt. Sinai Hosp., New York, 11—; assoc. attending physician and attending physician, 19—; clin. prof. med., Columbia, 36—Admin. consultant, Dept. Hosps., New York, 34—Consulting physician, Monmouth Mem. Hosp., Long Branch, N. J. and St. Joseph's and Rockaway Beach Hosps., N. Y.; research fellow, Mt. Sinai Hosp., 10-11, 14-17, 19-20. Chairman tech. advisory board, Dept. Health, New York, 35—mem. State Pub. Health Council, N. Y., 36—Mem. Red Cross Sanit. Cmn, Serbia and Russia, 15-16; lieut. col. M.C., 17-19. A.A.; Am. Med. Assn.; Am. Path. and Bact.; Soc. Clin. Invest.; Soc. Exp. Biol.; Col. Physicians; Harvey Soc.; Am. Physician.; Publ. Health Assn.; N. Y. Acad. Med. (trustee, 33—; chairman, cmt. pub. health relations, 37); Int. Am. Med. Mus. Experimental medicine; nephritis; nutrition.

Baekeland, George, Bakelite Corp., 247 Park Ave, New York, N. Y. Geology, Yonkers, N. Y., Feb. 8, 95. E.M., Colo. Sch. Mines; A.B., Cornell. Mine examination and geol. explor., 20-23; geol. explor., Standard Oil Co. of N. J., Africa and Europe; v. pres., Bakelite Corp. A.A.; Min. and Metal. Eng.; fel. Am. Geog. Soc.

Baekeland, Dr. L(eo) H(endrik), 247 Park Ave, New York, N. Y. **Chemistry, Ghent, Belgium, Nov. 14, '33. B.S., D.Sc., Ghent, 84; hon. Ch.D., Pittsburgh, 16; hon. Sc.D., Columbia, 29; hon. D.A.Sc., Brussels, 34; hon. LL.D., Edinburgh, 37. Asst. prof. chem., Ghent, 82-88; assoc. prof., 88-89; prof. chem. and physics, Higher Nor. Sch., Bruges, 85-87; mfg. and consulting chemist, New York, 89-99; research chemist, 99—; hon. prof. chem. eng., Columbia, 17—Chandler lecturer, Columbia, 14. Mem. chem. advisory cmt., U. S. Dept. Commerce; Naval Consulting Board, 15—; Nitrate Supply Cmn., 17; Nat. Research Council; admin. board, Inst. Int. Educ.; mem. Cmn. Relief Belgium Educ. Foundation, 35. Nichols medal, Chem. Soc., 09; Gibbs medal, 13; Scott medal, Franklin Inst., 10; Chandler medal, Columbia, 14; grand prize, Panama-Pacific Expos., 13; Perkin medal, Soc. Chem. Indust., 16; Messel medal, Soc. Chem. Indust., London, 38. Order of the Crown, Belgium, 19; officier, Légion d'honneur, 23; commander, Order of Leopold, Belgium, 24. Nat. Acad.; A.A.; Chem. Soc. (pres., 24); Electrochem. Soc. (pres., 09); Chem. Eng. (pres., 12); Philos. Soc.; Franklin Inst.; Chemists' Club; London Soc. Chem. Indust. (v. pres., 05); Royal Soc. Arts; hon. mem. Royal Soc., Edinburgh; Soc. chim. de France; Soc. de Chim. indust.; hon. mem. Soc. belge des Elec. Physical, general, industrial and organic biochemistry; synthesis of resinoids and intermediate bodies resulting from the action of phenols upon formaldehyde; photographic processes; electrical insulation; Velox; Bakelite.

Baender, F(red) G(ottlieb), 409 Bank of America Bldg., Glendale, Calif. Mechanical engineering. Moberly, Mo., 82. B.S. (M.E.), Iowa, 08; M.M.E., Cornell, 16. Head dept. mech. eng., Arkansas, 16-23; research engineer, Hays Corp., designing engineer, Mack Truck Co., and research engineer, De Laval Separator Co., N. Y., 23-28; prof. mech. eng. and head dept. Oregon State Col., 28-36; director air conditioning div., Hempill Diesel Schs., 36—Mech. Eng.; Eng. Educ.; Agr. Eng. Flameless combustion; Diesel engine injection systems; lubrication problems; heat transfer.

Baer, Clarence E(ugene), 71 W. Fifth St, Oswego, N. Y. Science education. Edinburg, Pa., May 6, 86. A.B., Cornell,

08; A.M., Columbia, 26. Teacher, high sch., Pa., 09-10, 15-27; Wash., 10-15; state supervisor science, N. Y., 27-28; science ed., Eastman Teaching Films, 28-33; head dept. science, State Nor. Sch., Oswego, 33—Summer, instr., Rochester, 30. Science ed., 'High Sch. Teacher,' 25-27. A.A.; Chem. Soc.; Nat. Assn. Research Sci. Teaching. Science curricula; visual aids.

Baerg, Prof. W(illiam) J, University of Arkansas, Fayetteville, Ark. Entomology. Hillsboro, Kans., Sept. 24, 85. A.B., Kansas, 15; Ph.D., Cornell, 22. Instr. entom., Cornell, 17-18; asst. prof., Arkansas, 18-20; prof., 20—entomologist, Exp. Sta., 18—Entom. Soc. Amer.; Assn. Econ. Entom. Poisonous arthropods; strawberry insects; crop pests; birds.

Baernstein, Dr. H(arry) D(aniel), University of Wisconsin, Madison, Wis. Physiological chemistry. Chicago, Ill., July 19, 96. B.S., Wisconsin, 21, M.S., 26, Ph.D., 29. Instr. physiol. chem., Wisconsin, 25—Soc. Biol. Chem. Proteins; enzymes; sulfur; metabolism.

Baetjer, Dr. Anna M(edora), 4900 Roland Ave, Baltimore, Md. Physiology. Baltimore, Md., 99. A.B., Wellesley Col., 20; Sc.D., Hopkins, 24. Asst. sch. hygiene and pub. health, Hopkins, 23-24; instr., 24-26; assoc., 26—Physiol. Soc.; Pub. Health Assn. Sympathetic nervous system and fatigue; physiological effects of environmental temperature and humidity; effect of potassium and calcium on cardiac and skeletal muscles; environmental and industrial hygiene.

Baeyeritz, Dr. M(ary), 3017 E. 78th St, Chicago, Ill. Chemistry. Los Angeles, Calif., Sept. 14, 99. A.B., Smith Col., 21; A.M., Columbia, 22; fellow, 23-24; Ph.D., 25. Asst. chem., Columbia, 24-25; research chemist, Prudential Life Ins. Co., 25; West. Elec. Co., 25-31; Carnegie Ill. Steel Co., 31—Chem. Soc.; Soc. Metals; Min. and Metal. Eng. Colloid chemistry; Bredig platinum sols; metals.

Bagby, Dr. B(athurst) B(rown), State Department of Health, Richmond, Va. Public health. Stevensville, Va., June 3, 79. M.D., George Washington, 04. Biochem. div., bur. animal indust., U. S. Dept. Agr., 00-03; private practise, 04-23; health officer, Henrico County, Va., 23; Richmond, Va., 24-25; Athens and Clark Counties, Ga., 26-29; Southampton County, Va., 30; director child health bur., State Dept. Health, Va., 30—Pub. Health Assn.; Va. Pub. Health Assn. (pres., 12, 30); Va. Med. Soc. (v. pres., 07). Hookworm; changes in small town brought about by health department work.

Bagby, Prof. English, University of North Carolina, Chapel Hill, N. C. Psychology. Baltimore, Md., May 9, 91. A.B., Princeton, 13, A.M., 14; Ph.D., Hopkins, 18. Asst. psychologist, U. S. Bur. Mines, 17; adj. prof. psychol., Va. Mil. Inst., 19-20; asst. prof., Yale, 20-25; assoc. prof., North Carolina, 25-28; prof., 28—Summers, instr., Hopkins; Columbia. Psychol. Assn.; S. Soc. Philos. and Psychol. Psychiatry; psychopathology; social psychology.

Bagg, Dr. Halsey J(oseph), Cornell University Medical College, New York, N. Y. Biology. Utica, N. Y., Oct. 23, 89. B.S., Columbia, 14, A.M., 15, Ph.D., 18. Asst. biol., Rockefeller Inst., 10-11; instr., N. Y. Univ., 14-17; research fellow, Huntington fund for cancer research, med. col., Cornell, 17—; assoc. anat., 26-27. Biologist, Mem. Hosp., N. Y., 20—A.A.; Soc. Nat.; Soc. Exp. Biol.; Soc. Zool.; Asn. Cancer Research (councilor, 35—); assoc. Radium Soc.; fel. N. Y. Acad. Heredity of animal behavior; hereditary structural defects; irradiation and mammalian development; irradiation of thyroid gland in relation to ovarian activity; radium lesions in the brain; origin of defects of the limbs; modification of germ plasm; biological measure of x-ray and gamma ray effects; etiology of experimental mammary cancer and teratoma testis.

Bagg, Dr. Rufus M(ather), 16 Brokaw Place, Appleton, Wis. Geology. West Springfield, Mass., April 19, 69. A.B., Amherst Col., 91; Ph.D., Hopkins, 95. Prin. high sch., Maine, 91-92; asst. geol., Hopkins, 95-97; asst., N. Y. State Museum, 97; prof. geol. and miner., Colo. Col., 98-99; instr., high sch., Colo., 99-00; sub-master, high sch., Mass., 01-03; prof. miner. and petrog., N. Mex. Sch. Mines, 03-04; mining engineer and geologist, 04-07; instr. geol., Illinois, 07-11; prof. geol. and miner., Lawrence Col., 11-34; emer. prof., 34—Consulting geologist, Elk Island gold mines, Man., Can., 34-35. Instr. Worcester Summer Sch. for Boys, 91, 92. Md. Geol. Surv., 96-98. Diploma and bronze medal, Paris Expos., 00. Inst. Min. and Metal. Eng. del. Int. Geol. Cong., S. Africa, 29. Geol. Soc.; Min. and Metal. Eng.; Paleont. Soc.; Geol. Soc. Wash.; Wis.

Acad. (v. pres., 30, pres., 33-36). Cretaceous and Tertiary Foraminifera; artesian water and oil supplies.

Bagley, Prof. William C(handler), Teachers College, Columbia University, New York, N. Y. *Education, Psychology*. Detroit, Mich., March 15, 74. B.S., Mich. State Col., 95; M.S., Wisconsin, 98; Ph.D., Cornell, 00; Ed.D., R. I. State Col., 19. Teacher, pub. schs., Mich., 95-97; asst. psychol., Cornell, 00-01; prin., pub. schs., Mo., 01-02; v. pres. and director training, Mont. State Nor. Col., 02-06; supt. training dept., N. Y. State Nor. Sch., Oswego, 06-08; prof. educ., Illinois, 08-17; director sch. educ., 09-17; *prof. educ., Teachers Col., Columbia*, 17-A.A.; Psychol. Asn.; Soc. Study Educ. Apperception of the spoken sentence; correlation of mental and motor ability in school children; factors of the educative process; educational values; minimal essentials in elementary school subjects; curriculum problems in elementary and normal schools; mass measures of mass education; education and crime; professional education of teachers.

Bahlike, Dr. W(illiam) H(erbert), Standard Oil Co. of Indiana, Whiting, Ind. *Physical chemistry*. Baltimore, Md., Nov. 7, 95. B.S., Richmond, 16; Ph.D., Hopkins, 21. Chemist, N. J. Zinc Co., 21-22; *Standard Oil Co. of Ind.*, 22-26; asst. director research, 26-34; assoc. director, 34-35; director, 35- Chem. Soc. Chemical engineering; petroleum refining; corrosion; physical and thermal properties of pure compounds and mixtures.

Bahner, Prof. Carl Tabb, Carson-Newman College, Jefferson City, Tenn. *Organic chemistry*. Conway, Ark., July 14, 08. A.B., Hendrix Col., 27; M.S., Chicago, 28; Th.M., South. Baptist Theol. Sem., 31; Ph.D., Columbia, 36. Asst. prof. chem. and head dept. physics, Union (Tenn.), 36-37; *prof. chem., Carson-Newman Col.*, 37- Summers, instr., Hendrix Col., 30, 31. Chem. Soc. Industrial organic chemistry; vitamin A; reactions of organic halides.

Bahney, Luther William, U. S. Metals Refining Co., Carteret, N. J. *Metallurgy*. Red Bluff, Calif., Dec., 25, 78. Met.E., Stanford, 11. Asst. prof. metal, Stanford, 07-11; Yale, 11-17; metal. engineer, research dept., Scovill Mfg. Co., Waterbury, Conn., 17-28; metal. engineer, 28-32; manager oxygen-free copper dept., U. S. Metals Ref. Co., 32- Copper and brass; refractories; methods of reclamation; casting shop metallurgy, especially oxygen-free copper.

Bahnson, Dr. M(onroe) J(ohn), 1614 Onondaga Ave., Lakewood, Ohio. *Inorganic chemistry*. Port Clinton, Ohio, March 5, 06. B.S., Case, 29; Cushman fellow, Western Reserve, 30-34; Ph.D., 34. Chemist, Grasselli Chem. Co., Cleveland, 29-30; research chemist, Ferro Enamel Corp., 34- Chem. Soc.; Ceramic Soc. Anhydrous silicate systems; ceramics.

Bahrns, Dr. Alice M(atilda), St. Helen's Hall Junior College, Portland, Oregon. *Animal nutrition*. Sacramento, Calif., Dec. 28, 99. A.B., California, 24, A.M., 26; Ph.D., Oregon, 30. Instr. animal biol., Oregon, 30-31; research assoc. animal nutrition, med. sch., 31-33; head dept. science, St. Helen's Hall Junior Col., 33- A.A.; Physiol. Soc. Reflexes in newly born animals; vertebrate and invertebrate nutrition.

Bahrt, George M(artin), P. O. Box 1416, Orlando, Fla. *Soil chemistry*. Tamaqua, Pa., April 16, 96. B.S., Pa. State Col., 21; M.S., Nebraska, 25. Asst., Exp. Sta., Nebraska, 23-25; analyst agr. chem., 25-26; soil analyst, 26-29; asst. soil scientist, *soil and fertilizer investigations*, bur. chem. and soils, U. S. Dept. Agr., 29-30; asst. soil technologist, 30-35; assoc. soil technologist, bur. plant indust., 35- A.A.; Chem. Soc.; Soc. Agron. Wet method for determining nitrates; citrus bronzing; acid and basic fertilizers, with and without rare chemicals on citrus and truck crops; effect of soil temperature, drought and rare elements on nitrate production.

Baier, Dr. D(onald) E(verett), New Jersey State Hospital, Trenton, N. J. *Psychology*. Philadelphia, Pa., March 27, 10. B.S., Princeton, 32, A.M., 33, Ph.D., 35. Asst. psychol., Princeton, 33-34; asst. psychologist, N. J. State Hosp., 35- Assoc. Psychol. Asn. Experimental and abnormal psychology.

Baier, Dr. Joseph G(eorge), Jr., 623 W. State St., Milwaukee, Wis. *Zoology*. Feb. 12, 08. B.S., Rutgers, 28, M.S., 29; Ph.D., Wisconsin, 32. Asst. zool., Rutgers, 28-29; *Wisconsin*, 29-32; instr., Milwaukee center, exten. div., 32-35; asst. prof., 35- A.A.; Soc. Zool.; Eugenics Soc.; Genetic Asn. Serology; eugenics.

Baler, W(illard) E(wing), 223 E. J St., Ontario, Calif. *Chemistry*. St. Louis, Mo., July 30, 02. B.S., Calif. Inst. Tech., 23. Research chemist, Calif. Fruit Growers Exchange, 23-26; plant supt., Exchange Orange Products Co., 27-28; manager research dept., Calif. Fruit Growers Exchange, 29- Chem. Soc. Food products; agricultural chemistry.

Ballar, Dr. John C(hristian), Jr., University of Illinois, Urbana, Ill. *Chemistry*. Golden, Colo., May 27, 04. A.B., Colorado, 24, fellow, 24-25, A.M., 25; fellow, Michigan, 25-26, Ph.D., 28. Asst. chem., Michigan, 26-28; instr., Illinois, 28-30; assoc., 30-35; asst. prof., 35- Chem. Soc.; Ill. Acad. Organic and inorganic chemistry; reduction of ketones to pinacols; molecular rearrangements; isomerism of inorganic molecules; stereochemistry of complex inorganic compounds.

Balley, Prof. A(lan) J(ames), University of Minnesota, St. Paul, Minn. *Forestry*. Tacoma, Wash., Feb. 16, 09. B.S.F., Washington (Seattle), 33. Anderson fellow, 33-35. M.S.F., 34. Pack fellow, 35-36. Ph.D., 36. *Supervising technician, bur. plant indust.*, U. S. Dept. Agr., 34- in charge wood technol., Inst. Paper Chem., Lawrence Col., 36-37; asst. prof. forestry, Minnesota, 37- Chem. Soc.; Soc. Foresters; Asn. Pulp and Paper Indust. Technology and chemistry of wood, cellulose, lignin and hemicelluloses; fiber structure; pulp and paper.

Balley, Alfred M(arshall), Colorado Museum of Natural History, City Park, Denver, Colo. *Ornithology, Mammalogy*. Iowa City, Iowa, Feb. 18, 94. A.B., Iowa, 16. Curator birds and mammals, La. State Museum, 16-19; rep., bur. biol. surv., U. S. Dept. Agr., Alaska, 19-21; curator birds and mammals, Colo. Museum Nat. Hist., 21-29; dept. zool., Field Museum Nat. Hist., 26-27; director, Chicago Acad. Sciences, 27-36; Colo. Museum Nat. Hist., 30- Bur. biol. surv., U. S. Dept. Agr. exped., Leyasan Islands, Hawaii, 12-13; leader, Arctic exped., Colo. Museum Nat. Hist., 21-22; mem., Abyssinian exped., Field Museum Nat. Hist., Chicago Daily News, 26-27. A.A.; Asn. Mus.; Ornith. Union; Cooper Ornith. Club; Wilson Ornith. Club; Soc. Mammal.; Forestry Ass'n; Pacific-Northwest Bird and Mammal Soc.; Ill. Audubon Soc.; Ill. Acad.; Chicago Ornith. Soc.; Geog. Soc. Chicago. Bird life of Alaska and Louisiana; mammals of the Arctic coast of Alaska; filming of wildlife.

Balley, Dr. Austin, American Telephone and Telegraph Co., 195 Broadway, New York, N. Y. *Physics*. Lawrence, Kans., June 9, 93. A.B., Kansas, 15; Ph.D., Cornell, 20. Supt. apparatus div., Corning Glass Works, 20-21; asst. prof. physics, Kansas, 21-22; tel. engineer, Am. Tel. and Tel. Co., 22-34; mem. tech. staff, Bell Tel. Labs., 34-37; engineer, Am. Tel. and Tel. Co., 37- 2nd lieut., Sig.C. 18. Radio Eng.; Acoustical Soc.; Elec. Eng. Telephone engineering; high frequency electric currents; radio transmission measurements.

Balley, Basil E(dwin), Pacific Fisheries Experimental Station, Prince Rupert, B. C. Can. *Biochemistry*. London, Eng., Sept. 11, 06. B.A.Sc., British Columbia, 30. Asst. chem. engineer, Can. Fishing Co., Ltd., Vancouver, B. C., 30-31; sci. asst. biochem., Pacific Fisheries Exp. Sta., Biol. Board Can., 31- Vitamins A and D; fat-soluble pigments in Pacific Coast fish.

Balley, Prof. Benj(amín) F(ranklin), University of Michigan, Ann Arbor, Mich. *Electrical engineering*. Sheridan, Mich., Aug. 7, 75. B.S., Michigan, 98, A.M., 00, Ph.D., 07. Instr. elec. eng., Michigan, 01-06; asst. prof., 06-09; junior prof., 09-13; prof., 13-, head dept., 25- Designing, constructing and chief engineer, companies. Fel. Elec. Eng. (sec'y, Detroit-Ann Arbor sect., 11); Elec. Mfrs. Assn.; Soc. Automotive Eng. X-ray; Wehnelt interrupters; electrolytic rectifiers; induction coils; induction motors; dynamo electric machinery; the capacitor motor.

Balley, Prof. Cameron V(ernon), New York Post-Graduate Medical School, 303 E. 20th St., New York, N. Y. *Medicine*. Toronto, Ont., Can., Nov. 25, 84. M.D., McGill, 09; L.R.C.P., L.R.C.S., Edinburgh and Glasgow, 13. Asst. prof. clin. med., N. Y. Post-Grad. Med. Sch., Columbia, 15-20; biochem., 20-21; assoc. prof., 22-23; prof. applied physiol., 24-34; clin. med., 34- A.A.; Am. Med. Assn.; Soc. Exp. Biol.; Soc. Biol. Chem.; Inst. Nutrition; Harvey Soc. Applied physiology; carbohydrate metabolism; toxic jaundice; animal calorimetry.

Bailey, Dr. C(harles) F(redrick), Mellon Institute, Pittsburgh, Pa. *Organic chemistry*. High River, Alta., Can., Feb. 3, 06. B.S., Illinois, 27; fellow, Wisconsin, 29-30, Ph.D., 30. Asst. chem., Wisconsin, 27-29; private research asst. to Prof. J. B. Conant, Harvard, 30-32; indust. fellow, Mellon Inst., 32-

35, senior indust. fellow, 35— Summer, research chemist, Eli Lilly and Co., 28. Chem. Soc. Organic and plant chemistry.

Bailey, Prof. C(lycle) H(arold), University Farm, St. Paul, Minn. Biochemistry. Minneapolis, Minn., April 15, 87. B.S., N. Dak. Col., 13; M.S., Minnesota, 16; Ph.D., Maryland, 21. Asst. grain standardization, U. S. Dept. Agr., 07-11; instr. and asst. prof. agr. chem., Minnesota, and cereal technologist, Exp. Sta., 11-16; chemist, Grain Inspection Dept., Minn., 16-17; assoc. prof. agr. biochem., Minnesota, 17, 20, prof., 20-21; assoc. agr. biochemist, Exp. Sta., 17-30, agr. biochemist, 30-Ed., 'Cereal Chem.', 23-24. Director research, Biscuit and Cracker Mfrs. Assn., 24-26. Thomas Burr Osborne medal, 32. A.A.; Chem. Soc.; Soc. Plant Physiol.; Am. Cereal Chemists (v. pres., 36); Deuts. Akad. der Naturforscher. Chemical technology of cereal industries; biochemistry of flour milling; respiration of cereals; chemistry of carbohydrates.

Bailey, Dr. D(ixon) L(lloyd), University of Toronto, Toronto, Ont., Can. Plant pathology. Winchester, Ont., Sept. 9, 96. B.A., Queen's (Can.), 18; M.S., Minnesota, 21, Ph.D., 23. Asst. pathologist, Can. Dept. Agr., 19-20; agent, U. S. Dept. Agr., Minn., 20-22; pathologist, Can. Dept. Agr., 22-26, senior pathologist, 26-28; assoc. prof. plant path., Toronto, 28— A.A.; Phytopath. Soc.; Can. Soc. Tech. Agr.; fel. Royal Soc. Can. Cereal diseases; sunflower rusts; smuts and stem rust; wheat root-rots; physiological specialization in *Puccinia graminea* avenae.

Bailey, Prof. E(arl) H(icks), State College, Miss. Botany. Vardaman, Miss., Jan. 10, 02. B.S., Miss. Agr. and Mech. Col., 27, M.S., 30; Agr. and Mech. Col., Texas, 27; Wisconsin, 30, 34. Assoc. prof. agron., Miss. Agr. and Mech. Col., 27, 28, bot., 28-31, agron., 31-32. Miss. State Col., 32-36; field agronomist, Am. Potash Inst., Miss., 36— Bot. Soc. Cytology.

Bailey, Mrs. Edna W(atson), 1022 Spruce St., Berkeley, Calif. Education. Parkersburg, W. Va., July 30, 83. B.S., California, 06, M.S., 07, Ph.D., 10. Teacher science, high sch., Calif., 12-13; supervisor science, 16-26; lecturer educ., California, 18-26; assoc. prof., 27— assoc. director student teaching, 26-A.A.; fel. Pub. Health Assn. Child development; school health; education and human biology; philosophical biology.

Bailey, Dr. E(dward) M(onroe), Box 1106, New Haven, Conn. Chemistry. New London, Conn., Aug. 27, 79. Ph.B., Yale, 02, M.S., 05, Ph.D., 10. Asst. chemist, Conn. Exp. Sta., 02-17; chemist in charge anal. chem., 17— State chemist, Conn., 19— Mem. food standard cmt., U. S. Dept. Agr., 22-Chem. Soc.; Agr. Chem. (pres., 30); Am. Med. Assn. (mem., council pharmacy, chem. and foods, 30—). Agricultural chemistry; chemistry, bacteriology and enzymes of the banana; carbohydrates and enzymes of the soy-bean; vitamin potency of commercial yeast preparation; food and drugs.

Bailey, Emerson Dudley, 220 W. 25th St., Wilmington, Del. Physics. Eveleth, Minn., Dec. 22, 02. B.S., Calif. Inst. Tech., 25. Junior physicist, Naval Research Lab., 28-29; research physicist, exp. sta., E. I. du Pont de Nemours and Co., 29— Ultracentrifugal research on colloids.

Bailey, Prof. E(rnest) A(ubrey), La Grange College, La Grange, Ga. Mathematics. Atlanta, Ga., April 6, 93. A.B., Georgia, 14; M.S., Emory, 26. Tutor physics, Georgia, 14-15; teacher, prin. and sch. supt., Ga., 15-20; instr. math., U. S. Naval Acad., 20-22; prof. math. and science, La Grange Col., 22-25, math., 25— dean and registrar, 24-

Bailey, Ernest (Winfield), R. R. 2, Highland, Calif. Horticulture. Worcester, Mass., March 28, 85. B.S., Mass. Col. and Boston, 08; M.S., Illinois, 09; California, 19-21. Asst. agron., Mass. Col., 08; from asst. to assoc. plant breeding, Illinois, 10-15, assoc. prof. pomol., col. agr., and plant breeding, Exp. Sta., 16-20; commercial orcharding, 20-24; horticulturist, Mutual Orange Distributors, Highland Mutual Groves, 24— Soc. Hort. Sci.; Pomol. Soc.; Am. Breeders Assn. Plant physiology and breeding; systematic pomology; marketing economics; growth periodicity; fruit; oranges.

Bailey, Ethel H, 444 Summer Ave., Newark, N. J. Mechanical engineering. Houlton, Maine, Aug. 18, 96. George Washington, 20; Rutgers, 27-29, 30-31; Newark Tech. Sch., 29-30. Tech. service rep., Cadillac Automobile Co., Boston, 19; asst. to engineer in charge specifications and materials sect., bur. construction and repair, aircraft div., U. S. Navy, 19-21; aeronautic material engineer, L. W. F. Eng. Co., L. I., 23-24; automotive engineer, research dept., Soc. Automotive Eng.,

New York, 24-26; mech. engineer, Art Metal Works, N. J., 26-28; Gen. Elec. Co., 29-34; personnel div., State Emergency Relief Admin., N. J., 34-36; mech. engineer, Montclair Pub. Library, 36— Inspector, Sig. C. and Bur. Aircraft Production, 18-19. A.A.; Mech. Eng.; Soc. Mil. Eng.; Am. Library Assn. Conservation of material and labor.

Bailey, Ethel Zoe, Sage Place, Ithaca, N. Y. Botany. Ithaca, N. Y., Nov. 17, 89. A.B., Smith Col., 11. Asst. to L. H. Bailey, 12— curator, Bailey Hortorum, N. Y. State Col. Agr., Cornell, 35— Botanical collecting trips to Venezuela, Brazil, W. Indies, Panama and U. S. Systematic botany of cultivated plants.

Bailey, Florence (Augusta) Merriam (Mrs. Vernon Bailey), 1834 Kalorama Road, Washington, D. C. Ornithology. Locust Grove, N. Y., Aug. 8, 63. A.B., Smith Col., 86; LL.D., New Mexico, 33. Brewster award, 31. Fel. Ornith. Union; Cooper Ornith. Club; Wilson Ornith. Club; Biol. Soc. Wash. Birds of village and field; birds of New Mexico and western United States.

Bailey, Prof. Frederick H(arold), Massachusetts Institute of Technology, Cambridge, Mass. Mathematics. Leominster, Mass., April 24, 65. A.B., Harvard, 87, A.M., 89. Asst. math., Harvard, 89-91; instr., Mass. Inst. Tech., 91-93; asst. prof., 93-04; assoc. prof., 04-07; prof., 07-35, emer. prof., 35— Instr., Radcliffe Col., 90-91; Simmons Col., 02-03. Math. Soc. Analytic geometry; calculus.

Bailey, Prof. Garland Howard, 615 N. Wolfe St., Baltimore, Md. Immunology. Giatto, W. Va., Nov. 6, 90. B.S., West Virginia, 15; M.D., Hopkins, 20, Dr. P.H., 21. Instr. path., Wisconsin, 21-22; epidemiol., Harvard, 22-23, prev. med. and hygiene, 23-25; assoc. immunol., Hopkins, 25-26, assoc. prof., 26— Summer, deputy state health officer, Md., 21. Soc. Bact.; Pub. Health Assn. Fatigue and susceptibility to infection; diphtheria and pneumococcus immunity; respiratory immunity in rabbits; accessory etiological factors of infection; cold and influenza immunity; measles; heterophile antigen and antibody; infectious mononucleosis; anaphylaxis.

Bailey, Dr. George Corbin, 260 W. Jersey St., Elizabeth, N. J. Organic chemistry. Eureka, Kans., Dec. 1, 85. A.B., Wisconsin, 09; A.M., Yale, 14, Ph.D., 16. Chemist, Winchester Arms Co., 16; research lab., Barrett Co., 17-21; chief chemist, Marcus Hook plant, Nat. Aniline and Chem. Co., 21-22; group leader, research dept., Buffalo plant, 22-26; research chemist, Roessler and Hasslacher Chem. Co., 26-32; works supt., Perth Amboy plant, Roessler and Hasslacher chem. dept., E. I. du Pont de Nemours and Co., 32— Chem. Soc. Pyrimidines; amines; coal tar products; resins; perfumes; catalytic oxidation products; benzene dye, naphthalene and vat color intermediates; indigo; phthalic anhydride; maleic and malic acids; anthraquinone; rubber accelerators; formaldehyde.

Bailey, Dr. Gladys Holmes (Mrs. Percy L. Bailey, Jr.), Hunter College, New York, N. Y. Physiology. Farley, Mass., July 13, 01. Ph.B., Brown, 26, A.M., 29, Ph.D., 29. Instr., Western Col., 29-30; comp. Anat., Hunter Col., 30— The nervous system and the regeneration of Nereis virens.

Bailey, Dr. H(arold) E(dwards), University of California, Berkeley, Calif. Botany. Salt Lake City, Utah, July 26, 06. A.B., California at Los Angeles, 30, Ph.D., California, 35. Teaching fellow bot., California, 31-34; asst. forester, Nat. Park Service, 34— Forest pathology; biological decomposition of wood; vegetation types in the western national parks.

Bailey, Dr. H(arold) W(oold), University of Illinois, Urbana, Ill. Mathematics. Chicago, Ill., 01. B.S., Ottawa (Kans.), 21; A.M., Illinois, 24, fellow, 25-26, Ph.D., 26. Asst. math., Illinois, 22-25, instr., 26-28; assoc., 28-31; asst. prof., 31— exec. sec'y dept. math., 34— A.A.; Math. Soc.; Math. Assn. Analysis.

Bailey, Herbert S(tevens), Exchange Orange Products Co., Ontario, Calif. Chemistry. Bethlehem, Pa., Sept. 12, 80. A.B., Kansas, 02; B.S., Mass. Inst. Tech., 06. Chemist, Armour Packing Co., 03-04; asst. oils, Mass. Inst. Tech., 05-06; instr. chem., Mich. State Col., 07-08; chief oil, fat and wax lab., bur. chem., U. S. Dept. Agr., 09-18; chemist, E. I. du Pont de Nemours and Co., 18-20; director research, South. Cotton Oil Co., 20-24; supt., The Exchange Orange Products Co., 24-25, manager, 25— Chem. ed., 'Cotton Oil Press,' 19-24. Chairman interdepartmental cmt. on fats and oils, Food Admin., 17-18. Chem. Soc. (sec'y, Wash. sect., 09); Soc. Test. Mat;

Bailey, Oil Chemists Soc. Oils for artificial leather; paints; varnishes; animal and vegetable oils; citrus oils and juices; foods.

Bailey, Prof. Irving W (idmer), Harvard University, Cambridge, Mass. *⁸*Botany*. Tilton, N. H. Aug. 15, 84. A.B., Harvard, 07, M.F., 09; hon. Sc.D., Wisconsin, 32. Asst. bot., Harvard, 08-09; instr. forestry, 09-12; asst. prof., 12-20; assoc. prof., 20-27; prof. plant anat., 27- Mem. advisory board, U. S. Forest Products Lab, 14-16; exec. cmt. div. biol. and agr., Nat. Research Council, 21-23, 30-31, v. chairman, 26-27. In charge wood sect, materials eng. dept, Bur. Aircraft Production, 18. Nat. Acad.; A.A.; Soc. Nat.; Bot. Soc. (ed. board, 'Am. Jour. Bot.', 15-18, treas., 21-24, v. pres., 28-); Biol. Soc. (exec. cmt., 25-); Soc. Foresters (ed. board, 'Proc.' 14-16); Philos. Soc.; Am. Acad. (councilor, 23-26). The cambium and its derivative tissues; structure, optical properties and chemical composition of the cell wall.

Bailey, James, 95 Steele Road, West Hartford, Conn. *Engineering, Physics*. Gowanda, N. Y. Jan. 17, 90. M.E., Lehigh, 12. Ceramic dept, Corning Glass Works, 12-15, asst. supt. blowing room, 15-16, develop. engineer, 16-29; v. pres., *Bailey and Sharp Co., Hamburg, N. Y.*, 29- Mech. Eng. Physical properties of glass and refractories; physical tests for glass; internal stresses in composite glasses; annealing; design of automatic machinery; action of glass on metals and refractories at high temperature.

Bailey, Prof. J(ames) R(obinson), University of Texas, Austin, Texas. *Chemistry*. Houston, Texas, Dec. 11, 68. A.B., Texas, 91; Ph.D., Munich, 97; Leipzig, 00-01. Asst. chem., Texas, 91, tutor, 91-94, instr., 96-00, adj. prof. and prof. org. chem., 01- Assoc. ed., 'Jour. Am. Chem. Soc.' A.A.; Chem. Soc.; Petrol. Inst. (director, research project No. 20); Texas Acad. Semicarbazid acids; hydrazin acids; hydrazo-acids; hydantoins; mustard oils and hydrazo compounds; use of cyanic and prussic acids in glacial acetic acids; conjugate systems; petroleum bases; destructive distillation of cotton seed meal.

Bailey, Dr. John Hays, 1853 W. Polk St, Chicago, Ill. *Immunology, Bacteriology*. Chicago, Ill. May 3, 00. B.S., Chicago, 24, Ph.D., 28. Asst. anat., Chicago, 26-28; fellow, Nelson Morris Inst., 28-29; Huesman fellow, James Whitcomb Riley Hosp., and mem. dept. pediat., sch. med., Indiana, 29-32; res., Munuc. Contagious Disease Hosp., Chicago, 32-35; senior bacteriologist, State Dept. Health, Ill., 35- A.A.; Soc. Bact.; Publ. Health Asn.; Inst. Med. Chicago. Snake venoms; pertussis; scarlet fever.

Bailey, Prof. John S(earls), Box 137, North Amherst, Mass. *Pomology*. East Aurora, N. Y. March 25, 99. B.S., Mich. State Col., 22; M.S., Iowa State Col., 23. Investigator pomol., Exp. Sta., Mass. Col., 23-26; asst. research prof., 26-31, Mass. State Col., 31- Soc. Hort. Sci. Peach breeding and hardiness; propagation and culture of high bush blueberries.

Bailey, Prof. John Wendell, University of Richmond, Richmond, Va. *Zoology*. Winona, Miss., Jan. 9, 95. B.S., Miss. Agr. and Mech. Col., 15, M.S., 17; A.B., Cornell, 16, A.M., 25; Austin scholar, Harvard, 26-27, A.M., Ph.D., 27. Field asst., bur. entom., U. S. Dept. Agr., 14; asst. prof. zool. and entom., Miss. Agr. and Mech. Col., 16-17; sci. asst., bur. entom., U. S. Dept. Agr., 17-18; alumni sec'y and research worker, Miss. Agr. and Mech. Col., 19-24; asst. entom., Cornell, 24-25; prof. biol., Miss. Col., 25-29; Richmond, 29- Cornell biol. exped., 16. Entom. control, U.S.N., 18-19. A.A.; Soc. Zool.; Entom. Soc. Amer.; Soc. Ichthyol. and Herp.; Soc. Mammal.; Eugenics Soc.; Asn. Econ. Entom.; Ornith. Union; Biol. Soc. Wash.; Va. Acad. Myriapoda; herpetology; natural history of Virginia.

Bailey, Dr. L(iberty) H(yde), Ithaca, N. Y. *¹*Botany, Horticulture*. South Haven, Mich., March 15, 58. B.S., Mich. State Col., 82, M.S., 85; LLD., Wisconsin, 07, Alfred, 08; Litt.D., Vermont, 19; D.Sc., Puerto Rico, 32. Prof. hort. and landscape gardening. Mich. State Col., 84-88; hort., Cornell, 88-03, emer. prof. agr., 21-, dean and director, N. Y. State Col. Agr., 03-13, director, Bailey Hortorium, 37-Chairman, Roosevelt Cmn. on Country Life, 08. Wilder medal, Pomol. Soc., 85, 21; Veitchian silver medal, Royal Hort. Soc., 97, gold medal, 27; George Robert White medal, Mass. Hort. Soc., 27; gold medal, Nat. Inst. Social Science, 28; grande medaille, Soc. nat. d'Acclimatation de France, 28; gold medal, Garden Club Amer., 31; Arthur Hoyt Scott medal and award, 31; distinguished service award, Am. Asn. Nurserymen,

31. Nat. Acad.; A.A. (v. pres., 15, pres., 26); Bot. Soc. (pres., 26); Soc. Hort. Sci. (pres., 07); Pomol. Soc. (past pres.); Philos. Soc.; Am. Acad.; cor. Acad. Nat. Sci. Phila.; hon. mem. Royal Hort. Soc.; cor. mem. Soc. lyonnaise d'Hort.; cor. mem. Royal Acad. Agr. di Turin; hon. mem. Hort. Soc. Norway; hon. mem. Japan Agr. Soc.; hon. mem. Hort. Soc. Japan; hon. mem. Chinese Soc. Hort. Sci.; hon. mem. New Zealand Inst. Hort. Systematic botany; cultivated plants.

Bailey, L(orin) H(arvey), 3904 McKinley St., N. W., Washington, D. C. *Chemistry*. Beloit, Ohio, April 14, 76. A.B., Michigan, 06. Chemist, Union Pacific R. R., 06-07; assoc. chemist, bur. chem. and soils, U. S. Dept. Agr., 07- Chem. Soc.; Asn. Cereal Chemists. Chemistry of cereals and allied products; baking powder; standard baking tests for bread; rye bread and cake; methods of analysis of cereal products; soy-bean flour; moisture and ash determinations.

Bailey, Dr. M(ary) Irene, Columbia University, New York, N. Y. *Chemistry*. Mills Co., Iowa. B.S., Nebraska, 27; M.S., Kans. State Col., 28; Ph.D., Columbia, 32. Research asst. chem., Columbia, 28- Summers, asst., Columbia, 32, 33, 35. Chem. Soc.; Home Econ. Asn. Food and colloid chemistry.

Bailey, Prof. N(ell) P(hillips), Rutgers University, New Brunswick, N. J. *Mechanical engineering*. Canon City, Colo., Nov. 13, 00. B.S., Colorado, 24; M.S., Idaho, 27; advanced eng. course, Gen. Elec. Co., 25. Gen. Elec. Co., 24-25; instr. mech. eng., Idaho, 25-27; asst. prof., 27-29; North Carolina, 29-30; assoc. prof., 30-34; prof. and head dept., Iowa State Col., 34-35; Rutgers, 35- Summers, eng. dept., Wash. Water Power Co., 26, 28, 29. Mech. Eng.; Eng. Educ. Steady state and transient heat flow and transfer; temperature measurement; measurement of pulsating air flow; vibration of machinery.

Bailey, Dr. Percival, 950 E. 59th St., Chicago, Ill. *Neurology*. Mt. Vernon, Ill., May 9, 92. B.S., Chicago, 14, Ph.D., 18; M.D., Northwestern, 18. Prof. neur., Chicago, 34- Neur. Asn.; Asn. Anat.; Asn. Path. and Bart.; Physiol. Soc. Pathology of brain tumors; physiology of the hypophysis.

Bailey, Prof. P(ercy) L(aurance), Jr. College of the City of New York, New York, N. Y. *Biology, Physiology*. Newport, R. I., March 14, 03. A.B., Brown, 26, fellow, 27-29, Ph.D., 29. Asst. biol., Brown, 24-26, demonstrator comp. anat., 26-27; instr. gen. physiol., Col. City of N. Y., 29-36, asst. prof. biol., 36- A.A.; Soc. Zool.; N. Y. Acad. Regeneration in annelids.

Bailey, Reed W(arner), U. S. Forest Service, Ogden, Utah. *Geology*. Nephi, Utah, Jan. 29, 96. B.S., Chicago, 24, M.S., 27. Instr. and asst. prof. geol., Utah State Col., 24-30; assoc. prof., 30-34; prof., 34-35; director, Intermountain Forest and Range Exp. Sta., U. S. Forest Service, 35- A.A. Geology of Bear River Range, Utah; Bonneville and post-Bonneville erosion and sedimentation, Utah; erosion and sedimentation in the valleys of the Colorado Plateau Province; floods and accelerated erosion in Utah; watershed factors.

Bailey, R(ussell) M(anley), University of Maine, Orono, Maine. *Biology*. Sidney, Maine, Dec. 4, 01. B.S., Maine, 28; Iowa State Col., 28-29; Minnesota, 29-31. Agent, U. S. Dept. Agr., 29-31; assoc. biologist, Exp. Sta., Maine, 31- A.A. Plant breeding and nutrition.

Bailey, Dr. Stanley F(uller), College of Agriculture, University of California, Davis, Calif. *Agricultural entomology*. Middleboro, Mass., Aug. 1, 06. B.S., Mass. Col., 29; Ph.D., California, 32. Asst. entom. col. agr., California, 29-32; junior entomologist, 32-, instr. entom., 34- Thysanoptera; black widow spiders; truck crop insects.

Bailey, Dr. Thomas L(aval), Shell Petroleum Corp., Houston, Texas. *Geology*. Berkeley, Calif., Oct. 5, 97. A.B., South Carolina, 17; A.M., California, 21, Ph.D., 26. Instr. geol. and biol., Univ. of the South, 17-18; geol., Pomona Col., 21-22; assoc. geologist, bur. econ. geol., Texas, 22-24; instr. geol., California, 24-25; dist. geologist, Shell Oil Co., 25-34; geologist, Bataafsechee Petrol. Mij, The Hague, Netherlands, 34-35; Shell Petrol. Corp., 35- A.A.; Geol. Soc.; Asn. Petrol. Geol. General and structural geology; sedimentation; stratigraphy.

Bailey, Prof. T(homas) L(eonard), Oklahoma Baptist University, Shawnee, Okla. *Chemistry*. Strasburg, Mo. Mo. Nor. Col., Warrensburg; A.B., Okla. Baptist Univ., 18; A.M., Oklahoma, 23; Colorado, 28, 30, 32. Prin. schs., Okla., 09-17; teacher math. and science, Okla. Baptist Univ., 19-22, prof. chem. and agr., 20- Chem. Soc.; Am. Acad.; Okla. Acad.

Household, general inorganic and sanitary chemistry; toxicology; soils; qualitative analysis; foods; water.

Bailey, Vernon, 1834 Kalorama Road, Washington, D. C. *Biology. Manchester, Mich., June 21, 64. Michigan, 93; George Washington, 94, 95. Chief field naturalist, bur. biol. surv., U. S. Dept. Agr., 87-33; retired. Ornith. Union; Soc. Mammal. (pres., 34-); Forestry Asn.; Cooper Ornith. Club; Biol. Soc. Wash. (pres., 22); Wash. Acad. Distribution of mammals, birds and plants; spermophiles and gophers of the Mississippi Valley; revision of *Eotomys*, *Microtus*, *Sigmodon*, *Thomomys*; biological surveys of Texas, New Mexico, North Dakota and Oregon; mammals of Glacier National Park; animal life of Carlsbad Cavern and Yellowstone National Park; cave life of Kentucky.

Bailey, Dr. Willard F(rancis), Skelly Oil Co., Pampa, Texas. Geology. Savannah, Mo., April 30, 04. A.B., Missouri, 25, A.M., 26, Ph.D., 34. Asst. geol., Missouri, 25-27, 31-34; asst. state geologist, Tenn., 27-30; petro. geologist, Skelly Oil Co., 34- Tenn. Acad. Petroleum; subsurface stratigraphy and sand and gravel resources of Tennessee.

Bailey, Prof. W(illiam) F(leming), MacMurray College, Jacksonville, Ill. Chemistry. Albia, Iowa, March 13, 01. B.S., Monmouth Col., 24; M.S., Illinois, 25, Ph.D., 33. Instr. chem., Washington and Lee, 25-26; asst. prof., 26-30; asst. Illinois, 30-33; prof., MacMurray Col., 33- Chem. Soc. Analysis of halides and alkali metals.

Bailey, Dr. W(illiam) M(arshall), 506 S. Poplar St., Carbondale, Ill. Botany. Troy Mills, Iowa, Sept. 25, 77. A.B., Campbell Col., 01, B.S., 02; M.S., Chicago, 13, Ph.D., 32. Head dept. biol., Campbell Col., 04-13; assoc. prof., South. Ill. State Nor. Univ., 14-21, head dept., 21-29, bot., 29- A.A.; Soc. Plant Physiol.; Tenn. Acad.; Ill. Acad. Plant physiology; plant ecology.

Baillie, Prof. W(illiam) H(arold) T(reverrow), University of Toronto, Toronto, Ont., Can. Biology. Toronto, Ont., Aug. 11, 88. B.A., Toronto, 11, fellow, 11-12, M.A., 12, M.B., 15, M.D., 28; L.C.P.S., 15. Demonstrator and asst. biol., Toronto, 12-15, lecturer comp. anat., 15-16, mammal. anat., 19-24, asst. prof., 24-28; assoc. prof., 28- Capt., C.M.C., 16-19; C.O.R.C., 19- Ont. Col. Physicians and Surg.; assoc. fel. Toronto Acad. Med.; Royal Can. Inst. Comparative anatomy; Annulata polychaeta; mammalian anomalies; blood vascular system in elasmobranch; peritoneal reactions in Mammalia; life histories in Cladocera and viability of the sexes; abdominal musculature in vertebrates; effect of light on pigment and visual apparatus; conjugate deviation and its origin.

Ballor, Prof. Edwin Maurice, Dartmouth College, Hanover, N. H. Psychology. Nebraska, 90. Simpson Col. (Iowa), 07-09; A.B., State Col. Wash., 14, A.M., 16; Ph.D., Columbia, 25. Teacher and pub. sch. supervisor, Wash., 09-13, 14-15; instr. educ., State Col. Wash., 15-18; psychol. expert, U.S.A., 19-21; training officer, U. S. Veterans Bur., 21-23; asst. educ. psychol., Teachers Col., Columbia, 23-24; instr., 24-25; asst. prof. psychol., Dartmouth Col., 25-28; prof., 28- 2nd lieut. Sanit. C., 18-19. A.A.; assoc. Psychol. Asn. Educational psychology; measurement; content and form in tests of intelligence; students' knowledge before and after course; developed lessons in psychology.

Bally, Joshua L(ongstreth), Jr., 4435 Ampudia St., San Diego, Calif. Biology. Philadelphia, Pa., Jan. 29, 89. A.B., Haverford Col., 12, A.M., 13; B.Mus., Pennsylvania, 15. With Am. Red Cross, 19-21; Union Title Ins. Co., 21-26; fellow, Inst. Biol. Research, Hopkins, 26-28; with research inst., San Diego Zool. Soc., 28- Am. Friends Service Cmt., 18-19. San Diego Museum. A.A.; Malacol. Union (v., pres., 35, pres., 36); Meteor Soc.; Acad. Nat. Sci. Phila.; Wyo. Geol. and Hist. Soc.; San Diego Soc. Nat. Hist. (pres., fellows, 32); San Diego Zool. Soc. Biometrical and experimental investigation of fresh-water Mollusca; recent and fossil Mollusca of San Diego and Imperial counties and Lower California; land and fresh-water Mollusca.

Bally, William Lloyd, Ardmore, Pa. Ornithology. Philadelphia, Pa., Dec. 26, 61. B.S., Haverford Col., 83. Prof. archit., Pennsylvania, 90; practising architect, 91- Fel. Ornith. Union; Inst. Archit.; State Asn. Archit. Pa. (sec'y., 09-); Del. Valley Ornith. Club (pres., 90); Pa. Audubon Soc. (treas., 02); Pa. Hort. Soc.; Acad. Nat. Sci. Phila. Bird photography; birds of Maine, New Jersey, North Dakota and the Magdalen Islands.

Bain, Edgar C(ollins), U. S. Steel Corp., New York, N. Y. Physics, Metallurgy. Marion, Ohio, Sept. 14, 91. Chem.E., Ohio State; M.S., Wisconsin; Columbia; D.E., Lehigh. Instr. metallog., Wisconsin, 16-17; chem. engineer, B. F. Goodrich Rubber Co., 17-18; metallurgist, Nat. Lamp Works, Gen. Elec. Co., 19-23; research metallurgist, Atlas Steel Corp., 23-24; Union Carbide and Carbon Research Labs., 24-28; metallurgist, research lab., U. S. Steel Corp., 28-35, asst. to v. pres., 35- Robert Howe mem. lecturer and Campbell mem. lecturer, 32. Robert W. Hunt medal, 29; Henry Marion Howe medal, 31; Benjamin C. Lamme medal, Ohio State, 37. Lieut. C.W.S., 18-19. Fel. Physical Soc.; Min. and Metal. Eng. (iron and steel cmt.); Soc. Test. Mat. (cmt. on metallog.); Soc. Metals (pres., 37). X-ray crystal structure; allotropy in metals; alloy steels; high speed steel.

Bain, Prof. Geo(rge) W(illiam), 12 Dana St., Amherst, Mass. Geology. Lachute, Que., Can., May 8, 01. B.Sc., McGill, 01, M.Sc., 23; A.M., Columbia, 23, Ph.D., 27. Asst. prof. geol., Vermont, 25-26; instr., Amherst Col., 26-31, asst. prof., 31- Gold medal, Can. Inst. Min. and Metal., 26. Geol. Soc.; Soc. Econ. Geol.; Min. and Metal. Eng.; Miner. Soc.; N. Y. Acad.; Can. Inst. Min. and Metal. Structural and metamorphic geology; petrology; mineral deposits.

Bain, Dr. H(arry) Foster, 93 Jane St., Hartsdale, N. Y. *Geology, Mining. Seymour, Ind., Nov. 2, 71. B.S., Moore's Hill, 90; Hopkins, 91-93; Ph.D., Chicago, 97. Asst. state geologist, Iowa, 93-00; special asst., U. S. Geol. Surv., 00-01; manager, Consol. Franklin Mines Co., 01-02; geologist, U. S. Geol. Surv., 02-08; state geologist, Ill., 05-09; ed., Mining and Sci. Press, 09-15; ed., 'Mining Magazine,' London, 15-16; explorations, Far East, 16-18; asst. director, U. S. Bur. Mines, 18-19; N. Y. Orient Mines Co., 19-20; director, U. S. Bur. Mines, 20-25; sec'y., Am. Inst. Min. Eng., 25-31; managing director, Copper and Brass Research Corp., 31-34; consulting geologist. Lecturer, Iowa, 98; Chicago, 99, 02, 03. Geol. Soc.; Min. and Metal. Eng.; Min. and Metal. Soc. Structural geology; ore deposits; mining methods; lead and zinc deposits.

Bain, Henry F(ranklin), U. S. Department of Agriculture, Washington, D. C. Plant pathology. Knoxville, Tenn., Dec. 25, 93. A.B., Tennessee, 16; M.S., Brown, 17. Plant quarantine inspector, fed. hort. board, U. S. Dept. Agr., 19-22, asst. pathologist, fruit disease investigations, 22-26; cranberry specialist, State Dept. Agr., Wis., 26-28; senior pathologist, div. hort. crops and diseases, bur. plant indust., U. S. Dept. Agr., 28- A.A.; Phytopath. Soc.; Bot. Soc. Wash. Cranberry diseases.

Bain, Prof. J. Watson, University of Toronto, Toronto, Ont., Can. Chemistry. London, Eng., Nov. 14, 75. B.A.Sc., Toronto, 97, fellow, 97-99; Zurich, 01. Demonstrator chem., Toronto, 99-02, lecturer, 02-05, assoc. prof. applied chem., 05-16, prof. chem. eng., 16- Fel. Inst. Chem.; Soc. Chem. Indust.; fel. Can. Inst. Chem.; fel. Royal Soc. Can. Industrial chemistry; chemical engineering.

Bainbridge, Dr. Kenneth T(ompkins), Harvard University, Cambridge, Mass. *Physics. Cooperstown, N. Y., July 27, 04. B.S., Mass. Inst. Tech., 25, M.S., 26; A.M., Princeton, 27, Ph.D., 29. Nat. research fellow physics, 29-31; fellow, Bartol Research Foundation, 31-33; Guggenheim Mem. Foundation fellow, 33-34; asst. prof., Harvard, 34- Assoc. ed. 'Physical Rev.', 37- Physical Soc. Electromagnetic forces in liquid conductors; photoelectric effect; positive ray analysis; photographic effect of positive ions; mass-spectrography and isotopes.

Bainbridge, Dr. W(illiam) Seaman, 34 Gramercy Park, New York, N. Y. Surgery. Providence, R. I., Feb. 17, 77. M.D., Columbia, 93; hon. A.M., Shurtleff Col., 99; hon. M.S., Washington and Jefferson Col., 02; hon. Sc.D., West. Univ. of Pa., 07; Litt.D., LL.D., Lincoln Mem. Univ.; LL.D., Coe Col. Adj. prof. N. Y. Post-Grad. Med. Sch., 02-06; prof. surg., N. Y. Polyclinic, 06-18; practising surgeon, 18- Surgeon, N. Y. Skin and Cancer Hosp., 03-18; attending surgeon, N. Y. Children's Hosp.; surg. director, Manhattan State Hosp.; consulting surgeon, Tarrytown Hosp., N. Y.; Cent. Islip State and Bergen County Hosps.; Hosp. for Joint Diseases; Booth Mem. Hosp.; S. County Hosp., R. I.; Dobbs Ferry Hosp.; consulting gynecologist, St. Andrew's Hosp., N. Y.; St. Mary's Hosp., L. I.; Ossining Hosp., N. Y.; consulting surgeon, 3rd naval dist., and attending specialist surg., U. S. Pub. Health Service, N. Y.; director, Equitable Life Assurance Soc.; hon. prof. surg., Mil. Med. Sch., Poland. Various medals and orders. Hon. pres., 1st Int. Cong. Study Tumors and Cancers, 06; U. S.

del, Cong. int. de Med. et de Pharmacie mil, Brussels, Belgium, 21; Rome, 23; Paris, 25; Warsaw, 27; London, 29; The Hague, 31; Madrid, 33; Bucharest, 37; mem. permanent cmt. Capt. M.C. U.S.N.R. Fel. Am. Med. Asn.; fel. Asn. Obstet., Gynec. and Abdom. Surg. (1st v. pres. 17); N. Y. Acad. Med.; fel. Royal Soc. Med.; hon. mem. Soc. des Chirurg. de Paris; Soc. gynec. de France; Reale Accad. Med. Rome; Ital. League Control Cancer; Union Medicale Latine; Nat. Acad. Med. Spain; assoc. Mil. Surg. Mex.; Acad. royale de Med. de Belg.; Asn. Mil. Surg. Hungary; hon. mem. Soc. Surg. Poland; hon. mem. Warsaw Surg. Soc. Operative gynecology; the cancer problem; medical and surgical developments of the war.

Baird, Dr. George J(oshua), Mellon Institute, Pittsburgh, Pa. Ceramics. Emporium, Pa., Aug. 26, 05. B.S., Pa. State Col., 27. M.S., 30; Sc.D., Mass. Inst. Tech., 36. Asst. supt., Keystone Brick Co., Watsontown, Pa., 27; instr. ceramics, Pa. State Col., 27-31, asst. prof., 31-36; indust. fellow, Mellon Inst., 36. Teaching asst., Mass. Inst. Tech., 34-35. Ceramic Soc. Mineral products; glass, its constitution and properties; properties of Pennsylvania clays; properties and new uses for fine silica; high temperature furnaces; refractories; resistance to abrasion.

Baird, A(lfred) B(riggs), 228 Dundas St. E., Belleville, Ont., Can. Entomology. Chipman, N. B., Oct. 11, 91. B.S.A., Toronto, 16; M.S., Cornell, 21. Dom. entom. branch, Can. Dept. Agr., 11-16, asst. entomologist, 16-24, entomologist in charge parasite work, 24—Entom. Soc. Amer.; Asn. Econ. Entom.; Can. Soc. Tech. Agr.; Entom. Soc. Ont.; N. S. Entom. Soc. (sec'y-treas., 22-24). Parasitic and predaceous insects; biological control of insects; corn borer; oriental fruit moth; wheat stem sawfly; larch sawfly; pine shoot moth; woolly apple aphid; earwigs; white fly; satin moth; lecanium scales; spruce sawfly; balsam woolly aphid; codling moth; imported cabbage worm; larch casebearer; pine sawfly.

Baird, Dr. Don O(tto), 1418 Ave. K, Huntsville, Texas. Science education. Russellville, Ohio, Nov. 30, 88. B.S., Ohio (Athens), 16; A.M., Columbia, 28. Ph.D., 30. Teacher, rural schs., Ohio, 08-12, supt. township sch., 12-14, supervising prin., 16-17; head dept. biol., high sch., Va., 19-22; acting head dept., Sam Houston State Teachers Col., 22-24, assoc. prof., 24-32, prof., 32—A.A.; Pub. Health Asn.; Social Hygiene Asn.; Nature Asn.; Sci. Teachers Asn. (director, 37); Texas Pub. Sch. Sci. Teachers Asn. (chairman, 34); Texas Folk-Lore Soc.; fel. Texas Acad. (v. pres., chairman, biol. sect., 35, exec. v. pres., 36, pres., 37). Health; social hygiene; popular science.

Baird, Dr. E(dgar) A(lan), 1735 N. Ashland Ave., Chicago, Ill. Botany. River Falls, Wis., Nov. 4, 86. A.B., Wisconsin, 14; A.M., 15. Ph.D., 20. Instr., Wisconsin, 15-17, 20-22; assoc. prof. and prof. bot., North Dakota, 22-34; biologist, Chicago Apparatus Co., 34—Officer, U.S.A., 17-19. A.A.; Bot. Soc. Mycology; cytology.

Baird, Parker K(arl), 2210 Fox Ave., Madison, Wis. Chemistry. Monroe, Wis., Jan. 31, 94. A.B., Lawrence Col., 16; A.M., Ohio State, 18; Wisconsin, 22-24. Asst., Ohio State, 16-17, asst. instr., 17; junior chem. engineer, gas research, eng. exp. sta., U. S. Bur. Mines, American Univ., 18; tech. director, Inland Empire Paper Co., Spokane, Wash., 19-22; chemist, pulp and paper sect., Forest Products Lab., U. S. Forest Service, 22-27, senior chemist, 27—Lecturer, Wisconsin, 31—C.W.S., U.S.A., 18. Asn. Pulp and Paper Indust. (chairman, use requirements cmt., 30-). Bleaching of wood pulp; fundamental and technical researches on paper; use requirements of papers.

Baird, Dean William Jesse, Berea College, Berea, Ky. Agriculture. Artemus, Ky., April 12, 90. B.S., Berea Col., 19; M.S., Cornell, 24. Teacher, Berea Vocational Sch., 15-24; foundation-junior high sch., Berea Col., 24-26, dean, 26—, prof. agr., 20-36, director dept., 26-36.

Baitzell, Prof. George A(lfred), Yale University, New Haven, Conn. *Zoology. Wright, Iowa, Oct. 2, 85. B.S., Cent. Col. (Iowa), 08; A.M., Yale, 09. Seessel fellow, 13-14, Ph.D., 14. Prof. biol. and chem., Cent. Col. (Iowa), 09-10, biol. and acting dean, 12-13; instr. zool., Yale, 14-18, asst. prof., 18-25, assoc. prof., 25-28; prof. biol., 28—Instr., Marine Biol. Lab., Woods Hole, 13-19. Asst. physiologist, Army-Navy gas investigation, 17-18, capt., C.W.S. A.A. (sec'y, F., 37); Soc. Nat.; Soc. Zool.; Soc. Exp. Biol.; Genetics Soc.; Asn. Anat.; Physiol. Soc.; Sigma Xi (pres., 38); Conn. Acad. Life history of Protozoa; tissue culture; micro-dissection; wound healing;

fibrin; connective-tissue formation; fibrous tissue in tubercular tissues.

Balty, Prof. H(erman) G(lenn), University of North Carolina, Chapel Hill, N. C. Civil engineering. Davie Co., N. C., Sept. 2, 95. A.B., North Carolina, 17, B.S. (C.E.), 22; Paris, 19; fellow, Rockefeller Foundation, 24-26; M.S., Harvard, 25, Sc.D., 28. Asst. physics, North Carolina, 15-17, instr. math., 20-22; asst. engineer, State Board Health, N. C., 22-24, assoc. engineer, 26-31; assoc. prof. sanit. and munici. eng., North Carolina, 26-29; prof., 29—, head dept. civil eng., 28-36, dean sch. eng., 31-36. State engineer, Fed. Emergency Admin. Pub. Works, 33-35, state director, 35-36. Chairman, State Board Examiners for Plumbing and Heating Contractors, N. C., 31—; engineer mem., State Board Health, N. C., 31—; chairman cmt. agr. and indust. research, The N. C. Plain, Inc. Lieut., Ordnance Dept., 17-19. Civil Eng.; Pub. Health Asn.; Eng. Educ.; Water Works Asn.; Elisha Mitchell Sci. Soc.; Federation Sewage Works Asn.; N. C. Soc. Eng.; British Inst. Sewage Purification. Factors governing aerobic and anaerobic decomposition of sewage sludge; the use of chlorine in sewage treatment; the characteristics and treatment of industrial wastes; stream sanitation; limnology; water purification.

Bajkov, Dr. Alexander D. University of Manitoba, Winnipeg, Man., Can. Ichthyology. Moscow, Russia, June 27, 94. Moscow, Agr. Col., 13-17; Ing. Agr. Agr. and Forest Col., Brno, Czechoslovakia, 24; M.Sc., Manitoba, 27, Ph.D., 31. Naturalist, Russian Far East Siberian fisheries exped., 14; Caspian sea fisheries exped., 15; Arctic Ocean fish exped., Archangel, 18; asst. in charge biol. sta., Lednice, Czechoslovakia, 24-25; ichthyologist, sci. exped., Jasper Park, Alta., 26; investigator fisheries, Can. Biol. Board, west, Can., 26-31; provincial investigator fisheries, Lake Winnipeg biol. sta., Manitoba, 32—Biologist, Atlantic Biol. Sta., St. Andrews, N. B., 33—Fish cmt., Indust. Develop. Board, Man. Fisheries expeds., west, and north, Can., and Hudson Bay, 27-32. Soc. Ichthyol. and Herp.; Nat. Hist. Soc. Man. (chairman, ichthyol. sect., 32). Fisheries investigations; hydrobiology; water biology; plankton; fisheries industry; food and growth of fishes.

Bakenhus, Rear Admiral R(euben) E(dwin), Third Naval District Headquarters, Washington and Christopher Sts., New York, N. Y. Civil engineering. Chicago, Ill., Sept. 10, 73. B.S., Mass. Inst. Tech.; grad., U. S. Naval War Col. Rear Admiral, C.E.C., U.S.N.; staff, U. S. Navy War Col., 24-27; pub. works officer, Third Naval Dist. Headquarters. Asst. chief bur. yards and docks, Navy Dept., 18-23, manager ship-yard plants, Emergency Fleet Corp., 20. Navy cross. A.A.; Civil Eng.; Soc. Mil. Eng.; Acad. Polit. and Social Sci.; Acad. Polit. Sci.; Permanent Int. Asn.; Navig. Congs.

Baker, Prof. A(lbert) W(esley), College Heights, Guelph, Ont., Can. Entomology. Walkerton, Ont., Nov. 1, 91. B.S.A., Toronto. Demonstrator entom. and zool., Ont. Agr. Col., 11-14, lecturer, 14-18, assoc. prof., 18-20, prof. syst. entom. and zool., 20—A.A.; Entom. Soc. Amer.; Asn. Econ. Entom.; Royal Can. Inst.; Entom. Soc. Ont. (sec'y, 11-27, pres., 28); Fed. Ont. Nat. Systematic entomology; Canadian Mallophaga.

Baker, Prof. Alfred, 81 Madison Ave., Toronto, Ont., Can. Mathematics. Toronto, Ont. M.A., Toronto, 78, LL.D., 14. Prof. math., Toronto, 87-19, emer. prof., 19—, dean residences, 84-90, faculty of arts, 12-19, mem. senate, 87—Toronto gold medalist. Mem. British Empire League. Retired capt., Queen's Own Rifles. Math. Soc.; fel. Royal Soc. Can. (pres., 15); Ont. Educ. Asn. (past pres.); Soc. math de France. Quaternions; synthetic and analytical geometry; trigonometry; mechanics.

Baker, Dr. Arthur A(lan), U. S. Geological Survey, Washington, D. C. Geology. New Britain, Conn., Oct. 31, 97. Ph.B., Yale, 19, Ph.D., 31. Geol. aid, U. S. Geol. Surv., 21-24, asst. geologist, 24-26, assoc. geologist, 26-29, geologist, 29-35, senior geologist, 35—Geol. Soc.; Asn. Petrol. Geol.; Geophys. Union; Geol. Soc. Wash.; Wash. Acad. Geology of fuels; stratigraphy and structural geology.

Baker, Dr. A(rthur) C(hallen), Laboratorio Entomologico, Calzada Mexico Tacuba 295, Colonia Anahuac, Mex., D. F. Entomology. Belleville, Ont., Can., Feb. 5, 85. B.S.A., Ont. Agr. Col. and Toronto, 11; Ph.D., George Washington, 18. Expert, bur. entom., U. S. Dept. Agr., 11-14, asst. entomologist, 15-18, entomologist, fruit insect investigations, 19-25, senior entomologist in charge trop. and subtrop. fruit insect investi-

gations, 26-27; *prin. entomologist* in charge trop. subtrp. and ornamental plant insect investigations, 28-32; plant quarantine and control admin., 29-30; special fruit-fly investigations, 32-34; *bur. entom. and plant quarantine*, 34— Entom. Soc. Amer.; Asn. Econ. Entom. (advisory cmt. and cmt. on nomenclature, 24-26; cmt. on training entomologists, 29-); Entom. Soc. Wash. (ed. 'Proc.' 18-23, pres. 31); Biol. Soc. Wash. (cmt. on nomenclature); Entom. Soc. Ont; Acad. Nac. de Cien. de Mex. Classification and biology of Aphidae; tropical entomology; fruit-flies.

Baker, Dr. Benjamin May, Jr. 9 E. Chase St., Baltimore, Md. Medicine. Norfolk, Va., Nov. 20, 01. B.S. Virginia, 22; B.A. Oxford, 25; M.D. Hopkins, 27. Intern and asst. res., Hopkins Hosp., 27-30; res. physician, 30-31; asst. visiting physician, 31-; instr. med., Hopkins, 23- Medical sciences.

Baker, Charles Laurence, Agricultural and Mechanical College, College Station, Texas. Geology. Cordova, Ill., Oct. 10, 87. Monmouth Col., 03-05; Oberlin Col., 05-07; B.S. Chicago, 08; fellow, 08-10; fellow, California, 10-11; A.M. 16. Asst. biol., Monmouth Col., 04-05; comp. anat. and vert. histol., Oberlin Col., 05-07; instr. geol., California, 11; Texas, 16; asst. geologist, South. Pacific Ry. Co., 12-13, 17-18; geologist, bur. econ. geol., Texas, 14-17, 22; L. E. Hanchett, 17-21, 23; oil companies, 21-24; E. Coast Oil Co., 24-25; chief geologist, 25-26; South. Pacific Ry., Mex., 25-26; Texas and La., 26; Rio Bravo Oil Co., 26-31; State Bur. Econ. Geol., Texas, 31-35; prof. geol. and head dept., Agr. and Mech. Col., Texas, 35- Field asst., U. S. Geol. Surv., 08, 10. Geol. Soc.; Asn. Petrol. Geol.; fel. Am. Geog. Soc.; Paleont. Soc.; fel. Royal Scottish Geog. Soc. Economic geology; geology of western United States, Mexico and River Plata Basin of South America.

Baker, Dr. Charles P(reston), 225 Fourth Ave., Rochester, Minn. Medicine. Edgerton, Minn., Sept. 2, 03. A.B. Park Col., 26; B.S. Nebraska, 30. M.D. 30, A.M. 32. Fellow, Mayo Foundation, Minnesota, 32- Physiology and pathology of the gastro-intestinal tract; spinal anesthesia; sodium ricinoleate.

Baker, Charles Whiting, Fern Hill, Montclair, N. J. Engineering, Economics. Johnson, Vt., Jan. 17, 65. C.E. Vermont, 86. Assoc. ed., Eng. News, '87-95; managing ed. and sec'y, Eng. News Pub. Co., 95-05, ed. in chief and v. pres., 05-17; consulting engineer and consulting ed., Eng. News Record, '17-20; consulting engineer and inventor, 20- Commissioner, Palisades Interstate Park, 11- Mech. Eng. (v. pres., 09-). Economics of transportation systems; monopolies and the people.

Baker, Chester L. 121 S. Third St., Philadelphia, Pa. Chemical engineering. Fairmont, N. Dak., June 22, 01. B.S. California, 25. Asst. chief chemist and superintendent of mill room, Pacific Sanit. Mfg. Co., Richmond, Calif., 25-26; chief chemist and asst. plant manager, Westend Chem. Co., Calif., 26-27; chief chemist and chem. engineer, Phila. Quartz Co., Berkeley, 27-35; tech. adviser, Phila., 35- Chem. Soc. (chairman, San Francisco sect., 31); Chem. Eng. Phase equilibria of Seearles Lake brine with development of process for commercial production of soda ash and borax; the system sodium oxide, silicon dioxide and water; discovery and description of several crystalline sodium silicates; development of processes of commercial manufacture of crystalline alkali metal silicates; detergency and adhesives.

Baker, Dr. Clarence E. (verrett), 112 De Hart St., West Lafayette, Ind. Horticulture. Champaign, Ill., Nov. 1, 96. B.S. Illinois, 20; M.S. Purdue, 29. Ph.D. 36. Hort. research, Exp. Sta., Purdue, 20- Soc. Hort. Sci. Pomology; pruning of apple trees; management of orchard soils; cold storage and keeping qualities of produce; types of farm storages for fruits and vegetables.

Baker, Prof. Clinton L(yle), Southwestern, Memphis, Tenn. Protozoology. Hamburg, Ark., Aug. 5, 04. B.S. Emory, 25, M.S., 26; Ph.D. Columbia, 32. Asst. prof. biol., Millsaps Col., 26-28; asst. N. Y. Univ., 29; zool., Columbia, 29-31; asst. prof. biol., Detroit, 31-32; assoc. prof., Southwestern (Tenn.), 32-Summers, instr., Hunter Col., 29; Columbia, 31. Director, Reel foot Biol. Sta., Tenn. A.A. Cytology of the Euglenidae.

Baker, Prof. C(roshby) F(red), 53 Johnson Ave., West Medford, Mass. Chemistry. Hampden, Maine, Feb. 15, 87. B.S. M.S., Tufts Col. Instr. chem., Tufts Col., 11-16, asst. prof., 16-23, prof., 23- Chem. Soc.; Min. and Metal. Eng. Metallurgy of non-ferrous metals; analytical chemistry.

Baker, Donald M(ecdord), 108 W. Sixth St., Los Angeles, Calif. Hydraulic engineering. Poway, Calif., Nov. 25, 90. B.S. California, 13. Asst. engineer, U. S. Indian Irrig. Service, 13-16; hydraulic engineer, State Water Cmn. and div. water rights, State Dept. Pub. Works, Calif., 17-24; consulting engineer, 24- Pres., Board of City Planning Commissioners, Los Angeles, 29-30; State Board Registration for Civil Engineers, Calif., 29-31; Los Angeles Eng. Council, 33-34; engineer consultant, Nat. Resources Board, 35- Officier, Ordre du Quissam Alaouite, Morocco. Civil Eng. (chairman, cmt. on meteorol. data, 31-, mem., cmt. nat. water policy, 35-); Asn. Eng. (director, 24-26, 2nd v. pres., 26, 1st v. pres., 27-29); Geophys. Union; Acad. Polit. and Social Sci; Water Works Asn; Pacific Geog. Soc. Hydrology; city and regional planning; water supply and utilization; precipitation; ground water; traffic; engineering economics.

Baker, Prof. E(dwin) M(yron), University of Michigan, Ann Arbor, Mich. Chemical engineering. Toledo, Ohio, Feb. 21, 93. B.S. Pa. State Col., 16. Chemist and shift supt., Hooker Electrochem. Co., 16-18; instr. chem. eng., Michigan, 18-20; asst. prof., 20-23; assoc. prof., 28-33, prof., 33- consulting engineer. Chem. Eng.; Chem. Soc.; Electrochem. Soc. (v. pres., 32, manager, 37-); Electro-platers Asn.; Soc. Test. Mat. Gas absorption; electrodeposition; distillation.

Baker, Prof. E(lmis) C(rain), 801 Monroe St., Stillwater, Okla. Mechanical engineering. Brandon, Miss., Feb. 1, 89. B.S. (M.E.), Miss. Agr. and Mech. Col., 11; M.S. (M.E.), Iowa State Col., 30. Efficiency engineer, Meridian Light and Ry. Co., Miss., 11-12; instr. mech. eng., Miss. Agr. and Mech. Col., 12-13, asst. prof., 13-14; prof., Okla. Sch. Mines and Metal, 14-17; asst. prof., Agr. and Mech. Col., Texas, 17-19; chief engineer and asst. supt., boiler plant, Int. Ship Building Co., Miss. and Texas, 19-21; asst. prof. mech. eng., Okla. Agr. and Mech. Col., 21-23; assoc. prof., 23-28, prof. in charge dept., 28- Mech. Eng.; Eng. Educ. Gas and oil fired internal combustion engines.

Baker, Ernest L. Pyramid Process Co., East Rochester, N. Y. Chemistry. Portland, Maine, 80. B.S. Maine, 03. Asst. chemist, N. Y. Exp. Sta., Geneva, 05-07, assoc. chemist, 07-14; chief chemist, Patent Cereals Co., 14-20; Schreiber Products Corp., 20-22; pres., Pyramid Process Co., 22- Chem. Soc. Cereal foods; cattle foods; dextrins; starches; sugars; vegetable oils; sugars from cereal starches; adhesives.

Baker, Dr. Frances E(llen), Mt. Holyoke College, South Hadley, Mass. Mathematics. Anna, Ill., Dec. 19, 02. A.B. Iowa, 23, M.S., 25; fellow, Chicago, 32-33, Ph.D., 34. Tabor Col., 25-27; Jefferson City Junior Col., Mo., 27-28; Creston Junior Col., Iowa, 29-31; Vassar Col., 35; instr. math., Mt. Holyoke Col., 35- Math. Soc.; Math. Asn. Finite combinatorial analysis.

Baker, F(rank) C(ollins), Museum of Natural History, Urbana, Ill. Zoology, Paleontology. Warren, R. I., Dec. 14, 67. Brown, 88-89; Jesup scholar, Acad. Nat. Sciences, Phila., 89-90; B.S. Chicago Sch. Sci., 95. In charge invert. dept., Ward's Nat. Sci. Estab., Rochester, 91-92; curator, Field Museum Nat. Hist., 94; curator, Chicago Acad., 94-15; zool. investigator, Syracuse, 15-17; curator, museum nat. hist., Illinois, 18- Acad. Nat. Sciences, Phila. exped., Mex., 90; Mollusca surv., Wis., 20-23; consultant, Ill. Geol. Surv., 25-; Mollusca surv., Ill. Nat. Hist. Surv., 31- A.A.; fel. Paleont. Soc.; Ecol. Soc.; Nat. Asn. Audubon Societies (v. pres., 96-15); Asn. Mus. (councilor, 14-16); Mollusca Union; fel. Geol. Soc.; Ill. Acad. (sec'y, 11, v. pres., 31); Chicago Acad. (sec'y, 94-96, 08); fel. Rochester Acad. (sec'y, 91); cor. mem. Zool. Soc. London; British Mus. Asn. Pleistocene and Canadian Mollusca; ecology; Lymneidae; Planorbidae; fresh-water pulmonates; limnology; museum administration; ethnoconchology; ethnozoology; land Mollusca of Illinois.

Baker, Dr. Fred(erick), 842 Rosecrans Blvd., Point Loma, Calif. Conchology. Norwalk, Ohio, Jan. 29, 54. B.S. Cornell, 78; M.D. Michigan, 80. Asst. ophthal. and otol., Michigan, 80-81; collector, U. S. Nat. Museum, Japan, China, Borneo, Sarawak, Formosa, Cambodia and P. I., 13-15; hon. curator molluscs, Scripps Institution, California, 30- Conchologist and surgeon, Stanford exped., Brazil, 11; Calif. Acad. exped., Gulf of Calif., 21. Trustee, Calif. State Nat. Sch., San Diego, 11-13. Malacol. Union (councilor, 37-); hon. mem. Pacific Geog. Soc.; fel. Calif. Acad.; South. Calif. Med. Soc. (pres., 00); Calif. Med. Soc. (v. pres., 00); San Diego Soc.

- Nat. Hist. (pres, 20-22); San Diego Mus. Asn. Mollusks; ophthalmology; otology; rhinology; laryngology.
- Baker, Prof. F(rederick) S(torrs),** University of California, Berkeley, Calif. Forestry. Bridgeport, Conn., June 3, 90. F.E. Colo. Col. 12. Officer, U. S. Forest Service, 12-25; assoc. prof. forestry, California, 26-36, prof., 36—Soc. Foresters; Ecol. Soc. Silvicultural phases of forestry.
- Baker, Dr. George A(len),** College of Agriculture, University of California, Davis, Calif. Mathematics. Robinson, Ill., Oct. 31, 03. B.S. Illinois, 26, Ph.D., 29. Assoc. statistician, U. S. Pub. Health Service, 29; fellow, Columbia, 29-30; statistician, State Dept. Health, New York, 30-31; head dept. math, Shurtleff Col., 31-34; prof. and head dept. Miss. Woman's Col., 34-36; with consumers' purchase study, bur. home econ. U. S. Dept. Agr., 36-37; instr. math. and junior statistician, col. agri., California, 37—Summers, statist. asst., Cornell, 31, statistician, Tennessee, 35. Math. Soc.; Math. Asn.; Statist. Asn.; South. Intercollegiate Math. Asn. (exec. councilor, 35-). Mathematical statistics; random sampling variations of means; variances; correlation coefficients.
- Baker, Prof. George J(acob),** 1117 12th St., North Fargo, N. Dak. Animal husbandry. Alma Center, Wis., April 9, 80. B.S.A., Minnesota, 09, M.S.A., 10. Asst. demonstration farms, Minnesota, 09-13; acting county agent leader, 13-15; supt. demonstration farms, Minnesota, 15-18; animal husbandman, exten. div., N. Dak. Col., 21-28, asst. animal husbandry and acting chairman, dept., 28-30; prof. animal husbandry and exten. animal husbandman, 30-, acting director exten. service, 37—Dist. supervisor, agr. adjust. admin., U. S. Dept. Agr., 33-36. Soc. Animal Production; Percheron Soc.; Shorthorn Breeders Asn.; N. Dak. Livestock Breeders Asn. (sec'y-treas., 22-, ed. 'Jour'). Milking shorthorns.
- Baker, Dr. G(erald) C(hifford),** 208 Hansler Place, Peoria, Ill. Sanitary chemistry. Bement, Ill., March 1, 94. A.B., Illinois, 17, M.S., 19; Ph.D., Iowa, 22. Chemist and bacteriologist, State Water Surv., Ill., 17-20; supervising chemist, Newport Chem. Co., 20-21; instr. chem., Iowa, 22-25; tech. director, Premier-Pabst Co., 25—Summer, chemist, Borromite Co. of Amer., 21. Consulting sanit. chemist, 22-25. Chem. Soc.; Water Works Asn. Water chemistry; water softening; malt products; sugars; syrups; feeds; beverages.
- Baker, Dr. Gladys E(lizabeth),** Hunter College, 68th St. and Park Ave., New York, N. Y. Botany. Iowa City, Iowa, July 22, 08. A.B., Iowa, 30, scholar, 30-31, M.S., 32; Jessie R. Barr fellow, Washington (St. Louis), 33-35, Ph.D., 35. Asst. bot., Washington (St. Louis), 35-36; instr. biol., Hunter Col., 36—A.A.; Torrey Bot. Club; Mycol. Soc. Mycology; morphology of Myxomycetes and Heterobasidiomycetes.
- Baker, Dr. Harry J(ay),** 453 Stimson Ave., Detroit, Mich. Educational psychology. Kinsman, Ohio, July 31, 89. A.B., Michigan, 13, A.M., 18, Ph.D., 20. Sch. supt., Ohio, 13-17; clin. psychologist, 20—Summers, prof., Missouri, 21-23, 25; Wisconsin, 28-31. A.A.; Psychol. Asn.; Soc. Study Educ. Intelligence tests; mechanical aptitudes examinations; characteristic differences in bright and dull pupils; educational disability and case studies in remedial teaching; diagnosis and treatment of behavior-problem children.
- Baker, Prof. Herbert J(onathan),** Rutgers University, New Brunswick, N. J. Agriculture. Selbyville, Del., April 15, 85. B.S. Mass. Col., 11; M.Ed., Harvard, 30. Asst. instr. agron. Mass. Col., and asst. to director, Exp. Sta., 11-12, asst. county agent leader and demonstrator farm management, 12-15; director agr. exten. service, Conn. Agr. Col., 15-23; prof. agr. exten. and director agr. and home econ. exten. service, N. J. State Col. Agr., Rutgers, 23—Special investigator, U. S. Dept. Agr., 28; consultant, Cmn. Reorganization of State Depts., Conn., 35-36. Chevalier du Mérite agricole, 19; officier d'Acad., 19. Director, A.E.F. Farm Sch., France, 19.
- Baker, Dr. Horace Burrough, University of Pennsylvania, Philadelphia, Pa. Zoology.** Sioux City, Iowa, Jan. 25, 89. B.S. Michigan, 10, Ph.D., 20. Instr. zool., Colo. Col., 13-17, asst. prof., 17; instr., Pennsylvania, 20-26, asst. prof., 26-29; assoc. prof., 29—Research assoc. Acad. Nat. Sciences Phila., 25—Bishop Museum fellow, Yale, 35. Summers, Mich. Biol. Surv., 08-10; instr. Marine Biol. Lab., Woods Hole, 24-26. Managing ed., 'The Nautilus,' 32—Univ. Mich. Museum exped., Mex., 10, 26; Venezuela, 20; Curaçao, 22; Jamaica, 33. Soc. Nat.; Soc. Zool.; Ecol. Soc.; Malacol. Union (councilor, 37-); London Malacol. Soc.; Deuts. Malakozool. Gesell. Moluscan morphology and systematics; animal distribution.
- Baker, Prof. H(orace) G(reeley),** 1706 Tacoma Ave., S., Tacoma, Wash. Genetics. Near Altoona, Kans., March 5, 73. A.B., Iowa, 24, A.M., 25; American Univ. Asst. prof. biol., Southwestern Col., 25-27; assoc. prof., 27-29; prof. Dakota Wesleyan, 29-31; manager, Econ. Publishers, 31—Lecturer, Eugenics Exhib. Bldg., Topeka Free Fair, 28. Eugenics Soc. Speculative biology; evolution; mutation; mental hygiene.
- Baker, Pres. H(ugh) P(otter),** Massachusetts State College, Amherst, Mass. Forestry, Education. St. Croix Falls, Wis., Jan. 20, 78. B.S. Mich. State Col., 01; M.F., Yale, 04; D.Oec., Munich, 10; LL.D. Syracuse, 33. Forest asst., U. S. Forest Service, 01-11; assoc. prof. in charge forestry, Iowa State Col., and forester, Exp. Sta., 04-07; prof. forestry, Pa. State Col., and forester, Exp. Sta., 07-12; dean, N. Y. State Col. Forestry, and prof. silviculture, Syracuse, 12-20; sec'y, Am. Paper and Pulp Asn., 20-28; manager, trade assoc. dept., U. S. Chamber of Commerce, 28-30; dean, N. Y. State Col. Forestry, Syracuse, 30-33; pres., Mass. State Col., 33—Asst. Forest Surv., Nebr. and Wyo., 01; chief, Iowa Forest Surv., 05; in charge forestry short course, Colo. Agr. Col., 07. A.A.; Soc. Foresters; fel. Royal Geog. Soc. Sand dunes along Columbia River; public lands of central Idaho; silviculture in New Mexico; forest surveys of Idaho and Iowa; adaptability of prairie states to growing of trees for commercial purposes; forest economics.
- Baker, Prof. I(da) M(ay),** The Commodore, Cleveland, Ohio. Mathematics. College City, Calif., Nov. 3, 88. B.S., Columbia, 23, A.M., 24; Ph.D., Ohio State, 37. Teacher, sch., Calif., 09-18; instr. and supervisor math., Calif. State Teachers Col., Fresno, 18-20, 24-25; asst. prof. sch. educ., Western Reserve, 25-29; assoc. prof., 29—A.A.; Math. Asn.; Nat. Council Math. Teachers. Radio lessons in arithmetic.
- Baker, Prof. J(ease) Allen,** 1101 N. C St., Indianola, Iowa. Inorganic chemistry. McMinnville, Oregon, July 23, 83. B.S., Linfield Col., 05; A.B., Denison, 07, A.M., 08; Ph.D., Iowa, 26; Wisconsin, 14; Illinois, 19-20; Chicago, 21. Linfield Col., 06; Simpson Col., 08-17; Iowa Wesleyan Col., 19; prof. chem., Simpson Col., 20—Chief army inspector ordnance, Atlas Powder Co., N. J., 18. Chem. Soc. Determination of tin in Babbitt and other alloys; solubilities of inorganic salts in sulfur monochloride; chemical reactions of sulfur monochloride with inorganic salts.
- Baker, Prof. John B(abeck),** 3821 Albemarle Ave., Drexel Hill, Pa. Mechanical engineering. Pontiac, Ill., June 23, 97. B.S., Illinois, 21, M.S., 24; Ph.D., 36. Chemist, Exp. Sta., Illinois, 21-23; asst. mech. eng. exp. sta., 23-26; instr. Lafayette Col., 26-27; assoc. prof. and head dept., New Mexico, 27-31; asst. materials engineer, State Highway Dept., N. Mex., 31-34; asst. prof. mech. eng., Drexel Inst., 35—Mech. Eng. Thermodynamics of gas reactions; mechanism of metallic failure.
- Baker, Dr. John C(lark),** 67 Engl. Rock Way, Montclair, N. J. Chemistry. Ridgeway, Iowa, Aug. 11, 84. B.S., Upper Iowa, 10, hon. Sc.D., 33; A.M., Columbian, 15, Ph.D., 16. Asst., Upper Iowa, 10; head dept. science, N. Mex. Nor. Univ., 10-13; asst. chem., Columbia, 14-16; assoc. chemist, N. Y. Exp. Sta., Geneva, 16-19; chief chemist, Wallace and Tiernan Products Co., 19-, v. pres., 23—Trustee, Upper Iowa, 35. A.A.; Chem. Soc.; Asn. Cereal Chemists. Diastatic enzymes; casein; milk control; fruit and water sterilization; applications of chlorine; flour and textile bleaching; condenser cleaning; electrolytic cells.
- Baker, Dr. Kenneth F(rank),** Pineapple Producers Cooperative Association, Honolulu, Hawaii. Botany. Ashton, S. Dak., June 3, 08. B.S., State Col. Wash., 30, Ph.D., 34. Asst. plant path., State Col. Wash., 30-34; nat. research fellow, Wis., 34-35; junior pathologist, div. forest path., U. S. Dept. Agr., 35-36; assoc. pathologist, Exp. Sta., Pineapple Producers Cooperative Asn., 36—Supervising technician, div. forest path., U. S. Dept. Agr., 34. Hawaiian Acad. Phytopath. Soc. Storage decays of apples; physiology of fungi.
- Baker, Dr. Kenneth H(ammond),** University of Minnesota, Minneapolis, Minn. Psychology. Randolph Center, Vt., April 5, 07. A.B., Ohio Wesleyan, 29, A.M., 30; Northwestern, 30-31; Ph.D., Ohio State, 34. Instr. psychol., Ohio State, 31-35; Minnesota, 35—Assoc. Psychol. Asa. Physiological psychology; human behavior.
- Baker, Dr. L(awrence) M(anning),** Berea College, Berea, Ky. Psychology. Laurel Creek, Ky., Jan. 23, 07. A.B., Berea

Col, 29; fellow, Kentucky, 31-33, A.M., 32, Ph.D., 33. Teacher, high sch, Ky, 30-31; assoc. prof. and prof. psychol. and head dept., Berea Col, 33- Assoc. Psychol. Asn. Experimental and general psychology; physiological factors involved and the changes taking place during learning.

Baker, Dr. Lillian E (loise), 182 East End Ave, New York, N. Y. Chemistry. Wheaton, Ill, 90. A.B. Wellesley Col, 14; A.M., Columbia, 19, fellow, 21-22, Ph.D., 22. Instr. physics and chem, Pratt Inst, 14-18; chem, Wellesley Col, 18-21; assoc. Rockefeller Inst, 22-31, assoc, 31- Physiology and nutrition of normal and malignant living cells; chemical changes and aging of animals.

Baker, Prof. M(anley) B(enson), 120 University Ave, Kingston, Ont, Can. Geology. Stratford, Ont, March 29, 77. B.A., Queen's (Can), 00, B.Sc., 02; Heidelberg, 07; Cambridge, 09. Lecturer geol, Queen's (Can), 00-05, acting prof. ecol, 06-08, prof. and head dept, 08- Field work, Ont. Dept. Mines, 00- Fel. Geol. Soc; Can. Inst. Min. and Metal. (councilor, 13-17); Royal Soc. Can. Precambrian geology of Ontario.

Baker, Prof. Merle P(orter), Iowa State College, Ames, Iowa. Dairying. Marengo, Iowa, Jan. 17, 99. B.S. Iowa State Col, 21, M.S., 23, Ph.D., 31. Asst. Exp. Sta, Iowa State Col, 22-26, asst. prof. dairy indust, col, 26- Wisconsin Alumni Research Foundation, 34-35. Dairy Sci. Asn; Soc. Bact. Dairy bacteriology.

Baker, M(oses) N(elson), 53 Oakwood Ave, Upper Montclair, N. J. Engineering. Enosburgh, Vt, Jan, 26, 64. Ph.B., Vermont, 86, C.E., 99. Assoc. ed, 'Eng. News,' 87-17; 'Eng. News Record,' 17-32; retired. Mem. Board Health, Montclair, 94-04, pres, 04-15; v. pres, State Dept. Health, N. J, 15. Water Works Asn; Nat. Munic. League (chairman, exec. cmt, 13-18); New Eng. Water Works Asn. Civil and sanitary engineering; public health; water and sewage treatment; garbage and refuse disposal; municipal administration; history of water treatment.

Baker, Dr. O(liver) E(dwin), College Park, Md. Geography, Economics. Tiffin, Ohio, Sept. 10, 63. B.S. Heidelberg Col. (Ohio), 03, M.S., 04, Sc.D., 37; A.M. Columbia, 05; Ph.D., Wisconsin, 21. Senior agr. economist, bur. agr. econ, U. S. Dept. Agr, 12- Prof. Clark, 23-26. Summers, Wis. Soil Surv, 10-12. V. chairman, div. geog. and geol, Nat. Research Council, 32. Del. Int. Union Sci. Investigation Popul. Problems and Int. Popul. Cong, 37. Asn. Geog. (v. pres, 23, pres, 32); Meteorol. Soc; Statist. Asn; Farm Econ. Asn; Popul. Asn. Land utilization; agricultural geography; climatology; ecology; sociology.

Baker, Prof. Perley D(ustin), Norwich University, Northfield, Vt. Chemistry. Bow, N. H, May 8, 97. B.S. Norwich, 20; A.M. Columbia, 26. Instr. chem, Norwich, 20-23, asst. prof, 23-29, assoc. prof, 29- Major, C.W.Res. Chem. Soc. Organic chemistry.

Baker, R(aymond) F(rank), 135 E. 42nd St, New York, N. Y. Geology. New Haven, Conn, Jan. 11, 92. Ph.B. Yale, 12. Geol. aid, U. S. Geol. Surv, 15-16; geologist, The Texas Co, 16-22, chief geologist, 22- A.A; Soc. Econ. Geol; Asn. Petroil. Geol.

Baker, Prof. R(aymond) K(emp), 717 12th St, Saskatoon, Sask, Can. Poultry husbandry. Trenton, Ont, Nov. 17, 76. B.A. Manitoba, 00. Sch. teacher, farmer and commercial poultryman, 00-13; asst. prof. animal husbandry, Saskatchewan, 13-16, prof. poultry husbandry, 16- Poultry Sci. Asn; Can. Soc. Tech. Agr. Breeding to increase production; conditions in poultry houses during winter.

Baker, Prof. Robert H(orace), University of Illinois, Urbana, Ill. Astronomy. Northampton, Mass, March 29, 83. A.B. Amherst Col, 04, A.M., 05; Ph.D., Pittsburgh, 10; Sc.D., Oglethorpe, 36. Asst. observatory, Amherst Col, 04-06; Allegheny Observatory, Pittsburgh, 06-10; asst. prof. astron, Brown, 10-11; prof. Missouri, 11-23; prof. Illinois, and director observatory, 23- Research assoc, Harvard, 31-32. A.A; Astron. Soc. Stellar spectroscopy; photographic and photoelectric photometry.

Baker, Dr. Roger D(enlo), Duke Hospital, Durham, N. C. Pathology. East Lansing, Mich, April 10, 02. A.B. Wisconsin, 24; M.D. Harvard, 28. Asst. path, Hopkins, 28-29, instr. sin, 24; M.D. Harvard, 28. Asst. path, Hopkins, 28-29, instr. sin, 24; M.D. Harvard, 28. Asst. path, 32-34, assoc. prof, 34- A.A. 29-30; anat. Duke, 30-32, path, 32-34, assoc. prof, 34- A.A. 29-30; anat. Duke, 30-32, path, 32-34, assoc. prof, 34- A.A. 29-30; anat. Duke, 30-32, path, 32-34, assoc. prof, 34- A.A. 29-30; assoc. prof. biol, Emory, 25-26, prof, 26- Rosenwald fel-Surgical pathology; fungous diseases.

Baker, Prof. R(ollo) C(lyde), Ohio State University, Columbus, 'Ohio. Anatomy. Middlebourne, Ohio, Oct. 2, 88. A.B. Ohio State, 15, A.M., 17; Ph.D., Chicago, 27. Instr. anat, Ohio State, 17-21, asst. prof, 21-27, assoc. prof, 27-32, prof, 32-, chairman dept. and sec'y col. med. Asn. Anat. Neurology and embryology of the central nervous system of urodeles.

Baker, Prof. Ross Allen, 101 Lakeside Drive, Baldwin, L. I, N. Y. Chemistry. Greencastle, Ind, Nov. 13, 86. A.B. DePauw, 06, A.M., 07, Sc.D., 37; Ph.D., Wisconsin, 14. Instr, high sch, Ill, 07-08; prof. chem, Baker, 08-10; instr, Wisconsin, 10-14; Minnesota, 14-16, asst. prof, 17-18; prof. inorg. chem, Syracuse, 19-30; chem. and in charge dept, commerce center, Col. City of N. Y, 30- Prof. Maryland, 24-25. Mem, Nat. Senate Chem. Educ, 25-30, sec'y, 27-30; Sci. Council, New York, 31- Dept. ed, 'Jour. Chem. Educ,' 25- Del, Int. Union Pure and Applied Chem, 28. Major, C.W.S, and commandant, U. S. Gas Sch, 18. A.A; Chem. Soc. (councilor, 31-, chairman, Syracuse sect, 23, sec'y, div. chem. educ, 27-32, chairman, 34); Inst. Chem. (chairman, N. Y. sect, and councilor, 34-); N. Y. Chem. Teachers Club (pres, 34). Metals; chemical education.

Baker, Dr. S(arah) Josephine, 148 Hodge Road, Princeton, N. J. Child hygiene. Poughkeepsie, N. Y, Nov. 15, 73. M.D. Woman's Med. Col. N. Y, 98; Dr.P.H. N. Y. Univ, 17. Med. inspector, Dept. Health, New York, 01-07, asst. commissioner, 07-08, director bur. child hygiene, 08-22. Lecturer, Teachers Col, Columbia; Univ. and Bellevue Hosp. Med. Col; consultant, U. S. Pub. Health Service; consultant, children's bur, U. S. Dept. Labor. Child Hygiene Asn. (pres, 18); Pub. Health Asn; Am. Med. Asn; fel. N. Y. Acad. Med. Health of children.

Baker, Prof. T(homas) A(lexander), University of Delaware, Newark, Del. Dairy husbandry. Dalton, Ga, Jan. 17, 93. B.S. Cornell, 14, Ph.D., 33. Instr. animal husbandry, Cornell, 14-17; N. Y. State Sch. Agr, Cobleskill, 17-18; prof, Delaware, 19- Dairy Sci. Asn. Heredity in dairy cattle.

Baker, Dr. Thomas S(tockham), Carnegie Institute of Technology, Pittsburgh, Pa. Education. Aberdeen, Md, March 23, 71. A.B. Hopkins, 91, Ph.D., 95; Leipzig, 92; LL.D, Delaware, 24; hon. Sc.D. Duquesne, 28, Lafayette Col, 32. Assoc. German, Hopkins, 95-00, lecturer modern German lit. and prof. modern languages, 00-08; director, Tome Inst, 08-19; sec'y, Carnegie Inst. Tech, 19-22, pres, 22-35, emer. pres, 35- Organizer, Int. Conf. on Bituminous Coal, Carnegie Inst. Tech, 26, 28, 31. A.A. Coal.

Baker, Dr. Weldon N(icholas), Morningside College, Sioux City, Iowa. Chemistry. Mt. Vernon, Iowa, July 15, 09. A.B. Morningside Col, 30; M.S. Iowa, 31; Ph.D., Columbia, 35. Instr. chem, Allegheny Col, 35-36; junior sea food inspector, food and drug admin, U. S. Dept. Agr, 36-37; instr. chem, Morningside Col, 37- Chem. Soc. Physico-chemical properties of heavy water.

Baker, W(illiam) A(iphonso), 1920 Parkwood Ave, Toledo, Ohio. Entomology. Dorchester, Mass, Aug. 14, 98. B.S. Mass. Col, 20. Div. cereal and forage insects, bur. entom. and plant quarantine, U. S. Dept. Agr, San Antonio, 20-24, Dallas, Texas, 25-26, Arlington, Mass, 26-28, Monroe, Mich, 28-33, parasite investigations of European corn borer, Toledo, Ohio, 33- senior entomologist in charge. Asn. Econ. Entom.; Entom. Soc. Amer. General cereal and forage insect investigations; sorghum midge and web worm; grass-hoppers and green bug; parasites.

Baker, Willis M(iles), U. S. Forest Service, Columbus, Ohio. Forestry. Warren, Pa, April 24, 92. B.S. (Forestry), Pa. State Col, 14. Forest ast, nat. forest, Ariz, U. S. Forest Service, 14-17; state forest ranger, Dept. Conservation and Develop, N. J, 17-18, asst. forester, 18-22, assoc. state forester, 22-30, supt. state forests, 26-30; director, Pa. Forest Research Inst, Mont Alto, 30-31; Cent. States Forest Exp. Sta, U. S. Forest Service, 31- Soc. Foresters (chairman, Allegheny sect, 29, cent. states sect, 35). Silviculture.

Baker, Prof. W(oolford) B(ales), Emory University, Ga. Biology, Cytology. Las Vegas, N. Mex, Dec. 30, 92. A.B. Henderson-Brown Col, 13; M.S. Emory, 20; Ph.D., Columbia, 26. Instr. science, Henderson-Brown Col, 13-14, head master ecad, 14-15, prof. biol. sciences and head dept, 15-19; instr. biol, Emory, 19-21, asst. prof, 21-24; acting prof. biol. and head dept, Agnes Scott Col, 22-24; asst. zool, Columbia, 24-25; assoc. prof. biol, Emory, 25-26, prof, 26- Rosenwald fel-

- low, Kaiser Wilhelm Inst, 31-32. Summer, instr, Marine Biol. Lab, Woods Hole, 26. Soc. Zool; Micros. Soc; Ga. Acad. Cytology and physiology of Euglenoidina; sex determination in aroids.
- Baker, Dr. Zelma**, 133 S. 36th St, Philadelphia, Pa. *Biochemistry*. Pittsburgh, Pa, Aug. 23, 10. B.S, Pittsburgh, 30, Ph.D, 34. Asst. chem, Pittsburgh, 31-34; *biochemist, biochem. research foundation, Franklin Inst*, 34- Biochemistry; enzyme kinetics; tissue respiration.
- Bakhmeteff, Prof. Boris A(lexander)**, Columbia University, New York, N. Y. *Civil engineering*. Tiflis, Russia, May 14, 80. C.E, St. Petersburg, 03, D.E, 12. Docent and prof, Polytech. Inst, St. Petersburg, 07-15; *prof. civil eng, Columbia*, 31-; *consulting engineer*. Chairman board, Lion Match Co, 24- Civil Eng; Mech. Eng; Eng. Inst. Can. Fluid mechanics; hydraulics.
- Bakke, Dr. A(rthur) L(awrence)**, Ames, Iowa. *Plant physiology*. Horace, N. Dak, June 26, 86. B.S, Iowa State Col, 09, M.S, 11; Ph.D, Chicago, 17. Asst. bot, Iowa State Col, 08-09; instr, Elgin Acad, 09-10; *Iowa State Col*, 10-13, asst. prof. bot. and plant physiol, 13-17, assoc. prof. plant physiol, 17-25, prof, 25-, *research prof, Exp. Sta*, 25- Assoc. desert lab, Carnegie Institution, 13, 14; collaborator and asst. pathologist, bur. plant indust, U. S. Dept. Agr, 14, 18, 19, 34, agent, 36-, plant physiologist, Copenhagen, 29; *Cent. Exp. Sta*, Stockholm, 29. A.A; Soc. Plant Physiol; Bot. Soc; Ecol. Soc; fel. Iowa Acad. City smoke and vegetation; transpiring power of plants; determination of wilting; hardiness of plants; respiration in plants; action of herbicides.
- Bakken, Prof. Henry H(arrison)**, 2218 Chadbourne Ave, Madison, Wis. *Agricultural economics*. March 24, 96. A.B, Wisconsin, 22, A.M, 23. Asst. prof. and assoc. prof. agr. econ, Wisconsin, 23- Econ. Asn. Marketing agricultural products.
- Bakken, Herman E**, Aluminum Co. of America, New Kensington, Pa. *Metallurgy, Chemistry*. Faribault, Minn, Sept. 13, 92. A.B, St. Olaf Col, 15; Minnesota, 16-18. Supt, Am. Magnesium Corp, Niagara Falls, 24-28; asst. director research, *Aluminum Co. of Amer*, 28- Director, Am. Magnesium Corp, Pittsburgh, 28- 2nd lieut, C.W.S, 18-19. Chem. Soc; Soc. Metals. Purification of magnesium and other metals; preparation of barium and strontium; manufacture of phosgene.
- Balamuth, Dr. Lewis**, College of the City of New York, New York, N. Y. *Physics*. New York, N. Y, Dec. 31, 05. B.S, Col. City of N. Y, 27; Ph.D, Columbia, 34. *Instr. physics, Col. City of N. Y*, 27- Solid state.
- Balch, Francis N(oyes)**, Massachusetts Bldg, 60 State St, Boston, Mass. *Biology*. Boston, Mass, Nov. 23, 73. A.B, Harvard, 96, A.M, 97, LL.B, 00; Woods Hole, 96; U. S. Fish Cmn, 97; Cold Spring Harbor, 98, 99; Bermuda, 10. Mem, Mass. Constitutional Convention, 16-19; Mass. Legislature, 19-20; assoc. prof. legal aspects of business, grad. sch. business admin, Harvard, 30-35; Boston Finance Cmn, A.A; Soc. Nat; Soc. Zool; fel. Am. Acad; Nuttall Ornith. Club; Boston Soc. Nat. Hist; Boston Malacol. Club (v. pres. and past pres); London Malacol. Soc; Conchol. Soc. of Gt. Britain and Ireland. Coloration and distribution of Mollusca; bird migration and coloration; chromatophores of cephalopods; the Nudibranchiata; heredity, eugenics and crime; anthropology and pre-history.
- Balch, Royal T(yler)**, U. S. Department of Agriculture, Washington, D. C. *Chemistry*. Kalamazoo, Mich, Jan. 3, 95. B.S, Kalamazoo Col, 16; A.M, Clark, 17. *Bur. chem. and soils, U. S. Dept. Agr*, 17-18, 19-, senior chemist. C.W.S, U. S.A, 18-19. Chem. Soc. Physical constants in relation to carbohydrate analysis; sugar manufacture; production of starch from sweet potatoes; sugar-cane deterioration.
- Baleh, Prof. Walter B(uswell)**, Kansas State College, Manhattan, Kans. *Horticulture*. Chicago, Ill, Oct. 1, 95. B.S, Cornell, 19; M.S. Kans. State Col, 25; Chicago, 26, 29-32. N. Y. Bot. Garden, 19-21; from instr. to assoc. prof. hort. in charge olericulture and floriculture, Kans. State Col, 21- U.S.N, 17-19. Kans. State Florists Asn. (sec'y-treas, 26). Olericulture; floriculture; soil sterilization; enzymatic and respiratory activities of roots while dormant and after treatment to break rest period; evaporation studies with recording atmometers; vegetable variety trials.
- Balderton, Dr. Mark**, Lafayette College, Easton, Pa. *Physics*. Colora, Md, 89. A.B, Haverford Col, 12; Harvard, 12- 13; Ph.D, Columbia, 25. Asst. physics, Lafayette Col, 13-15; prof, Guilford Col, 15-22, dean, 17-22; instr. physics, *Lafayette Col*, 24-26, asst. prof, 26-30, assoc. prof, 30- A.A; Physical Soc; Asn. Physics Teachers. X-rays.
- Baldes, Dr. Edward J(ames)**, Mayo Clinic, Rochester, Minn. *Biophysics*. Fairfield, Nebr, July 5, 98. B.A, Saskatchewan, 18; A.M, Harvard, 20, Ph.D, 24; Ph.D, London, 36. Asst. physics Saskatchewan, 18-19; Radcliffe Col, 21-24; instr, Harvard, 23-24; asst. biophys, Mayo Foundation, Minnesota, 24-34, assoc. prof, 34-, mem. div. physics and biophys. research, 24-; Mayo Clinic, 24. Physical Soc; Physiol. Soc; Inst. Physics. Blood flow; osmotic pressure; electro-phisiology.
- Baldeschwieler, E(mile) L(ouise)**, 7 W. Holly St, Cranford, N. J. *Chemistry*. Switzerland, March 1, 90. Ch.B, Cooper Union, 13, B.S, 20. Chemist in charge lab, Bishop Gutta Percha Co, New York, 10-13; asst. chief chemist, Int. Nickel Co, New York, 13-22; chemist in charge analysis and inspection work, research labs, Standard Oil Develop. Co, Linden, N. J, 22- Chem. Soc; N. Y. Acad. Organic and analytical chemistry.
- Baldinger, Dr. Lawrence H(enry)**, 814 E. Corby Blvd, South Bend, Ind. *Pharmacy*. Galion, Ohio, Jan. 12, 07. Ph.C, Western Reserve, 28, B.S, 29; M.S, Notre Dame, 31, Ph.D, 33. Instr. pharmacy, Notre Dame, 29-37, asst. prof, 37-, head dept, 33- A.A; Pharmaceut. Asn; Chem. Soc; Ind. Acad. Oil of peppermint and synthetic medicinals.
- Balduf, Prof. W(alter) V(alentine)**, 610 Michigan Ave, Urbana, Ill. *Entomology*. La Carne, Ohio, Sept. 28, 89. A.B, Ohio Wesleyan, 15; M.S, Ohio State, 20, Ph.D, 22. Instr, high sch, Ohio, 15-18; zool. and entom, Ohio State, 18-20; asst. entomologist, Ohio Exp. Sta, 20-22; asst. prof. entom, Illinois, 22- A.A; Entom. Soc. Amer; Asn. Econ. Entom; Ill. Acad; Ohio Acad. General entomology; bionomics of entomophagous insects; taxonomy of Eurytomidae.
- Baldwin, Dr. Edward R**, Saranac Lake, N. Y. ^{*Medicine}. Bethel, Conn, Sept. 8, 64. M.D, Yale, 90, hon. A.M, 14; Sc.D, Dartmouth Col, 37. Asst. sch. med, Yale, 89-90; intern, Hartford Hosp, 90-92; asst, Saranac Lab, 94-15; director, Trudeau Foundation, 15- Am. Med. Asn; Asn. Path. and Bact; Am. Physicians; Tuber. Asn; Clin. and Climat. Asn. Tuberculosis; immunity and infection; tuberculin.
- Baldwin, Prof. E(rnest) J(oy)**, 540 S. Ninth Ave, Pocatello, Idaho. *Chemistry*. Hewins, Kans, Dec. 24, 90. B.S, Kansas, 15, M.S, 16; Ph.D, Stanford, 31. Instr. chem, South Dakota, 16-18; state food and drug chemist, S. Dak, 18; asst. prof. chem, South. Branch, Idaho; 19-27, prof, 27- Consulting physical chemist, U. S. Bur. Mines, 22. Chem. Soc. Conductance of electrolytes in non-aqueous solutions; optical determination of volatile oils in emulsions; photochemical determination of quantum efficiency of the oxygen-ozone reaction.
- Baldwin, Dr. Francis Marsh**, University of Southern California, Los Angeles, Calif. *Zoology*. West Upton, Mass, Jan. 16, 85. A.B, Clark, 06, A.M, 07; Ph.D, Illinois, 17. Instr. nature and science, Ky. Nor. Sch, Louisville, 08-11; prof. biol, Western Maryland Col, 11-15; asst. zool, Illinois, 15-17; asst. prof, Iowa State Col, 17-19, assoc. prof, 19-20, prof. physiol, 20-27; zool, *Southern California*, 27-, chairman dept, 29-, director, *Marine Biol. Sta*, 28- Bur. Fisheries, Woods Hole, 15. Summers, Illinois, 16; Marine Biol. Lab, Woods Hole, 19; Lakeside Lab, 24, 25. A.A; Physiol. Soc; fel. Iowa Acad. Earthworms; Ambystoma; carotid, aorta and subclavian arteries of the rabbit; permeability of sea-urchin eggs; consumption of oxygen in marine forms and snakes; body temperature in turtles; photochemical distribution on retina; metabolism; digital sphygmograph; simple spirometer; ultra-violet assay; interphysiology.
- Baldwin, G(eorge) Clyde**, 419 First National Bank Bldg, Great Falls, Mont. *Civil engineering*. Kinsman, Ohio, April 14, 84. B.S, Kansas, 06. Surveyor, Alaska Boundary Surv, 06-09; junior engineer, asst. engineer and hydraul. engineer, U. S. Geol. Surv, 10-30; gen. agent for Mont. and north. Wyo, Northwest. Mutual Life Ins. Co. of Milwaukee, 30- Aid, U. S. Coast and Geod. Surv, 03-04, 05. Trustee, pub. schs, Idaho Falls, 24-27. Civil Eng; Asn. Eng. Hydrometry; stream measurements; water distribution.

- Baldwin, Dr. Henry I(ves)**, Hillsboro, N. H. *Forestry*. Saranac Lake, N. Y., Aug. 23, 96. A.B., Yale, 19, M.F., 22; Ph.D., 31; Cornell, 20; Am-Scandinavian Foundation fellow, Sweden, 23-24; Germany, 27-29. Instr., high sch., N. Y., 19; asst. to dean, sch. forestry, Yale, 22-23; research forester, Brown Co., N. H., 24-32; visiting prof. forestry, Pa. State Col., 32-33; asst. forester, *State Forestry and Recreation Dept.*, N. H., and res. forester, *Caroline A. Fox Research and Demonstration Forest*, Hillsboro, 33- Mem. subcm't. on forestry, Nat. Research Council, 34; mem. cmt. preservation nat. conditions, Int. Union Forest Research Organizations, 29. A.A. (councilor, 34-); Soc. Foresters (exec. councilor, New Eng. sect., 28-30); Ecol. Soc.; Bot. Soc.; Soc. Protection N. H. Forests; N. H. Acad.; Svenska Skogsvardsförening. Silviculture; seed germination; meteorology; climatology.
- Baldwin, Prof. I(ra) L(awrence)**, University of Wisconsin, Madison, Wis. *Bacteriology*. Oxford, Ind., Aug. 20, 95. B.S.A., Purdue, 19, M.S.A., 21; Ph.D., Wisconsin, 26. Instr. bacter., Purdue, 19-24; asst. prof., 24-25; assoc. physiol., Exp. Sta., 26; asst. prof. agr. bacter., Wisconsin, 27-29; assoc. prof., 29-32; prof. and asst. dean col. agr., 32- A.A.; Soc. Baet. (secy-treas., 36-); Soc. Agron.; Wis. Acad.; Ind. Acad. General and soil bacteriology.
- Baldwin, Dr. Jane North**, Vassar College, Poughkeepsie, N. Y. *Hygiene*. Keeseville, N. Y., Feb. 10, 76. M.D., Cornell, 00. Asst. physician, *Vassar Col.*, 04-14; asst. physiol., 05-06; assoc. physician, 14-25; physician and prof. hygiene, 25- Asst. Neur. Inst., New York. Am. Med. Asn.; Col. Physicians; Am. Study Int. Secretions; Student Health Asn. (v. pres., 28-30, pres., N. Y. sect., 32-34); Women's Med. Soc., N. Y. Student health; endocrinology; pelvic histories of women after graduation.
- Baldwin, J(ullan) T(ownsend)**, Paulsboro Manufacturing Co., Paulsboro, N. J. *Chemistry*. Berkeley, Calif., July 11, 01. B.S., Princeton, 23; M.S. Mass. Inst. Tech., 24. Chemist, Sandura Co., Inc., 24-28; chief chemist, 28-30; Del. Floor Products, 36-37; mfg. manager, *Paulsboro Mfg. Co.*, 37- Chem. Soc.; Soc. Rheol.; Franklin Inst. Resins; plastics and protective coatings; pigment vehicle relationships; production and modification of vegetable oil gels.
- Baldwin, Dr. Mark**, 3614 N. Abingdon St., Arlington, Va. *Soils*. Ellis, Kans., June 8, 89. B.S., Earlham Col., 12; hon. Sc.D., 33. Soil surveyor, Ind., 11; soil scientist, bur. chem. and soils, U. S. Dept. Agr., 12-; inspector, 1st dist., soil surv., 23- Mem. Fed. Board Surv. and Maps. A.A.; Soc. Agron.; Am. Geog. Soc.; Soil Sci. Soc.; Int. Soc. Soil Sci. Soil science.
- Baldwin, Dr. M(aynard) M(artin)**, Pennsylvania State College, State College, Pa. *Organic chemistry*. Walla Walla, Wash., April 25, 04. B.S., Whitman Col., 20; Ph.D., Washington (Seattle), 35. Teacher, high schs., Wash. and Idaho, 26-30; research asst., mineral indust. exp. sta., Pa. State Col., 35- Chem. Soc. The condensation of aliphatic aldehydes with ketones; coal hydrogenation.
- Baldwin, Dr. S(amuel) Prentiss**, 11025 East Blvd., Cleveland, Ohio. *Biology, Ornithology*. Cleveland, Ohio, Oct. 26, 68. A.B., Dartmouth Col., 92, A.M., 94. Sc.D., 32; LL.B., Western Reserve, 94. Practicing lawyer, 94-99; chairman, *The Williamson Co.* Trustee, Cleveland Museum Nat. Hist.; director Baldwin Bird Research Lab., Ohio; research assoc., Western Reserve, A.A.; Soc. Nat.; fel. Ornith. Union; Soc. Zool.; Ecol. Soc.; Genetic Asn.; fel. Geol. Soc.; Inland, East, Northeast, and West. Bird-Banding Assn. (hon. pres.); Ohio Acad.; British Ornith. Union; Deuts. Ornith. Gesell.; Australasian Ornith. Union. Geology of Lake Champlain, Muir Glacier, Snake River and New Mexico; bird banding; daily life of birds; physiology of bird temperature; measurement of birds.
- Baldwin, Dr. W(esley) M(anning)**, P. O. Box 441, York Beach, Maine. *Anatomy*. Troy, N. Y., Aug. 18, 79. A.B., Cornell, 07, A.M., 09, M.D., 11; Bonn and Würzburg, 11-13; Sorbonne, 26. Asst. anat. med. col., Cornell, 04-06; asst. demonstrator, 06-07; instr., 07-14; asst. prof., 14-15; prof. Albany Med. Col. Union (N. Y.), 15-36; anatomist, Albany Hosp., 29-36. A.A.; Assn. Anat.; Anat. Gesell. Human anatomy and histology; experimental embryology; pancreas; muscle structure; syphilis; biological effects of x-rays and electromagnetic energy on cells and tissues.
- Bale, Dr. William F(reer)**, Strong Memorial Hospital, 360 Crittenden Blvd., Rochester, N. Y. *Biophysics*. Augusta, N. J., Jan. 2, 11. A.B., Cornell, 32; fellow, Rochester, 32-36, Ph.D., 36. Research asst., Rochester, 36- X-ray diffraction of tooth and bone tissues; physiological effects of radiation; utilization of radioactive substances as tracers in biological processes.
- Bales, Prof. P(aul) D(obson)**, 7772 Second Ave., S., Birmingham, Ala. *Physics*. Greeneville, Tenn., Feb. 25, 02. B.S., Chattanooga, 25; A.M., Indiana, 28. Asst. physics, Chattanooga, 22-25; instr., 25-27; asst. instr., Indiana, 27-28; prof. Howard Col. (Ala.), 29- A.A.; Physical Soc.; Am. Physics Teachers; Ala. Acad. Reflection characteristics of ultra-violet radiation; high frequency measurements.
- Balfour, Prof. Donald C(hurch)**, 427 Sixth Ave., S. W., Rochester, Minn. *Surgery*. Toronto, Ont., Can., Aug. 22, 82. M.B., Toronto, 06, M.D., 14, LL.D., 34. Prof. surg., Minnesota, 15-, assoc. director, Mayo Foundation, 35-37; director, 37- Surgeon, Mayo Clinic. Assoc. ed., 'Surg., Gynec. and Obstet.' 31- A.A.; Surg. Asn.; fel. Col. Surg. (pres., 36); Soc. Clin. Surg.; Ry. Surg.; Am. Med. Asn.; Interurban Surg. Soc.; S. Surg. Asn.; West. Surg. Asn.; hon. mem. Southeast. Surg. Cong.; hon. mem. Los Angeles Surg. Soc.; Minn. Acad.; Pan-Am. Med. Asn.; Soc. des Chirurg. de Paris; Royal Acad. Med. Rome; hon. fel. Royal Australasian Col. Surg.; Soc. int. de Chirurg. Abdominal surgery.
- Balfour, Dr. Marshall C(oulter)**, Rockefeller Foundation, New York, N. Y. *Public health*. Marlboro, Mass., Oct. 14, 96. B.S., Mass. Inst. Tech., 18; M.D., Harvard, 26. Asst. director div. popular health instruction, League Red Cross Societies, Geneva, 20-22; field director, int. health div., Rockefeller Foundation, 26- Tech. adviser, Ministry of Health, and director div. malaria, Sch. Hygiene, Athens, Greece, 30- A.A.; Pub. Health Asn.; Am. Med. Asn.; Soc. Trop. Med. Malaria.
- Ballinkin, Dr. Isay A(lexander)**, 2300 Auburn Ave., Cincinnati, Ohio. *Physics*. Odessa, Russia, Sept. 14, 00. B.S. (M.E.), Robert Col., Constantinople, 25; Hanna fellow, Cincinnati, 26, M.S., Ph.D., 29. Instr. physics, Cincinnati, 29- Designer, Cent. Sci. Co., Chicago, 30-31. Summer, asst. sec'y science advisory cmt., Nat. Research Council, 29; research physicist, Cambridge Tile Mfg. Co., Cincinnati, 36. A.A.; Am. Physics Teachers; Optical Soc. Optical determination of axial stresses; radiation from crystalline substances under high potentials; mercury and mercury-amalgam vapor lamps; wave-machines; transverse vibrations of long rods; flexible crystal models; physics of clays; colorimetry.
- Balk, Prof. R(obert)**, Mt. Holyoke College, South Hadley, Mass. **Geology*. Reval, Estonia, May 31, 99. Ph.D., Breslau, 24. Assoc., N. Y. Geol. Surv., 25-26; asst. prof. geol., Hunter Col., 25-35; assoc. prof. and head dept., Mt. Holyoke Col., 35- Acting asst. prof., Stanford, 34. Geol. Soc.; Geol. Verein; Norsk Geol. Förening. Structural geology.
- Balke, Dr. Clarence W(illiam)**, 40 Deere Park Drive, S., Highland Park, Ill. **Chemistry*. Auburn, Ohio, March 29, 80. A.B., Oberlin Col., 02; Ph.D., Pennsylvania, 05. Acting prof. physics and chem., Kenyon Col., 03-04; fellow, Pennsylvania, 05-06; instr. chem., 06-07; assoc., Illinois, 07-10, asst. prof. and prof. inorg. chem., 10-16; chem. director, Fansteel Products Co., North Chicago, Ill., 16- Summer, instr., Oberlin Col., 03. Chem. Soc.; Electrochem. Soc.; British Inst. Metals. Atomic weights; metallic cerium, tungsten and molybdenum; tantalum; columbium; tantalum carbide; hard carbides.
- Balken, Dr. Eva Ruth**, University of Chicago, Chicago, Ill. *Psychology*. Pittsburgh, Pa., Dec. 31, 05. A.B., Pittsburgh, 22, A.M., 23; Ph.D., Chicago, 30. Consultant psychologist, Levindale, Baltimore, 23-24; psychologist, mental hygiene clinic, Michael Reese Hosp., Chicago, 25-26; S. Side and Lower N. Side Child Guidance Centers, Chicago, 26-30; consultant psychologist, Lake Forest Day Sch., Ill., 28-31; research psychologist and instr. psychol. dept. path., Sprague Mem. Inst., Chicago, 32- Asst., Pittsburgh; research psychologist, Pa. Reformatory, 25; asst., Lewis Inst. (Ill.); lecturer, high sch., Chicago, Ill.; clin. psychologist, Elgin State Hosp., Elgin, Ill. Assoc. Psychol. Asn. Reaction times and the consciousness of deception; affective, volitional and galvanic factors in learning; vitamins and intelligence; dynamics of emotions; vitamin deficiencies in psychoses.
- Ball, Prof. Albert**, Cooper Union, New York, N. Y. *Physics*. Perrysburg, N. Y., July 14, 73. A.B., Cornell, 01. Instr. physics, Pratt Inst., 01-05; Cooper Union, 05-07, asst. prof., 07-12, prof. in charge, 12- A.A.; Physical Soc.; Elec. Eng.; Eng. Educ.

- Ball, Dr. A (Ipheus) M(esserly)**, Hercules Powder Co, Wilmington, Del. *Chemical engineering*. Lincoln, Nebr, Feb. 13, 05. B.S, Calif. Inst. Tech, 26; Ph.D, Yale, 29. Asst. chem. eng, Calif. Inst. Tech, 26-27; chem, Yale, 27-28; with exp. sta, *Hercules Powder Co*, 29- Chem. Soc; Chem. Eng. Cellulose and derivatives; explosives; naval stores; synthetic resins.
- Ball, Dr. Carleton R(oy)**, U. S. Department of Agriculture, Washington, D. C. *Agronomy, Botany*. Little Rock, Iowa, June 12, 73. B.S, Iowa State Col, 96, M.S, 99, hon. Sc.D, 20. Asst. bot, Iowa State Col, 96-98; asst. botanist, Exp. Sta, 97-98; asst. agrostologist, U. S. Dept. Agr, 99-05, agronomist, bur. plant indust, 06-18, cerealist in charge office cereal investigations, 18-24, senior agronomist in charge, 24-26, prin. agronomist in charge, 26-30; research assoc, bur. pub. admin, California, 31-35; chief agriculturist, planning div, agr. adjust. admin, U. S. Dept. Agr, 35- Acting director grad. sch, U. S. Dept. Agr, 25-26. Agron. adviser, Nat. Research Council, 28-30. A.A; Soc. Agron. (sec'y, 10-14, pres, 16, ed. board, 27-); Bot. Soc; Soc. Plant Physiol; Soc. Plant Taxon; Agr. Hist. Soc; Calif. Bot. Soc; Wash. Acad; Bot. Soc. Wash. Agronomy and botany of cereals and grain sorghum; taxonomy of willows and grasses; federal-state relationships in administration of scientific research.
- Ball, Prof. C(harles) D(udson), Jr**, 647 Sunset Lane, East Lansing, Mich. *Biochemistry*. Philadelphia, Pa, Oct. 15, 89. B.S, Pa. State Col, 15; M.S, Minnesota, 24. Instr. chem, Mich. State Col, 15-17, 19-21, asst. prof, 21-30, assoc. prof, 30- C.W.S, U.S.A, 17-19. Chem. Soc; Soc. Plant Physiol. Wheat oil; biochemical relations of phenols; relation between bound water and composition of plants.
- Ball, Dr. C(harles) O(lin)**, American Can Co, Maywood, Ill. *Chemistry*. Abilene, Kans, March 30, 93. A.B, George Washington, 20, M.S, 22, Ph.D, 26. Chemist, Nat. Canners Asn, Washington, D. C, 19-22; chemist, asst. manager research dept. and asst. to director research, Am. Can Co, 22- A.A; Chem. Soc; Inst. Chem. Food technology; thermal sterilization of canned food; temperature distribution in retorts; technological phases of canning.
- Ball, Dr. Clayton G(arrett)**, Paul Weir Co, Chicago, Ill. *Geology*. Wauconda, Ill, Dec. 16, 06. B.S, Northwestern, 28; A.M, Harvard, 32, Ph.D, 35. Geologist, Ziegler Coal Co, Chicago, 28-29; asst. geologist, Ill. Geol. Surv, 29-35; geologist, Bell and Zoller Coal Co, Chicago, 35-37; Paul Weir Co, 37- Soc. Econ. Paleont. and Miner; Ill. Mining Inst; Ill. Acad. Coal petrography; mineral matter in coal.
- Ball, Prof. E(lmer) D(arwin)**, University of Arizona, Tucson, Ariz. *Entomology*. Athens, Vt, Sept. 21, 70. B.S, Iowa State Col, 95, M.S, 98; Ph.D, Ohio State, 07. Asst. zool. and entom, Iowa State Col, 95-97; Colo. Agr. Col, 97-01; prof, Utah State Col, 02-07, director, Exp. Sta, and dean agr, 07-16; state entomologist, Wis, 16-18; prof. zool. and entom, Iowa State Col, 18-21; director sci. work, U. S. Dept. Agr, 21-25; in charge celery insect investigations, State Plant Board, Fla, 25-28; dean col. agr. and director, Exp. Sta, Arizona, 28-31, prof. zool. and econ. entomologist, 31- Asst. sec'y agr, U. S. Dept. Agr, 20-21. A.A; Entom. Soc. Amer; Asn. Econ. Entom. (pres, 18); Ecol. Soc; Entom. Soc. Wash; Biol. Soc. Wash; Iowa Acad; Utah Acad. (pres, 10); Ohio Acad; Wash. Acad. Taxonomy and life histories of Hemiptera-Homoptera; North American Cercopidae, Membracidae, Fulgoridae, Cicadellidae; codling moth and beet leaf-hopper; insect carriers of plant diseases; biology of celery tyer and range grasshoppers.
- Ball, Dr. Eric G(lendinning)**, 710 N. Washington St, Baltimore, Md. *Physiological chemistry*. Coventry, Eng, July 12, 04. B.S, Haverford Col, 25, fellow, 25-26, A.M, 26; Ph.D, Pennsylvania, 30. Asst. sch. med, Pennsylvania, 26-28; nat. research fellow med, Hopkins, 29-30, instr, 30-33, assoc, 33- Int. Physiol. Cong. fellow, Rome, 32; Guggenheim Mem. Foundation fellow, 37-38. Soc. Biol. Chem; Chem. Soc. Composition of pancreatic juice; oxidation-reduction potentials of biological systems.
- Ball, Prof. Gordon H(arold)**, University of California at Los Angeles, Los Angeles, Calif. *Zoology*. Warren, Pa, Sept. 20, 99. B.S, Pittsburgh, 20, M.S, 21; fellow, California, 23-24, Ph.D, 24. Asst. biol, Pittsburgh, 20-21; teaching fellow zool, California, 21-23, instr, California at Los Angeles, 24-27, asst. prof, 27-36, assoc. prof, 36- A.A; Soc. Zool; Soc. Exp. Biol; Soc. Trop. Med; Soc. Parasitol. Protozoology; variation in fresh-water mussels; conjugation and division-rate in paramecium; parasitology; marine protozoa.
- Ball, Dr. H(oward) A(lonzo)**, 233 A St, San Diego, Calif. *Pathology, Physiology*. Rutland, Vt, Sept. 3, 04. A.B, Emmanuel Missionary Col, 23; M.D, Col. Med. Evangelists, 28. Asst. pathologist, Los Angeles County Gen. Hosp, 28-30; research pathologist, W. K. Kellogg Foundation, 30-31; pathologist, San Diego County Gen. Hosp, 31- Instr. and later fellow, Col. Med. Evangelists, 29- Prize, Calif. Med. Asn, 33. Asn. Path. and Bact; Asn. Cancer Research; Soc. Exp. Path; Soc. Exp. Biol; Soc. Clin. Path; Pub. Health Asn; Asn. Study Int. Secretions. Relationship of pituitary to tumor growth; carbohydrate metabolism following hypophysectomy; hypophysis and detoxification; coccidioidal granuloma; torulosis; leptospiral jaundice.
- Ball, Dr. John D(udley)**, Mt. Mary College, Milwaukee, Wis. *Engineering*. Seneca, Ill, Dec. 8, 82. B.S, Illinois, 07, E.E, 15; Ph.D, Marquette, 28. Testing dept, Gen. Elec. Co, Schenectady, 07-08, standardizing lab, 08-13, consulting eng. dept, 13-17; prof. elec. eng, Sch. Eng, Milwaukee, 17-18, dean, 18-20; organization supt, and manager planning dept, Ed. Schuster and Co, 20-25; v. pres. and educ. director, Sch. Eng. Milwaukee, 26-34; prof. physics and business admin, Mt. Mary Col, 33- Edward Longstreth medal, Franklin Inst, 16. Fel. Elec. Eng. (chairman, Milwaukee sect, 28). Magnetism; electrical machinery; permeability with alternating current; reluctivity of silicon steel; eddy current losses and resistivity; magnetic laws; unsymmetrical hysteresis loop; magnetism and the commercial application of magnets; demagnetization methods on the energy required to magnetize steel; education.
- Ball, Prof. John R(ice)**, Northwestern University, Evanston, Ill. *Geology, Paleontology*. Fremont, Ohio, June 26, 81. A.B, Northwestern, 13, A.M, 19; B.D, Garrett Biblical Inst, 13; Ph.D, Chicago, 27. Instr. geol. and geog, Northwestern, 18-21, 23-25, asst. prof, 25-28, assoc. prof. geol. and paleont, 28- Ill. Geol. Surv. A.A; Paleont. Soc; Soc. Econ. Paleont. and Miner; Ill. Acad; Chicago Acad. (hon. curator and sci. governor). Shoreline topography, west shore of Lake Michigan; Silurian stratigraphy and faunas of southeastern Missouri; areal geology of Illinois; Silurian fauna of the Chicago region.
- Ball, Dr. Josephine**, Johns Hopkins Hospital, Baltimore, Md. *Psychology*. Chicago, Ill, 98. A.B, Columbia, 22; Ph.D, California, 29. Asst. psychol, Minnesota, 23-26; anat, California, 26-27, psychol, 27-29; research asst. psychol, Phipps Psychiat. Clinic, Hopkins, 29- Summer, asst, anthropoid exped, Cuba, 24. A.A; assoc. Psychol. Asn. Learning in the rat; physiological mechanism of sex behavior; afferent impulses from the sex organs; sex hormones in relation to sex and general activity; behavior correlated with female sex cycle.
- Ball, Max W(alte)**, Edmonton Credit Bldg, Edmonton, Alta, Can. *Geology*. Munson, Ill, Sept. 9, 85. E.M, Colo. Sch. Mines, 06; LL.M, Nat. Univ, 14. Field asst, U. S. Geol. Surv, 06-07, geol. aid, 07-08; junior geologist, 08-09, asst. geologist, 09-14, geologist, 15-16; mining engineer and law officer, U. S. Bur. Mines, 16-17; chief geologist, Rocky Mt. region, Royal Dutch Shell Co, 17-18, gen. manager, 18-21; pres, West. Pipe Line Co, 21-26; Argo Oil Co, 22-28; consulting petrol. engineer, 28- Chairman oil board, U. S. Geol. Surv, 10-16; chairman, Milmac Oil Co; pres, Abasand Oils, Ltd, 30-; Royal Royalties, Ltd, 31- Geol. Soc; Asn. Petrol. Geol. (v. pres, 21, pres, 22); Min. and Metal. Eng. Economic geology; conservation; petroleum industry; Wyoming coal fields; oil fields; Canadian oil sands.
- Ball, Prof. Oscar M(elville)**, College Station, Texas. *Botany*. Miami, Mo, Aug. 25, 68. Oklahoma, 92-93; fellow, Virginia, 96-97, A.B, 97; Bonn, 00; Ph.D, Leipzig, 03. Instr. bot, Virginia, 95-96; prof. chem. and biol, Miller Sch, Va, 97-00; bot. and mycol, Agr. and Mech. Col. Texas, 03-10, biol, 10-37, emer. prof, 37-, curator museum. A.A; Geol. Soc; Paleont. Soc; Texas Acad; Deuts. Bot. Gesell. Paleobotany.
- Ball, Dr. Ralph H(enry)**, 304 Maple Place, Cranford, N. J. *Organic chemistry*. Kelowna, B. C, Can, May 24, 05. B.A, British Columbia, 26, M.A, 28; Nat. Research Council Can. bursar, McGill, 28-29, student, 29-30, Ph.D, 31. Demonstrator inorg. and agr. chem, British Columbia, 26-28; anal. chem, McGill, 30-31; research dept, Celluloid Corp, Newark, 31- Cellulose chemistry; replacement of halogen atoms substituted in the aromatic nucleus; halogen at the cathode by

electrolysis; cellulose ethers; the applications of cellulose acetate to the field of plastics.

Ball, Dr. Robert W (Illiam), Colonial Farms, Avondale, Pa. *Inorganic chemistry*. Sandwick, B. C., Can., April 27, 04. B.A., British Columbia, 25, M.A., 27; Illinium fellow, Illinois, 29-30; Ph.D., 31. Asst. chem., British Columbia, 25-27; Illinois, 27-29; research chemist, exp. sta. E. I. du Pont de Nemours and Co., 30-32; Krebs Pigment and Color Corp., 32-35; E. I. du Pont de Nemours and Co., 35- Chem. Soc.; Asn. Pulp and Paper Indust. Rare earths; white pigments; paper.

Ball, Prof. S(tanley) C(rittenden), Yale University, New Haven, Conn. *Zoology*. Shelburne Falls, Mass., Nov. 19, 85. Ph.B., Yale, 11, Ph.D., 15. Draftsman, marine biol. lab., Carnegie Institution, Tortugas, Fla., 13-14; asst. curator zool., Peabody Museum, Yale, 15-16; instr., Mass. Col., 16-18; prof. biol., Springfield Col., 18-21; curator, Bishop Museum, Honolulu, 21-26; asst. curator zool., Peabody Museum, Yale, 26-27; curator, 27-, asst. prof. biol., univ., 27-33; assoc. prof., 33- Head sci. party, Bishop Museum, Honolulu, Kaimiloa exped., 24-25. A.A.; Ecol. Soc.; Soc. Zool. Anatomy; entomology; migration of insects; ornithology; animal coloration; herpetology.

Ball, Dr. Sydney H(obart), 26 Beaver St., New York, N. Y. *Geology*. Chicago, Ill., Dec. 11, 79. A.B., Wisconsin, 01, Ph.D., 10. Asst. geologist, Mo. Bur. Mines and Geol., 01-02; asst. geol., Wisconsin, 03-04; geol. aid, U. S. Geol. Surv., 04-05; asst. geologist, 05-07; chief geologist, Soc. int. forestière et minière du Congo, 07-09; consulting mining geologist, 09- Consulting engineer, U. S. Bur. Mines. Director, Cmn. Relief Belgium Educ. Fund; advisory board, Gemol. Inst., Amer. Officier, Royal Order of the Lion, Belgium, 19. Geol. Soc.; Soc. Econ. Geol. (pres., 30); Min. and Metal. Eng. (past director); hon. mem. Gemol. Inst., Amer.; Min. and Metal. Soc. (v. pres., 24, pres., 33); Soc. belge de Géol.; hon. mem. Chem., Metal. and Min. Soc., S. Africa. Geology of Miller County, Missouri, and Nevada; areal geology; geology of the Belgian Congo; precious stones.

Ball, Prof. T(hedodore) R(olly), 7533 Westmoreland Ave., Clayton, Mo. *Chemistry*. Marshalltown, Iowa, July 29, 83. B.S., Drake, 08; Harvard, 08-09; M.S., Illinois, 14, fellow, 15-16; Ph.D., 16. Instr. chem., 10-13; Illinois, 16-17; asst. prof., Washington (St. Louis), 17-21; assoc. prof., 21- A.A.; Chem. Soc. (sec'y, St. Louis sect., 19, chairman, 26). Inorganic chemistry; physical chemistry; ionization in mixed electrolytes; the preparation of titanous chloride from titanic oxides; the color in the sulfocyanate test for iron; optimum acidity for precipitation of zinc phosphate; acidity of the ammonium phosphates; induced reactions; magneto-optic method of chemical analysis.

Ball, Prof. Thomas F(auntleroy), University of South Carolina, Columbia, S. C. *Electrical engineering*. Richmond, Va., April 18, 94. B.S., South Carolina, 15; M.S., Virginia, 19. Adj. prof. physics, Virginia, 21-25; prof. elec. eng. and head dept., South Carolina, 25- Consulting engineer, Elec. Eng. (chairman, publicity cmt., 31, faculty councilor, Univ. S. C. branch); Eng. Educ.; S. C. Soc. Eng. (pres., 31); S. C. Acad. High voltage transmission; public utilities; mathematical physics; direct and alternating currents.

Ball, Dr. W(illiam) L(ee), 627 Carleton Ave., Westmount, Que., Can. *Biochemistry*. North Hatley, Que., July 18, 08. B.Sc., McGill, 31, Ph.D., 35. With Pigment and Chem. Co., Montreal, 34-35; Abbott Labs., Montreal, 35; Ayerst, McKenna and Harrison, 35- Endocrinology; organic chemistry; certain derivatives of diphenyl; Grignard reagents; the action of ammonia on α -benzoyl-butyric ester.

Ballantine, Dr. J(ohn) P(erry), 1802 Ravenna Blvd., Seattle, Wash. *Mathematics*. Rahuri, India, Feb. 23, 96. A.B., Harvard, 18; fellow, Chicago, 22-23, Ph.D., 23. Instr. math., Maine, 19-20; Pa. State Col., 20-21; Michigan, 21-22; Columbia, 23-26; asst. prof., Washington (Seattle), 26-30; assoc. prof., 30- Math. Soc.; Math. Asn. Interpolation.

Ballantine, Stuart, Ballantine Laboratories, Boonton, N. J. *Acoustics, Electrophysics*. Philadelphia, Pa., Sept. 22, 97. Harvard, 20-21, Tyndall scholar, 23-24. Research engineer, Radio Frequency Lab., Boonton, 22-23; private investigations, 24-27; supt. research div., Radio Frequency Labs., Boonton, 27-29; pres., Boonton Research Corp., 29-35; Ballantine Labs., 35- Liebmann mem. award, 31; Elliott Cresson medal, Frank-

lin Inst., 34. Expert radio aid, U.S.N., 17-20. Fel. Acoustical Soc.; fel. Physical Soc.; fel. Radio Eng. (pres., 35); Franklin Inst. Radio; vacuum tubes; bacteriology.

Ballantyne, Dr. E(lloitt) N(ichols), 141 Kent St., Hamilton, Ont., Can. *Pathology*. Alexander, Man., Sept. 6, 90. B.A., Western Ontario, 10, M.D., 17, M.Sc., 27. Instr. path. and bacter., sch. med., Western Ontario, 20-22, 23-27, anat., 27-29; pathologist, St. Joseph's Hosp., Hamilton, 29- Asn. Study Neoplastic Diseases; Can. Med. Asn.; Int. Asn. Med. Mus. Histology; bacteriology; pathology.

Ballard, Prof. Charles W(Illiam), 115 W. 68th St., New York, N. Y. *Pharmacognosy*. New York, N. Y., July 6, 87. Ph.C., Columbia, 07, Phar.D., 08, A.M., 11, Ph.D., 26. Instr. pharmacog., Columbia, 07-18, assoc. prof. mat. med., 18-32, prof., 32-, dean col. pharmacy, 37- Pharmacognosist, S. B. Penick Co., 14-17; micro-analyst, bur. foods and drugs, Health Dept., New York, 17- Assoc. mem. revision cmt., U. S. Pharmacopoeia, 20-; Nat. Formulary Revision Cmt. A.A.; Pharmaceut. Asn.; Torrey Bot. Club; N. Y. Micros. Soc. Food and drug botany; microscopy of food and drug products.

Ballard, Dr. James W(Illiam), 5438 Wilkins Ave., Pittsburgh, Pa. *Physics*. Cincinnati, Ohio, Sept. 28, 00. A.B., Illinois, 29; M.S., Pittsburgh, 32, Ph.D., 35. Asst., Pittsburgh, 29-30; instr., Carnegie Inst. Tech., 30-34; Westinghouse research lab., Westinghouse Elec. and Mfg. Co., 34-35; in charge x-ray and spectros. lab., U. S. Bur. Mines, 35- Summers, Gen. Elec. Co., Ind., 26-27; Westinghouse Elec. and Mfg. Co., Pittsburgh, 29; E. A. Myers and Sons, 35. Physical Soc. Photoelectricity; x-ray and spectrographic analysis.

Ballard, Dr. Stanley S(umner), University of Hawaii, Honolulu, Hawaii. *Physics*. Los Angeles, Calif., Oct. 1, 08. A.B., Pomona Col., 28; A.M., California, 32, Ph.D., 34. Asst. physics, Dartmouth Col., 28-30; teaching fellow, California, 30-34, fellow, 34-35; instr., Hawaii, 35- Physical Soc. Spectroscopy; hyperfine structure; spectroscopic analysis of volcanic gases; applications of spectroscopy to agriculture.

Ballard, W(alter) R(aymond), College Park, Md. *Horticulture*. Towanda, Ill., May 8, 78. B.S., Kans. State Col., 05. Asst. horticulturist, Exp. Sta., Maryland, 06-11, pomologist, 12-18; garden specialist, States Relations Service, 18-19; asst. prof. pomol., Maryland, and in charge small fruits investigations, Exp. Sta., 19-20, specialist veg. and landscape gardening, exten. service, 20-29, exten. horticulturist, 30- Hort. Soc.; Md. Veg. Growers Asn. (sec'y-treas). Plant breeding; small fruits; home vegetable gardens; landscape gardening.

Ballard, Prof. William C(yrus), Jr., Cornell University, Ithaca, N. Y. *Electrical engineering*. Baltimore, Md., Sept. 1, 88. M.E., Cornell, 10. From instr. to prof. elec. eng., Cornell, 10- Consulting elec. engineer. Assoc. Elec. Eng.; Radio Eng. Radio communication; radio and sound pictures.

Ballard, W(illiam) S(allsbury), U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Platteville, Wis., May 29, 81. A.B., Illinois, 04. Asst. bot., Illinois, 04-06; from sci. asst. to senior pathologist, fruit disease investigations, div. fruit and vegetable crops and diseases, bur. plant indust., U. S. Dept. Agr., 06- A.A.; Phytopath. Soc.; Soc. Hort. Sci.; Chem. Soc. Horticultural crops and diseases; parasitic and physiological diseases of fruits.

Ballard, Prof. W(illiam) W(hitney), Dartmouth College, Hanover, N. H. *Zoology*. Griswoldville, Mass., April 4, 06. B.S., Dartmouth Col., 28; Ph.D., Yale, 33. Asst. biol., Yale, 28-30; instr. zool., Dartmouth Col., 30-35, embryol. med. sch., 34-35, asst. prof. zool. and Anat., 35- A.A.; N. H. Acad. Experimental embryology; anatomy; Amphibia.

Baller, Prof. Warren R(obert), 3045 N. 52nd St., Lincoln, Nebr. *Educational psychology*. Trenton, Nebr., June 19, 00. A.B., York Col., 23; A.M., Nebraska, 27; Ph.D., Nebraska, 35. Prin. high schs., Nebr., 23-27; prof. psychol., York Col., 27-33; instr., Nebraska, 35-36; asst. prof., 36- A.A.; assoc. Psychol. Asn. Measurements; social adjustment of the mentally deficient.

Balloch, Dr. Edward A(rthur), Wyoming Apartments, Washington, D. C. *Medicine*. Somersworth, N. H., Jan. 2, 57. A.B., Princeton, 77, A.M., 94; M.D., Howard, 79, Sc.D., 28. Demonstrator anat., sch. med., Howard, 79-82, lecturer minor surg., 90-99; asst. prof. surg., 99-04, prof., 04-19, dean, 10-28, emer. dean, 28- Fel. Col. Surg.; fel. S. Surg. and Gynec. Asn.; D. C. Med. Soc. (pres., 08). Surgery.

- Ballon, Dr. David H(erbert)**, 1471 Crescent St, Montreal, Que, Can. *Otolaryngology*. Saad, Lithuania, 88. B.A, McGill, 08, M.D, 09. Asst. demonstrator *otolaryngol*, McGill, 14-20; demonstrator, 20-31; lecturer, 31-37; asst. prof, 37- Chief otolaryngologist, Royal Victoria Hosp. Asn. Thoracic Surg; Acad. Ophthal. and Otolaryngol; fel. Col. Surg; fel. Royal Col. Surg. Can. Bronchoscopy; esophagoscopy; pneumography; bronchiectasis; mastoiditis; malignant disease of the nasal accessory sinuses.
- Ballon, Dr. Harry C(larence)**, 1511 Bishop St, Montreal, Que, Can. *Surgery*. Montreal, Que, Dec, 6, 01. M.D, McGill, 23; Pathological Inst, Frankfort, 26-27; path. and anat. insts, Budapest, 27-28; Rockefeller fellow, Washington (St. Louis), 28-29. Instr. surg, Washington (St. Louis), 28-31; asst. prof, 32; *practising physician*, 33-; *assoc. surgeon, Jewish Gen. Hosp.* A.A; fel. Col. Surg; Asn. Thoracic Surg; Tuber. Asn; Cent. Soc. Clin. Research; Montreal Medico-Chirurg. Soc; Can. Physiol. Soc. Anatomy; physiology of mediastinum and diaphragm; clinico-pathological aspects of lung suppuration; physiology of cough; anatomy of coeliac plexus; effects of retention of pancreatic secretion; bronchography.
- Ballou, Charles H(erbert)**, Estación Experimental de Agricultura y Zootecnica, Caracas, Venezuela. *Entomology*. Jacksonville, Fla, March 29, 90. B.S, Cornell, 14. Dept. Agr, Cuba, 17-21; entomologist, 21-23; agent, Japanese beetle lab, bur. entom., U. S. Dept. Agr, 27-29; prof. and chief dept. entom, Escuela de Agr, Medellín, Colombia, 30; Escuela and Centro Nacional de Agr, Costa Rica, 31-38; *entomologist, Estación Exp. de Agr, Caracas*, 38- A.A; Asn. Econ. Entom; Entom. Soc; N. Y. Entom. Soc; hon. mem. Soc. Geog. e Hist. de Honduras; cor. mem. Soc. Geog. de Cuba. Host plants of insects; insect pest surveys of Costa Rica.
- Ballou, Prof. Donald H(enry)**, Georgia School of Technology, Atlanta, Ga. *Mathematics*. Chester, Vt, March 28, 08. A.B, Yale, 28; A.M, Harvard, 31, Ph.D, 34. Instr, Harvard, 33-34; *math, Ga. Tech*, 34-35; asst. prof, 35- Math. Soc; Math. Asn. Laplace-Stieltjes integrals and completely monotonic functions.
- Ballou, Dr. Willard A(lger)**, Junior College of Connecticut, Bridgeport, Conn. *Mathematics*. Providence, R. I, July 12, 81. B.S, R. I. State Col, 04; A.B, Columbia, 13, A.M, 15; Ph.D, Pennsylvania, 32. Prof. math. and anal. mech, Pratt Inst, 07-18; dean, Pa. State Nor. Sch, West Chester, 22-27; *prof. math. and physics, Junior Col. of Conn*, 28- Research ballistician, Ordnance Dept, 17-19; consultant gen. staff, U.S.A, 19-22. A.A; Math. Soc; Mech. Eng. Fundamental formulae for small gun fire; fire tables for Browning machine gun; education.
- Balls, Prof. Arnold K(ent)**, George Washington University, Washington, D. C. *Biochemistry*. Toronto, Ont, Can, April 2, 91. B.S, Pennsylvania, 12; Ph.D, Columbia, 17, Prague, 29. Asst. chemist, U. S. Dept. Agr, 12-14; research and consulting chemist, yeast indust, 19-26; assoc. chem. pharmacol, Pennsylvania, 23-28; Prague, 28-30; privat-docent biochem, Deuts. Technische Hochschule, Prague, 30-31; senior chemist, bur. chem. and soils, U. S. Dept. Agr, 31-35; *adj. prof. enzymology, George Washington*, 35- Lieut, Sanit.C, 18-19. Wash. Acad. Med. Yeast manufacture; yeast metabolism; enzyme chemistry.
- Bally, Prof. Louis Henry**, 519 Summit Ave, Tahlequah, Okla. *Bacteriology*. Andover, Kans, Nov. 10, 97. A.B, Fairmount Col, 20; fellow, Kansas, 21, A.M, 21, Ph.D, 29. *Prof. biol, Northeast Okla. State Teachers Col*, 22- Immunology.
- Balmer, F(rank) E(verett)**, State College of Washington, Pullman, Wash. *Agriculture*. Woodston, Kans, Oct. 29, 83. B.S. (Agr), Kans. State Col, 05, 08; Minnesota. Instr, consol. rural schs, Minn, 09-11; prin, Lacrosse County Agr. Sch, Wis, 11-13; supervisor county agents in west cent. Minn, Univ. Minn, 13-14; asst. state leader and state leader county agents, 14-30; *director agr. exten, State Col. Wash*, 30- Agr. Hist. Soc; Farm Econ. Asn. Agricultural extension.
- Balmer, H(arold) F(rederic)**, Museum of Science and Industry, Chicago, Ill. *Astrophysics*. Toronto, Ont, Can, May 11, 99. B.A, Toronto, 22, M.A, 24. Demonstrator astron, Toronto, 23-24; asst, Lick Observatory, California, 24-26; instr, Michigan, 26-27; astron. and math, Carleton Col, 27-29; astron. and physics, Kansas, 29-30; asst. physical science, Buffalo Museum Science, 30-32; physics, A Century of Progress Expos, Chicago, 33-34; sci. adviser, Griffith Observatory, Los Angeles, 34-35; with *Museum Science and Indust*, 37- A.A; Astron. Soc; Royal Astron. Soc. Can. (recorder, 23, 34).
- Balsbaugh, Prof. Jayson C(lair)**, Massachusetts Institute of Technology, Cambridge, Mass. *Electrical engineering*. Hershey, Pa, Jan. 8, 02. B.S, Pa. State Col, 21; M.S, Mass. Inst. Tech, 24. Engineer, Gen. Elec. Co, 21-22; instr. elec. eng, Mass. Inst. Tech, 22-27; asst. prof, California, 27-28; *Mass. Inst. Tech*, 28-36; *assoc. prof*, 36- Engineer, Jackson and Moreland, Boston, 25-30. A.A; assoc. Elec. Eng. Electric power generation, distribution, cables and rates; thermal conductivity of insulating materials; dielectrics; dielectric measurements.
- Baltazar, Prof. Eulalio P(erez)**, College of Agriculture, University of the Philippines, Laguna, P. I. *Agronomy, Plant physiology*. San Fernando, La Union, P. I, Feb. 12, 97. B.S, Philippines, 22, M.S, 24; Philippine fellow, Texas, 31-33, Ph.D, 33. Nurseryman and asst. instr, col. agr, Philippines, 22-25; orchardman, 23-25; teacher, sch, P. I, 25-26; head dep. science, 26-28; instr. agron, col. agr, Philippines, 28-31, 33-34; *asst. prof*, 34-, in charge farm crops div, 28-29, fiber and oil div, 29-31, *div. tobacco, cotton and gen. textiles*, 33- Nat. Research Council P. I. Texas Acad; Philippine Soc. Adv. Research; Los Baños Biol. Club. Textile industry and dye materials of the Philippines; respiration and form of root system of cotton; introduction, acclimatization, variety, fertilization, green manuring, intercropping and spacing tests of cotton and tobacco; manufacture of cigarette, chewing and pipe tobaccos; seed storage.
- Balthis, Dr. Joseph H(endrickson), Jr**, 819 Harrison St, Wilmington, Del. *Chemistry*. Washington, D. C, Jan. 25, 07. B.S, Randolph-Macon Col, 29; M.S, West Virginia, 31; fellow, Illinois, 33-34, Ph.D, 34. *Research chemist, exp. sta. E. I. du Pont de Nemours and Co*, 34- Chem. Soc. Chemistry of organo-complex compounds of chromium.
- Baltzly, Dr. Richard**, Burroughs-Wellcome and Co, Tuckahoe, N. Y. *Organic chemistry*. Hudson, Mass, Aug. 6, 06. A.B, Harvard, 26, A.M, 28, Ph.D, 31. Research assoc. pharmacol, sch. med, Vanderbilt, 31-34; asst. biochem, col. physicians and surg, Columbia, 34-36; Pease Labs, 36-37; *Burroughs-Wellcome and Co*, 37- Steric hindrance; pharmacological effect of cresol derivatives; stereochemistry.
- Balz, Dr. Emil H(arold)**, The Plaskon Co, Toledo, Ohio. *Chemistry*. Columbus, Ohio, May 28, 92. B.S, 14; M.S, Pittsburgh, 16, Ph.D, 19. Instr. org. chem, Pittsburgh, 16-19; prof, Westminster Col, 21-22; indust. fellow, Mellon Inst, 22-27; director research and plant supt, Fries and Fries Co, 27-30; tech. director, Multicolorotype Co, 30-31; director research, Duplate Corp, Creighton, Pa, 31-33; research fellow, Mellon Inst, 33-37; chem. engineer and research chemist, *Plaskon Co*, 37- Chem. Soc. Synthetic organic chemistry; essential oils; aromatics; printing inks; varnishes; printing processes; plastics; safety glass.
- Bamberg, Dr. Rayburn H(olmes)**, U. S. Department of Agriculture, Bozeman, Mont. *Plant pathology*. Winona, Miss, June 22, 05. B.S, Miss. Agr. and Mech. Col, 27; M.S, Minnesota, 29, Ph.D, 33. Instr. plant path, Minnesota, 28-29; agent, field sta, bur. plant indust, U. S. Dept. Agr, 29-37, assoc. pathologist, 37- Phytopath. Soc. Wheat breeding.
- Bamford, Prof. R(onald)**, 7 Holly St, College Heights, Hyattsville, Md. *Botany*. Rockdale, Lancashire, Eng, Nov. 1, 01. B.S, Conn. Agr. Col, 24; M.S, Vermont, 26; fellow, Columbia, 29-30, Ph.D, 31. Asst. bot, Vermont, 24-26, instr. and asst. botanist, Exp. Sta, 26-29; asst. bot, Columbia, 30-31; asst. prof, Maryland, 31-32, assoc. prof, 32- Bot. Soc; Torrey Bot. Club; Bot. Soc. Wash. Cytology; chromosomes; behavior of cells in toxic solutions.
- Bamforth, Prof. F(rederic) R(ichard)**, Ohio State University, Columbus, Ohio. *Mathematics*. Kingston, Ont, Can, May 19, 99. B.A, Queen's (Can), 21, M.A, 22; fellow, Chicago, 26-27, Ph.D, 27. Albert Col, 22-25; instr. math, Chicago, 27-28; nat. research fellow, Harvard, 28-29; asst. prof, Cornell, 29-30; *Ohio State*, 30- Differential equations; surface transformations.
- Banck, Prof. L(eo) J(ohn)**, St. Mary's University, San Antonio, Texas. *Biology*. Dubuque, Iowa, March 17, 96. B.S, Dayton, 19; Ph.D, Fribourg, 27. *Prof. biol, St. Mary's Univ. San Antonio*, 27- Sci. Soc. San Antonio (v. pres, 33-36, pres, 36-). Myrmicophiloy.

- Bancroft, Dr. Edith S(usam) W(hittaker)**, Hamilton, N. Y. *Botany*. North Conway, N. H., Nov. 19, 93. A.B., Radcliffe Col., 16, A.M., 17, Ph.D., 22; Alice Freeman Palmer fellow, Wellesley Col., 20-21. Instr. biol., Maine, 18-20. Summer, asst., Harvard, 19. A.A. Plant anatomy and morphology.
- Bancroft, Dr. George**, West Waldheim Road, Aspinwall, Pa. *Chemistry*. Ithaca, N. Y., Jan. 29, 05. A.B., Harvard, 27; Ph.D., Cornell, 31. Research chemist, cancer research labs, grad. sch. med., Pennsylvania, 30-37; director research, Zemmer Co., Pittsburgh, 37-. Chem. Soc. Glycogen-lactic acid equilibrium; peroxidase; radiation.
- Bancroft, Geo(rge) J(arvis)**, Bancroft Block, Denver, Colo. *Mining engineering*. Denver, Colo., Sept. 10, 73. B.S., Stanford, 95; Colo. Sch. Mines, 96. Ed. 'Mining Science,' 11- Colo. Sci. Soc. Origin of ore deposits.
- Bancroft, Prof. Geo(rge) R(ussell)**, Jefferson Medical College, Philadelphia, Pa. *Chemistry*. Weymouth, N. S., Can., July 7, 78. B.A., Acadia, 06, D.Sc., 34; A.B., Yale, 14, Silliman fellow, 15-17, Ph.D., 17. Prin. pub. schs., N. S., Can., 98-99, 00-03, 06-07; science master, Halifax Acad., 07-13; asst. instr. chem., Yale, 14-17; prof. chem. and physics, Transylvania Col., 17-18; asst. prof. org. chem., Kentucky, 18-20; assoc. prof., West Virginia, 20-23; prof. physiol. chem., sch. med., West Virginia, 23-31; *Jefferson Med. Col.*, 31-. A.A.; Chem. Soc. (sec'y, Lexington, Ky., sect., 18); fel. Inst. Chem.; Franklin Inst.; W. Va. Sci. Soc. (sec'y, 22, v. pres., 23, pres., 24); W. Va. Acad. (pres., 24); Ky. Acad.; N. S. Inst. Organic chemistry; esters derived from substituted aliphatic alcohols.
- Bancroft, Dr. J(oseph) Austen**, Anglo American Corp. of South Africa, Ltd., Box 4587, Johannesburg, S. Africa. *Geology*. North Sydney, N. S., Can., April 8, 82. B.A., Acadia, 03; Yale, 04, A.M., 08. Ph.D., McGill, 10. Demonstrator geol., McGill, 05-08, lecturer, 08-10, asst. prof., 10-11; assoc. prof., 11-13, Dawson prof., 13-28; consulting geologist, Anglo Am. Corp. of S. Africa, Ltd., 27-31; British S. Africa Co., 31-36; *Anglo Am. Corp. of S. Africa, Ltd.*, 36-. Asst. gen. manager, Granby Consol. Mining and Smelting Co., B. C., Can., 21-22. Geol. Soc.; Can. Min. Inst.; fel. Royal Soc. Can. Petrography and economic geology; geology of coast and islands between the Strait of Georgia and Queen Charlotte Sound, British Columbia; geology of northern Quebec; gold, copper, zinc, lead and bauxite deposits.
- Bancroft, Prof. M(erle) F(owler)**, Acadia University, Wolfville, N. S., Can. *Geology*. North Sydney, N. S., Nov. 2, 90. B.A., Acadia, 11; A.B., Yale, 13, fellow, 13-15. Engineer, Price Bros. and Co., 11-12; asst. geologist, Geol. Surv. Can., 16-23; prof. geol., Acadia, 23-; head dept., 24-. Summers, field asst., Geol. Surv. Can., 10-16. B.C., 26; scouting geologist, McIntyre Porcupine Mine, Ltd., Ont., 28; Gregory River Area, Norseman Corp., 29. A.A.; Can. Inst. Min. and Metal. Geology of the Kootenay Lake, Slocan, Larder and Windermere districts; artesian water supply; gold-bearing deposits on the west coast of Vancouver Island; economic geology of Hudson Bay Mountain; Pleistocene walrus skulls.
- Bancroft, Prof. Wilder D(wight)**, 7 East Ave., Ithaca, N. Y. **Physical chemistry*. Middletown, R. I., Oct. 1, 67. A.B., Harvard, 88; Ph.D., Leipzig, 92; hon. Sc.D., Lafayette Col., 19, Cambridge, 23; hon. LL.D., Southern California, 30. Assoc. chem., Harvard, 88-89, 93-94; instr., 94-95; asst. prof. *physical chem.*, Cornell, 95-03; prof., 03-37; emer. prof., 37-. Visiting Tallman prof., Bowdoin Col., 37. Ed., 'Jour. Physical Chem.', 96-32. Chairman div. chem., Nat. Research Council, 19; board visitors, Bur. Standards, 22-25; mem. advisory cmt., cancer research fund, Pennsylvania, 28. Nichols medal, Am. Chem. Soc., 33. Nat. Acad. Chem. Soc. (pres., 10); Physical Soc.; hon. mem. Electrochem. Soc. (pres., 05, 19); Philos. Soc.; Am. Acad.; hon. mem. London Chem. Soc.; hon. mem. Soc. chim. de France; hon. mem. Polish Chem. Soc. Phase rule, electrochemistry; irreversible reactions; chemistry of light; colloid chemistry.
- Banfield, Dr. W(alter) M(iller)**, U. S. Department of Agriculture, Morristown, N. J. *Plant pathology*. Paterson, N. J., Aug. 27, 02. B.S., Rutgers, 25; Ph.D., Wisconsin, 30. Agent, bur. plant. indust., U. S. Dept. Agr., 26-30; nat. research fellow biol., Chicago, 30-33; forest path. lab., U. S. Dept. Agr., 33-. Phytopath. Soc.; Torrey Bot. Club. Crown-gall and forest-tree diseases; cellular pathology.
- Bangham, Prof. R(alph) V(andervort)**, College of Wooster, Wooster, Ohio. *Zoology, Parasitology*. Wilmington, Ohio, Feb. 26, 95. A.B., Wilmington Col., 15; B.S., Haverford Col., 16, fellow, 16-17, A.M., 17; fellow, Ohio State, 22-23, Ph.D., 23. Asst., Haverford Col., 16-17; instr. biol., 17-18; prof., Agr. and Mech. Col., Texas, 18-19; asst. prof. anat., Baylor, 19-20; biol., 20-22; *Col. of Wooster*, 23-24, prof. and head dept., 24-. Summers, Ohio Fish and Game Div., 26-30, 37. A.A.; Soc. Zool.; Soc. Parasitol.; Ecol. Soc.; Fisheries Soc.; Micros. Soc.; fel. Ohio Acad. (v. pres., zool. sect., 25). Ecol. ecology and life history of parasites of black bass; parasites of fresh-water fish; stream surveys.
- Bangham, W(alter) N(icolas)**, Goodyear Rubber Plantations Co., Dolok Merangir, E. C., Sumatra. *Genetics*. Wilmington, Ohio, May 4, 03. B.S., Ohio State, 26; M.S., Harvard, 29; Sheldon traveling fellow, Cent. Amer., 29. Firestone Rubber Plantations Co., Monrovia, Liberia, 26-28; botanist, *Goodyear Rubber Plantations Co.*, 29-32, in charge plant research, 33-. A.A.; Genetics Soc.; fel. Am. Geog. Soc. Cytology and breeding of Hevea; improvement and distribution of tropical plants.
- Bangson, Prof. John S(tuver)**, Berea College, Berea, Ky. *Genetics*. Oriole, Pa., June 28, 89. B.S., Susquehanna, 13, A.M., 17. Prof. biol., Talladega Col., 21-22; Benedict Col., 22-25; Berea Col., 25-. A.A.; Genetics Soc.; Genetic Assn.; Eugenics Soc.; Bot. Soc.; Eugenics Research Assn.; Ky. Acad. (pres., 33). Genetics of Phlox; human heredity.
- Banker, Dr. Howard J(ames)**, 14 Myrtle Ave., Huntington, N. Y. *Mycology, Eugenics*. Schaghticoke, N. Y., April 19, 66. A.B., Syracuse, 92; A.M., Columbia, 00, Ph.D., 06. Instr. biol., Southwest. Nor. Sch., California, Pa., 01-04; prof., DePauw, 04-14; research eugenics, eugenics record office, Carnegie Institution, 14-33; retired. A.A. Hydnaceae; human heredity.
- Banks, John Edwin**, American Bridge Co., Ambridge, Pa. *Engineering*. Knoxville, Iowa, Oct. 15, 67. A.B., Iowa State Col., 89; C.E., Cornell, 92. Prin. Anglo-Chinese Sch., Singapore; engineer, Bur. Standards, 04-12; asst. engineer, Am. Bridge Co., 00-04, 12-. Manganese explorations, Gold Coast, Africa, 26-27. Assoc. Civil Eng.; Royal Asiatic Soc. Standards for detailing; hip and valley designs.
- Banks, Prof. Nathan**, Holliston, Mass. *²*Entomology*. Roslyn, N. Y., April 13, 68. B.S., Cornell, 89, M.S., 90. Agent, div. entom., U. S. Dept. Agr., 90-92; asst. entomologist, 96-16; curator insects, museum comp. zool., Harvard, 16-, assoc. prof. zool. univ., 28-35; emer. assoc. prof., 35-. A.A.; Entom. Soc. Amer. (pres., 18); Am. Acad.; Cambridge Entom. Club; Entom. Soc. Wash.; Phila. Entom. Soc.; assoc. Acad. Nat. Sci. Phila. Systematic American arachnology; neuropterology; geographical distribution and habits of insects; catalogues of Neuroptera of the world and of American Arachnida and Heteroptera and fossorial Hymenoptera; mimicry and protective resemblance in insects.
- Bannan, Dr. M(arvin) W(illiam)**, University of Toronto, Toronto, Ont., Can. *Botany*. Parry Sound, Ont., March 23, 08. B.A., Toronto, 29, Ph.D., 33. Asst. bot., Toronto, 29-. Bot. Soc. Plant anatomy.
- Banner, Prof. A(lberta) E(therel)**, Winston-Salem Teachers College, Winston-Salem, N. C. *Psychology*. Chicago, Ill., March 17, 09. B.S., Ohio State, 29, M.S., 32, Ph.D., 35. Head dept. home econ., Wilberforce, 29-33; prof. psychol., Winston-Salem Teachers Col., 35-. Summer, instr., Lincoln (Mo), 35. Assoc. Psychol. Assn. Experimental psychology; home economics.
- Bannerman, Prof. H(arold) M(acColl)**, Dartmouth College, Hanover, N. H. *Geology, Mineralogy*. Barney's River, N. S., Can., April 9, 97. B.Sc., Acadia, 24; fellow, Princeton, 26, Ph.D., 27. Asst. geol., Princeton, 24-25; instr., Dartmouth Col., 27-28; asst. prof., 28-34, prof., 34-. Asst. geologist, Geol. Surv. Can., 27-30. Soc. Econ. Geol.; Geol. Soc.; Miner. Soc. Precambrian geology; mineral deposits.
- Banta, Dr. A(rthur) M(angan)**, Brown University, Providence, R. I. or Cold Spring Harbor, L. I., N. Y. *²*Zoology*. Greenwood, Ind., Dec. 31, 77. A.B., Indiana, 03, A.M., 04; Ph.D., Harvard, 07. Instr. pub. schs., 95-97; prin., high sch., 99-01; asst. zool., Indiana, 03-05; Harvard, 05-07; prof. biol., Marietta Col., 07-09; res. investigator, sta. for exp. evolution, Carnegie Institution, 09-30, research assoc., 30-33, 36-37; acting prof. biol., Brown, 29-30; research prof., 30-. Am. Soc. Zool. alternate rep., div. biol. and agr., Nat. Research Council, 32-. mem. board on fellowships in biol. sciences, 34-. Mem. cmt.

of one hundred, Int. Cong. Genetics, Ithaca, 32. A.A.; Soc. Nat. (sec'y, 35); Soc. Zool; Soc. Exp. Biol; Ecol. Soc.; Genetics Soc.; Limnol. Soc.; Eugenics Research Asn.; Eugenics Soc.; Am. Inst.; Ind. Acad; Ohio Acad. Speleology; animal behavior; inhibition of development of melanin pigment in animals; effects of selection; comparative physiology and effects of changed environment on cavernicolous and non-cavernicolous animal species; sex control; genetics, physiology of development and factors in longevity of Cladocera.

Banta, A(rthur) Perry, 159 Sierra View Road, Pasadena, Calif. Sanitary science. Brooklyn, N. Y., June 29, 04. B.S. Stanford, 26; fellow, Calif. Inst. Tech, 26-27, M.S. 28. Consulting physician, Celite Co., 26-27; designing engineer, Quinton, Code and Hill, 27; research engineer, Los Angeles County Sanitation Dists., 28- Assoc. Civil Eng. (pres. sanit. eng. sect.); Pasadena Eng. Soc. (director). Chemistry and bacteriology of sewage treatment; hydrogen ion concentration and bicarbonate equilibrium of bacterially digesting solids.

Banta, Dr. Clifford, Swarthmore, Pa. Chemistry. Marshall, Ind., Nov. 24, 92. A.B. Wabash Col., 15; A.M. Colorado, 16; Grasselli fellow, Mass. Inst. Tech, 20, Savage fellow, 21, Ph.D., 22. Research chemist, E. I. du Pont de Nemours and Co., 17, 19; Standard Oil Co. of Ind., 22-24; Barrett Co., Frankford, Pa., 24-30; Vacuum Oil Co., 31-33; petrol. technologist, E. I. du Pont de Nemours and Co., 33- Research chemist, C.W.S., 18. Chem. Soc.; Petrol. Inst.; Petrol. Technol.; Soc. Automotive Eng. Motor fuels; lubricants.

Banting, Sir F(rederic) G(rant), University of Toronto, Toronto, Ont., Can. Medicine. Alliston, Ont., Nov. 14, 91. M.B. Toronto, 16, L.R.C.P., 18, M.D., 22, D.Sc., 23; LL.D., Queen's (Can.), 23; Western Ontario, 24; Sc.D., Yale, 24. Univ. State of N. Y., 31. Res. surgeon, Hosp. Sick Children, Toronto, 19-20; asst. physiol. Western Ontario, 20-21; lecturer pharmacol., Toronto, 21-22; senior demonstrator med., 22-23; prof. med. research, 23-, head, Banting inst. John Scott medal, Phila., 23; Rosenberger medal, Chicago, 23; Nobel prize, 23; Cameron prize, Edinburgh, 27; Flavelle medal, Royal Soc. Can., 31; Apothecaries' medal, London, 34; F. N. G. Starr gold medal, Can. Med. Asn., 36. Nat. Research Council Can., 37- Am. Physicians; Physiol. Soc.; Can. Med. Asn.; fel. Royal Soc. Can.; fel. Royal Col. Surg. (Can.); Ont. Med. Asn.; Acad. Med. Toronto; fel. Royal Col. Physicians; British Physiol. Soc.; hon. fel. Royal Col. Surg.; fel. Royal Soc. Internal secretion of the pancreas.

Banus, Prof. M(arco) Garcia, Tufts College Medical School, Boston, Mass. Physiology. Valencia, Spain, July 6, 93. B.A. Madrid, 09, M.S., 14, D.Sc., 15. Spanish nat. research fellow, 16-18; fellow, Rockefeller Inst., 18; Yale, 18-19, instr. physiol. sch. med., 19-20; demonstrator, sch. med., Western Reserve, 24-25, instr., 25-29; asst. prof. med. sch., Tufts Col., 29-31, assoc. prof., 31- Physiol. Soc. Microscopical anatomy; regeneration; chemistry of nucleoproteids; semi-permeability of membranes; acid-base equilibrium and buffering of blood; high body temperature and blood composition.

Barach, Dr. Alvan L(eroy), 893 Park Ave., New York, N. Y. Internal medicine. Newcastle, Pa., Feb. 22, 95. Col. City of N. Y., 12-15; M.D. Columbia, 19. Intern, Presb. Hosp., 19-20; asst. med., Harvard Med. Sch. and Mass. Gen. Hosp., 20-21; Presb. Hosp., New York, 22-; col. physicians and surg., Columbia, 22-25, instr., 25-28; assoc., 28-36, asst. prof. clin. med., 36- Fel. Am. Med. Asn.; fel. Col. Physicians; Soc. Clin. Invest.; Soc. Exp. Biol.; N. Y. Acad. Med. Pneumonia; heart disease; asthma; the development of oxygen tents and oxygen chambers; the physiology of anoxemia in clinical disease; the effects of oxygen treatment in atelectasis of the lung, in post-operative cases and the new-born; asthma; congestive heart failure; coronary thrombosis; emphysema and fibrosis of the lung; helium as a therapeutic gas in asthma and obstructive lesions in the respiratory tract.

Barach, Dr. Joseph H(yem), Union Trust Bldg., Pittsburgh, Pa. Medicine. Kalvaria, Lithuania, March 12, 82. M.D., Pittsburgh, 03. Res. physician, West. Pa. Hosp., 03-04, res. pathologist, 05; pathologist, Eye and Ear Hosp., 04-09; South Side Hosp., 10; consulting physician, dept. health, Carnegie Inst. Tech., 10-; asst. prof. med. sch. med., Pittsburgh, and med. director, Falk clinic, 30-, prof. clin. med. sch. dentistry, 34- Visiting physician, Presb. Hosp., 10- Cong. Sch. Hygiene, Buffalo, 11; Int. Cong. Hygiene and Demog., Wash-

ington, 10. Capt., M.C., 18-19. A.A.; Am. Med. Asn.; fel. Col. Physicians. Morphology of the blood; physical diagnosis; the cardio-vascular system; nephritis and diabetes.

Barb, Prof. Clark F(red), Colorado School of Mines, Golden, Colo. Petroleum engineering. Alton, Kans., July 5, 97. P.E. Colo. Sch. Mines, 25, M.S., 28. Instr. petrol. eng. Colo. Sch. Mines, 25-28, asst. prof., 28-29; petrol. research, Pa. State Col., 29-31; assoc. prof. petrol. eng. and head dept. petrol. Colo. Sch. Mines, 36- Filtering clays and mineral oils; production data on oil fields; porosity-permeability relations in Pennsylvania oil sands; oil field waters of Pennsylvania.

Barbeau, Dr. C(harles) Marlus, National Museum, Ottawa, Ont., Can. Anthropology. Beaconsfield, Que., March 5, 83. B.A., Laval, 03, LL.D., 07; B.Sc., Oxford, 10; Sorbonne, 10. Asst. anthropologist, Geol. Surv. Can., 11; assoc. anthropologist, 19-22; anthropologist and folklorist, 22- Assoc. ed., Jour. Am. Folk-Lore, 16- Folk-Lore Soc.; Royal Soc. Can.; Can. Hist. Asn.; cor. mem. Soc. des Amerindiens de Paris. Wyandotte, Huron, Iroquoian and Tsimshian ethnography; French and English folk-lore of Canada.

Barbella, Nicholas G(eorge), U. S. Department of Agriculture, Washington, D. C. Animal husbandry. Taylortown, Pa., Aug. 21, 97. A.B. George Washington, 28, M.S., 30. Junior pharmacologist, food, drug and insecticide admin., U. S. Dept. Agr., 27-31; assoc. biochemist, animal husbandry div., bur. animal indust., 31- Assoc. chem., George Washington, 28-29. Agr. Chem.; Pharmacut. Asn. Drugs, especially ergot; digitalis; pituitary pharmacology of tin, lead arsenate and sulfur dioxide; food colors; anterior pituitary; thyroid; isolation and identification of flavoring constituents of meat.

Barber, Prof. B(ertram) A(lpheus), 350 West St., N. Hillsdale, Mich. Biology. Grayling, Mich., July 16, 85. A.B. Hillsdale Col., 12; State Col. fellow, Michigan, 12-13, A.M., 13; hon. Sc.D., Ottawa (Kans.), 27. Colgate, 28. Prof. biol. Defiance Col., 13-15; Hillsdale Col., 15- director, Slatyon Arboretum, 25- Ornith. Union; Wilson Ornith. Club; Mich. Audubon Soc. (councilor); Mich. Acad. (v. pres. zool. sect., 22). Entomology; ornithology; botany; Mallophaga.

Barber, Clifford L(amatte), Kester Solder Co., 4201 Wrightwood Ave., Chicago, Ill. Chemistry. West Jersey, Ill., March 29, 94. B.S. Chicago, 23, M.S., 25. Analyst, Swift and Co., 19-23; research chemist, Kester Solder Co., 25- Soft solders; soldering fluxes.

Barber, Prof. Clifford W(arren), New York State Veterinary College, Ithaca, N. Y. Pathology. Sharpsburg, Iowa, May 29, 01. D.V.M. Colo. Agr. Col., 31; Ph.D., Cornell, 35. Instr. vet. path., Cornell, 31-35; asst. prof. Exp. Sta., Colo. State Col., 35-37; research asst. prof. poultry diseases, N. Y. State Vet. Col., Cornell, 37- Hyaline degeneration of skeletal muscle; fowl paralysis and leucosis; museum technique.

Barber, D(eLois) H(arold), 5 Lexington Road, Montgomery, Ala. Engineering. Vermilion, S. Dak., July 27, 94. B.E., Iowa, 17. Asst. engineer, Cent. States Eng. Co., Iowa, 19-20; drainage engineer, 20-25; from junior engineer to dist. engineer, water resources branch, U. S. Geol. Surv., 25- Teacher, high sch., Iowa, 20-24. C.Eng., 17-19, capt. Civil Eng.; Soc. Mil. Eng. Data of stream flow; East Gulf drainage of Georgia, Alabama, Mississippi and Louisiana.

Barber, E(rnest) R., 1200 S. Broad St., New Orleans, La. Entomology. Liverpool, Eng., Oct. 12, 84. Ont. Agr. Col., 03. Bur. entom., U. S. Dept. Agr., 11-22; pres. and gen. manager, Barber Labs., Inc., 23- A.A.; Asn. Econ. Entom. Control of insect pests.

Barber, Dr. Geo(rge) W(are), 56 Hillhouse Ave., New Haven, Conn. Entomology. Hyde Park, Mass., Aug. 3, 90. B.S. Mass. Col., 13; M.S. Harvard, 25, Sc.D., 27. Sci. asst., bur. entom. and plant quarantine, U. S. Dept. Agr., 14-24; asst. entomologist, 24-27; assoc. entomologist, 27- Lieut., U.S.A., 17-19. A.A.; Asn. Econ. Entom.; Ecol. Soc.; Entom. Soc. Amer.; Agr. Hist. Soc.; Ornith. Union. European corn borer; corn ear worm; corn insects; field history of Lepidoptera; ecology of birds.

Barber, H(arry) G(ardner), U. S. National Museum, Washington, D. C. Entomology. Hiram, Ohio, April 20, 71. A.B., Nebraska, 93, A.M., 95; A.M., Harvard, 98. Teacher high sch., 98-30; asst. and later assoc. entomologist, bur. entom. and plant quarantine, U. S. Dept. Agr., 30- Investigator, Am. Museum Nat. Hist., 14-16. Summers, U. S. Nat.

Museum, 22-26. A.A; fel. Entom. Soc. Amer; N. Y. Entom. Soc. (sec'y, 02-10, pres, 16-18); Entom. Soc. Wash. Hemiptera; Heteroptera.

Barber, H(erbert) S(pencer), U. S. Department of Agriculture, Washington, D. C. *Entomology*. Yankton, S. Dak, April 12, 82. Pub. scha. Asst. preparator, U. S. Nat. Museum, 98-02; U. S. Dept. Agr, 02-04; U. S. Nat. Museum, 04-08; asst. and later assoc. entomologist, bur. entom. and plant quarantine, U. S. Dept. Agr, 08- A.A; Entom. Soc. Amer; Asn. Econ. Entom.; Wash. Acad; Entom. Soc. Wash. Coleoptera.

Barber, Dr. H(ervey) H(ubbard), University of Minnesota, Minneapolis, Minn. *Inorganic chemistry*. East Jewett, N. Y. March 2, 85. A.B. Cincinnati, 18; Ph.D. Minnesota, 26. Instr. inorg. chem., Minnesota, 18-27, asst. prof, 27- Chem. Soc. Specific reagent for rapid gravimetric determination of sodium; separation of sodium from rubidium, cesium, potassium and lithium; gravimetric determination of lithium and sodium by the uranyl zinc acetate method.

Barber, Dr. I(ra) G(arrett), Western Electric Co, Chicago, Ill. *Physics*. Villa Nova, Ont., Can. Feb. 12, 98. B.A. Queen's (Can), 16; Ph.D. Chicago, 20. Instr. physics, Ohio State, 18; physics and elec. eng., Rensselaer Polytech, 18-19; physicist, Linde Air Products Co, Buffalo, 20-22; West. Elec. Co, 22- A.A; Physical Soc. Secondary electron emission from metals; improved magnetic materials for telephone work.

Barber, Prof. Lena A(melia), Meredith College, Raleigh, N. C. *Botany*. Lenawee Co, Mich, April 22, 75. B.S. Adrian Col, 98; A.B. Michigan, 04, M.S. 11; fellow, Missouri, 14-15. Teacher, sch. Mich, 91-93, high sch, 99-01; Ohio, 01-03; S. Dak, 04-07; Iowa, 07-10; head dept. science, Christian Col, 10-14; prof. biol., Lindenwood Col, 17-18; Woman's Col. of Ala, 18-22; prof. and head dept. Meredith Col, 22- A.A. Fungous flora of silage; mycology; mosses.

Barber, Dr. M(arshall) A(lbert), Rockefeller Foundation, New York, N. Y. *Bacteriology*. Crown Point, Ind. Nov. 22, 68. A.B. Kansas, 91; A.B. Harvard, 92, A.M. 94, Ph.D. 07. Asst. bot., Harvard, 92-93; asst. and assoc. prof. bot. and bacter., Kansas, 94-06, prof. bacter. and path. med. sch, 06-11; research, Bur. Science, P. I, 11-15; int. health board, Rockefeller Foundation, 15-17; med. research, Rockefeller Inst, 18-19; special expert, malaria research, U. S. Pub. Health Service, 20-29; int. health div, Rockefeller Foundation, 29-Mem. Nat. Malaria Cmn. John Scott medal. Major, Sanit. C, 17-18. A.A; Acad. Trop. Med. Medicine; helminthology; malaria.

Barber, Dr. Sherburne F(rederick), State University of Iowa, Iowa City, Iowa. *Mathematics*. Nunda, N. Y. Oct. 25, 07. A.B. Rochester, 29, A.M. 30; Ph.D. Illinois, 33. Nat. research fellow, Hopkins, 33-34; Princeton and Inst. Advanced Study, 34-35; assoc. math., Iowa, 35- Math. Soc. Cremona and birational transformations.

Barber, T(homas) C(aldwell), Box 67, Mesa, Ariz. *Entomology*. Liverpool, Eng. July 27, 81. B.A.Sc. Toronto, 04. Hort. inspector, Ill, 06-07; asst. entomologist, La, 07-10; in charge sugar-cane insect investigations, bur. entom. U. S. Dept. Agr, 11-12; entomologist, Sugar Exp. Sta, Tucumán, Argentina, 12-14; Delta Lab, Tallulah, La, 14-16; fed. hort. board, Texas, U. S. Dept. Agr, 17-18, in charge sugar-cane investigations, 18-24; cotton insect investigations, 24-27, asst. entomologist, div. cotton insects, bur. entom. and plant quarantine, 27-

Barber, Prof. W(illiam) Harley, 621 Ransom St, Ripon, Wis. *Physics*. Black Earth, Wis, Aug. 28, 78. B.S. Wisconsin, 01, A.M. 09; Chicago, 11-13, 14. Asst. prin. and prin, high sch, Wis, 01-05; asst. Bur. Standards, 05-06; prof. phys. exp. Ripon Col, 06-, registrar, 10-15, dean, 15-24, acting pres, 17-18. Instr. Wisconsin, 24-26. Summers, asst. Chicago, 13. Mem. Basic Science Board, Wis. Physical Soc; Wis. Acad. Oil-drop falling in hydrogen gas.

Barber, Dr. W(illiam) Howard, 121 E. 60th St, New York, N. Y. *Surgery*. New York, N. Y. 86. A.B. Columbia, 09, M.D. 11. Instr. surg. N. Y. Polyclinic, 14-16; Univ. and Bellevue Hosp. Med. Col, 15-19, lecturer and director dept. exp. surg, 19-23; clin. prof. surg, 23-35, med. col, N. Y. Univ, 35- Aast. attending surgeon, Bellevue Hosp, 18-21, attending surgeon, 21; senior attending surgeon, Jamaica Hosp, N. Y; past director surg, N. Y. Neur. Hosp; director surg, Welfare

Hosp, 37- Fel. Col. Surg; Am. Med. Asn; Soc. Exp. Biol; Harvey Soc; N. Y. Surg. Soc; N. Y. Acad. Med. General and abdominal surgery.

Barborka, Dr. Clifford J(oseph), 700 N. Michigan Ave, Chicago, Ill. *Medicine*. Clinton, Iowa, July 19, 94. B.S. Chicago, 16, M.D. Rush, 20; M.S. Minnesota, 28; Sc.D. Simpson Col, 32. Consulting physician, staff, Mayo Clinic, 21-32; instr. med. med. sch, Northwestern, 32- Inst. Mayo Found. Minnesotta. Am. Med. Asn; Asn. Study Internal Secretions; fel. Col. Physicians; Gastro-Enterol. Asn; Cent. Soc. Clin. Research. Diabetes mellitus; obesity; epilepsy; Soc. Clin. Research. Diabetics mellitus; obesity; epilepsy; migraine; the ketogenic diet; nutrition.

Barbour, Prof. Erwin H(ineckley), University of Nebraska, Lincoln, Nebr. *Paleontology*. Springfield, Ind. A.B. Yale, 82, Ph.D. 87. Asst. paleontologist, U. S. Geol. Surv, under Prof. O. C. Marsh at Yale, 82-89; prof. geol. Grinnell Col, 89-91; prof. paleont., Nebraska, 91-, director, State Museum, 91- Head, State Geol. Surv, Nebr, 91-26. U. S. Geol. and Hydrog. Surv. Geol. Soc; Paleont. Soc; Soc. Vert. Paleont; Asn. Mus; Nebr. Acad; Nebr. Ornith. Union. Vertebrate paleontology.

Barbour, Prof. George B(rown), University of Cincinnati, Cincinnati, Ohio. *Geology*. Edinburgh, Scotland, Aug. 22, 90. Marburg; M.A. Edinburgh, 10; B.A. Cambridge, 16, M.A, 18; Ph.D. Columbia, 29. Prof. geol. Peking Univ, China, 20-22; Peiyang Univ, 22-23; Yenching Univ, 23-32; lecturer, Cincinnati, 32-33; visiting physiographer, Cenozoic Lab, 33-34; hon. lecturer, London, 34-37; assoc. prof., Cincinnati, 37-Lecturer, Columbia, 28-29. Cor. mem., Geol. Surv. China. Gill. mem. award, Royal Geog. Soc, 37. Mil. service, 14-19. Fel. Geol. Soc; fel. Geol. Soc. London; fel. Royal Geog. Soc; fel. Royal Soc. Edinburgh; Soc. géol. de France; fel. Geol. Soc. China; fel. Finland Geol. Soc. Geomorphology.

Barbour, Dr. Henry G(ray), Yale University School of Medicine, New Haven, Conn. ***Physiology, Pharmacology*. Hartford, Conn, March 28, 86. A.B. Trinity Col. (Conn), 06; M.D. Hopkins, 10, fellow, 10-11; Freiburg, 11; Vienna, 12; London, 13. Asst. prof. pharmacol, Yale, 12-21; prof. McGill, 21-23; physiol. and pharmacol, Louisville, 23-31; assoc. prof. pharmacol. and toxicol, sch. med., Yale, 31- Revision cmt, U. S. Pharmacopoeia, 20-30. A.A; Physiol. Soc; Soc. Pharmacol. (assoc. ed, 'Jour', 21-34, councilor, 22-26, 30); Soc. Biol. Chem; Soc. Exp. Biol; Am. Med. Asn; Soc. Anesthetists; Cent. Soc. Clin. Invest; fel. Int. Col. Anesthetists. Body temperature; fever; periodic respiration; drug effects on mammalian arteries; pyretic and antipyretic drug action; amines; anesthetics; blood and serum specific gravity; heat regulation and water exchange; morphine addiction and withdrawal; magnesium in drug combinations; brain hydration; pituitary and water exchange; heavy water effects in mammals.

Barbour, Dr. Thomas, Harvard University, Cambridge, Mass. ***Zoology*. Martha's Vineyard, Mass, Aug. 19, 84. A.B. Harvard, 06, A.M. 08, Ph.D. 11; hon. D.Sc. Havana, 30, Dartmouth, 36. Curator and mem. council, library, Harvard, 08-; curator reptiles and amphibians, museum comp. zool, 10-27, director museum comp. zool. and univ. museum, 27-, lecturer and later prof. zool, 22-, mem. faculty, Peabody Museum, 13- Custodian, Atkins Institution, Cuba, Arnold Arboretum, in charge, Barro Colorado Island Lab, C. Z. Trustee, Radcliffe Col, 30-34; Carnegie Institution, 35. Advisory board, Guggenheim Mem. Foundation. Gold medal, Harvard Travelers Club, 07. Del. Pan-Am. Sci. Cong, Santiago, Chile, 07-08. Nat. Acad; A.A; Soc. Zool; Ornith. Union; Soc. Mammal; Soc. Ichthyol. and Herp. (past pres); Soc. Trop. Med; Explorers Club; Am. Acad; cor. mem. Am. Hispan. Soc; Nutall Ornith. Club; New Eng. Zool. Club (pres); Wash. Acad. (non-res. v. pres, 37); fel. N. Y. Zool. Soc; hon. mem. Zool. Soc. Phila; Acad. Nat. Sci. Phila; Boston Soc. Nat. Hist. (pres, 25-, trustee, 30); Biol. Soc. Wash; fel. Royal Geog. Soc; Royal Asiatic Soc; Soc. Preserv. Fauna British Empire; for. mem. Zool. Soc. London; Nederland. Dierkundige Vereen Amsterdam; hon. fel. Acad. Nat. Phys. Med. Sci. Cuba. Herpetology; geographical distribution of fishes and reptiles.

Barbour, William R(ichard), U. S. Forest Service, Atlanta, Ga. *Forestry*. Ridgway, Pa, June 9, 90. Ph.B. Yale, 11, M.F. 12. Forest asst, examiner and supervisor, U. S. Forest Service, 12-18; forest engineer, Cent. Leather Co, 19-20; asst. state forester, Tenn, 21; consulting forester, 22-24; forester, Republic of Haiti, 25-29; Trop. Plant Research Foundation, 30; Virgin Islands, 31; gen. supt. forests, P. R, and supervisor,

- Luquillo Nat. Forest**, 31-35; *assoc. forester, U. S. Forest Service*, 36- Soc. Foresters. Tropical forestry.
- Barclay, Prof. B(ertram) D(onald)**, 1539 S. Florence Ave, Tulsa, Okla. *Botany*. Champaign, Ill., Nov. 9, 98. B.S. Col. of Wooster, 23; Syracuse, 23-24; M.S., West Virginia, 26; fellow, Chicago, 26-28; Ph.D., 28. Asst. forest bot. and path, N. Y. State Col. Forestry, Syracuse, 23-24; instr. bot., West Virginia, 24-26; prof., Tulsa, 28- A.A.; Ecol. Soc.; Okla. Acad. (v. pres., sect. A, 30, 34, pres., F, 36). Plant morphology; origin and development of tissues in stem of *Selaginella wilde-novii*; organography of *Elephantella groenlandica* at varying altitudes.
- Barclay, Dr. Earle H(erbert)**, 306 S. D St., Hamilton, Ohio. *Chemistry*. Portsmouth, Va., June 20, 94. Ch.E., Virginia, 16; Ph.D., Hopkins, 22. Research chemist, Silica Gel Corp., Baltimore, 22-29; *Champion Paper and Fibre Co.*, 29-Instr., Y.M.C.A., Baltimore, 21-29. U.S.N.R., 18-19, lieut. A.A. Adsorption.
- Barclay, Dr. Harriet G(eorge)**, 1539 S. Florence Ave, Tulsa, Okla. *Botany*. Minneapolis, Minn., Aug. 31, 01. A.B., Minnesota, 23, A.M., 24; fellow, Chicago, 25-28; Ph.D., 28. Asst. bot., Minnesota, 23-25; Chicago, 27-28; acting instr., Tulsa, 29-30, acting asst. prof., 31-35, 36-; ecol. staff, *Rocky Mt. Biol. Lab.*, 35- Ecol. Soc.; Okla. Acad. Plant ecology; flood plain succession of the Mississippi River; germination of native herbaceous seeds; alpine meadow successions at varying altitudes; vegetational history of an alpine meadow.
- Bard, Prof. Phillip**, Johns Hopkins University School of Medicine, Baltimore, Md. **Physiology*. Hueneme, Calif., Oct. 25, 98. A.B., Princeton, 23; A.M., Harvard, 25, Ph.D., 27. Instr. physiol., Harvard Med. Sch., 26-28; asst. prof., Princeton, 28-31; Harvard Med. Sch., 31-33; prof., sch. med., Hopkins, 33-Div. med. sciences, Nat. Research Council; Nat. Board Med. Examiners, 35- A.A.; Physiol. Soc. (councilor, 36-); Am. Acad. Neural basis of emotional reactions; central control of the sympathetic nervous system; functions of hypothalamus; temperature regulation; postural reactions; localization of function in cerebral cortex; neural basis of sexual behavior.
- Bardin, Collis M(atterson)**, 3115 Nevada Ave, Fresno, Calif. *Chemistry, Physics*. Utica, N. Y., Aug. 19, 04. B.Ch., Cornell, 24; M.S., Wisconsin, 25; California, 25-26, 29-30; Wisconsin, 24, 25; Cornell, 31. Prof. physics, Dubuque, 26-27; instr., junior col. science, San Rafael Mil. Acad., Calif., 27-30; science, Wash. Union High Sch., Fresno, 30- Asn. Physics Teachers. Trinitrites.
- Bardsley, Prof. C(larence) E(dward)**, 401 E. Seventh St, Rolla, Mo. *Civil engineering*. St. Louis, Mo., April 23, 94. B.S., Mo. Sch. Mines, 20, C.E., 23; M.S., Missouri, 24; Nat. Slag Asn. fellow, Michigan, Sc.D., 26; Northwestern, 27-28; Technische Hochschule, Charlottenburg, Berlin, 28-29. Eng. dept., Mo. Pacific Ry., 13-14; topog. branch, U. S. Geol. Surv., 17-19; from instr. to prof. civil and hydraul. eng., Mo. Sch. Mines, 20-; consulting engineer, 24- John R. Freeman traveling scholar of Am. Soc. Civil Eng., Europe, 28-29; city engineer, Rolla, Mo., 27-29; engineer, Phelps County, Mo., 31; state rep., U. S. Coast and Geod. Surv., 33- Summers, eng. dept., Wabash R. R., 15; Pa. R. R., 17; assoc. prof., Michigan, 26; hon. mem. faculty, Northwestern, 27-28; U. S. C. Eng., 30-31; U. S. Waterways Exp. Sta., 31; engineer, Skaggs Dam, 34. Civil Eng. (special cmt. hydraul. research, 34-); Soc. Mil. Eng., Eng. Educ.; Nat. Soc. Professional Eng.; Astron. Soc.; Verein Deuts. Ing.; Int. Asn. Road Congs. Geodesy; astronomy; civil, hydraulic and highway engineering; education.
- Bardwell, Dr. D(wight) C(ooley)**, Solvay Process Co., Syracuse, N. Y. *Physical chemistry*. Aspen, Colo., Jan. 20, 97. B.S., California, 19, Ph.D., 21. Asst. physical chemist, U. S. Bur. Mines, 21-24; assoc. physical chemist, 24-25; fixed nitrogen research lab., U. S. Dept. Agr., 25-26; Atmospheric Nitrogen Corp., 26-35; nitrogen div., Solvay Process Co., 35-A.A.; Chem. Soc. Radium; chemical effects of the alpha radiation from radon in gas systems.
- Bardwell, Fred L(eslie)**, 907 E. Fourth St., Northfield, Minn. *Chemistry*. Excelsior, Minn., Sept. 2, 58. B.S., Minnesota, 81, Mass. Inst. Tech., 84. Asst. chem., Mass. Inst. Tech., 84-86, instr., 86-94; asst. prof., 94-11; Case, 11-15; lecturer, Minnesota, 17-19; Carleton Col., 22-29; retired. Work for India-rubber mfg. and culture companies. A.A.; Chem. Soc. India-rubber.
- Bardy, Dr. Joseph**, 5321 Wayne Ave, Philadelphia, Pa. *Psychology*. Russia, Dec. 23, 88. M.D., Pennsylvania, 11, A.B., 18, A.M., 21, Ph.D., 23. *Instr. physics and biol., Olney Senior High Sch., Phila.* A.A.; Soc. Study Educ. Educational psychology; tests and measurements.
- Bare, C(larence) O(wen)**, R. R. 4, Box 17, Charleston, S. C. *Entomology*. Protection, Kans., Nov. 14, 89. A.B., Kansas, 23, fellow, 23-24, A.M., 24. Teacher and prin. pub. schs., Kans., intermittently, 07-20; asst. entomologist, truck crop insect investigations, bur. entom. and plant quarantine, U. S. Dept. Agr., 26- Biol. surv., Univ. Kans., 23. Summers, inspector, Entom. Cmn., Kans., 23, 24. U.S.A., 18-19. A.A.; Entom. Soc. Amer.; Asn. Econ. Entom.; Kans. Entom. Soc.; Fla. Entom. Soc.; Asn. C. Acad. Notonectidae; parasites of celery insects; celery cutworms; arsenical residues on cabbage; substitutes for arsenicals as cabbage insecticides.
- Bareis, Prof. Grace M(arie)**, Canal Winchester, Ohio. *Mathematics*. Canal Winchester, Ohio. A.B., Heidelberg Col. (Ohio), 97; Bryn Mawr Col., 97-99, 02-06; fellow, Ohio State, 06-08, Ph.D., 09. Teacher, Miss Roney's Sch., Bala, Pa., 00-06; asst. prof. math., Ohio State, 08- Trustee, Heidelberg Col. (Ohio), 34- A.A.; Math. Soc.; Math. Asn. Groups.
- Barer, Dr. Adelalde Pauline**, 106 S. Dodge St., Iowa City, Iowa. *Medicine*. Iowa City, Iowa, Aug. 31, 97. A.B., Iowa, 19, Ph.D., 28; M.S., Ohio State, 21. Asst. home econ., Ohio State, 19-21; instr., Illinois, 21-24; asst. metabolism, Iowa, 24-27; assoc. med., 28- Summer, instr., Colorado, 25. Metabolism.
- Barham, Dr. H(arold) N(athan)**, 820 Bluemont Ave, Manhattan, Kans. *Organic chemistry*. Almena, Kans., Aug. 5, 97. Univ. Caen, 19; A.B., Bethany Col. (Kans.), 21; M.S., Ohio State, 22; Ph.D., Kansas, 28. Prof. chem., Mont. Wesleyan Col., 22-23; instr., high sch., Kans., 23-24; prof. chem., Bethany Col. (Kans.), 24-26; research chemist, Cities Service, 28-29; assoc. prof. chem., Kans. State Col., 29- Chem. Soc. Calculation of flash points of pure organic substance; the electrodeposition of metals from their liquid ammonia solutions; petroleum derivatives; fermentation of xylose solutions by *Aspergillus flavus*; kojic acid as a dye intermediate.
- Baril, Prof. Oller L(udger)**, 91 Eureka St., Worcester, Mass. *Organic chemistry*. Spencer, Mass., July 21, 98. A.B., Col. of Holy Cross, 20, A.M., 23, M.S., 27. Teacher, high sch., Mass., 20-21; People's Acad., Vt., 21-22; instr. chem., Col. of Holy Cross, 22-25, lecturer, 25-27, prof. org. analysis, 27- Chem. Soc. Catalysis in organic chemistry; preparation of derivatives for the identification of ethers; physical properties of picrates; microdetermination of oxygen.
- Barlinger, John W(illiam)**, Painesville, Ohio. *Plant pathology*. Jamestown, Ind., Aug. 30, 95. A.B., Wabash Col., 18; M.S., Ohio State, 24. Assoc. pathologist in charge European barberry eradication in Ohio, bur. plant indust., U. S. Dept. Agr., 18-30; plant parasitologist and nursery inspector, State Dept. Agr., Ohio, 30- Phytopath. Soc.; Ohio Acad. Common barberry and black stem rust of wheat.
- Barkan, Dr. Hans**, Stanford University Hospital, San Francisco, Calif. *Medicine*. San Francisco, Calif., July 26, 82. A.B., Stanford, 06; M.D., Harvard, 10. Asst. path., Harvard, 10-11, instr., 11-12; intern, eye clinic, Vienna, 12-14; asst. ophthalm., sch. med., Stanford, 14-16, instr., 16-18, asst. prof., 18-28, prof., 28- Pathologist, L. I. Hosp., N. Y., 10-12; trustee, Mills Col. A.A.; Am. Med. Asn.; Ophthal. Soc.; Acad. Ophthal. and Otolaryngol.; Pacific Coast Oto-ophthal. Soc.; Ophthal. Gesell. Ophthalmology.
- Barkas, Dr. W(alter) H(enry)**, Columbia University, New York, N. Y. *Physics*. Portland, Oregon, Sept. 3, 12. B.S., Washington (Seattle), 32, Ph.D., 36. Teaching fellow physics, Washington (Seattle), 32-36; instr., Columbia, 36- Physical Soc. Nebular redshift; potential functions; nuclear physics.
- Barkenbus, Dr. C(harles)**, 348 Aylesford Place, Lexington, Ky. *Organic chemistry*. Kalamazoo, Mich., July 7, 94. B.S., Kalamazoo Col., 17; Ph.D., Yale, 20. Asst. Yale, 17-18; asst. prof. chem., Kentucky, 20-30, prof., 30- Chem. Soc. Analysis of naturally occurring drugs; synthetic organic chemistry.
- Barker, Prof. A(ugustus) L(awrence)**, 302 Elm St., Ripon, Wis. *Chemistry*. Cedar Bluff, Ala., Feb. 10, 88. B.S., Alabama, 10, fellow, 10-11, M.S., 11; fellow, Chicago, 14-15; Ph.D., Wisconsin, 22. Instr. biol., Alabama, 11-13; asst. prof. chem., Mississippi, 15-16; instr. physiol., Emory, 16-17; prof.

chem., Ripon Col., 17-20; instr., Wisconsin, 20-21; prof., Ripon Col., 21- Chem. Soc.; Wis. Acad. Organic chemistry; deaminization of esters of amino acids; qualitative analysis.

Barker, Dr. E(lmer) Eugene, U. S. Treasury Department, Washington, D. C. *Landscape architecture*. Crown Point, N. Y., Dec. 31, 86. A.B., Cornell, 10, Ph.D., 14; M.L.A., Harvard, 25. Sci. aid, sta. for exp. evolution, Carnegie Institution, 11; asst. prof. plant breeding, Cornell, 14-19; plant breeder, Insular Exp. Sta., P. R., 19-20; chief agronomist, 20-21; asst. prof. bot, Georgia, 21-22; investigator, State Dept. Agr., Mass., 23-25; landscape architect, Westchester County Park Cmn., 26-28; State Div. Archit., N. Y., 28-36; with procurement div., U. S. Treasury Dept., 36- Nat. Indust. Conf. Board. Breeding of native Puerto Rican plants; physiography; the brook stickleback; food supply and agricultural industry of New England; regional planning; landscape architecture.

Barker, Prof. E(rnest) F(ranklin), 18 Ridge Way, Ann Arbor, Mich. *Physics*. Listowel, Ont., Can. March 16, 86. B.S., Rochester, 08; A.M., Michigan, 13, fellow, 13-14, Ph.D., 15. Instr. math, Rochester, 10-12; asst. physics, Michigan, 14-15; prof., Western Ontario, 15-19; nat. research fellow, Michigan, 19-22; asst. prof., 22-31, prof., 31- A.A.; fel. Phys. Soc. Infra-red spectra.

Barker, Dr. George E(rnest), 167 College St., Buffalo, N. Y. *Organic chemistry*. Cortland, N. Y., Aug. 8, 07. B.S., Mass. Inst. Tech., 30, Ph.D., 35. Asst. Mass. Inst. Tech., 30-34; research chemist, Nat. Aniline and Chem. Co., 34- Chem. Soc. Application of spectroscopy to organic chemistry; development of industrial chemical products.

Barker, Dr. Harold C(harles), University of Pennsylvania, Philadelphia, Pa. *Physics*. Philadelphia, Pa., Dec. 3, 75. B.S., Pennsylvania, 03, A.M., 05, Ph.D., 07. Asst. chem., Drexel Inst., 96-98; physics, Pennsylvania, 03-04, instr., 04-10, asst. prof., 10-19, prof., 19- Physical Soc. Peltier electromotive force.

Barker, Dr. H(orace) Albert, University of California, Berkeley, Calif. *Microbiology*. Oakland, Calif., Nov. 29, 07. A.B., Stanford, 29, Ph.D., 33. Asst. zool., Chicago, 30-31; nat. research fellow, Hopkins Marine Sta., Pacific Grove, 33-35; Gen. Educ. Board fellow, Tech. Univ., Delft, Holland, 35-36; instr. soil microbiol. and junior soil microbiologist, Exp. Sta., California, 36- Soc. Bact.; West. Soc. Nat. Soil microbiology; physiology and biochemistry of bacteria, protozoa and lower algae; denaturation of proteins.

Barker, Howard H(ill), 346 Richmond Ave., South Orange, N. J. *Physics, Chemistry*. Baraboo, Wis., Sept. 28, 90. A.B., Colorado, 13; A.M., Missouri, 16. Junior chemist, U. S. Bur. Mines, 15-16; chief chemist, Chem. Products Co., Denver, 16-19; chief chemist and director, Ore Products Corp., 19-21; research prof., eng. exp. sta., Missouri, 21-23; v. pres. and chemist, U. S. Radium Corp., New York, 23- V. pres., Weksler Thermometer Corp. A.A.; Chem. Soc. Uranium; vanadium; measuring and extraction of radium; measurement of luminous zinc sulfide compounds activated with radium; detection of minute amounts of radium in living persons.

Barker, Prof. John W(illiam), Wittenberg College, Springfield, Ohio. *Chemistry*. Cassville, Mo., Sept. 4, 94. B.S., Kans. State Col., 20; M.S., Kansas, 23, Ph.D., 25. Control chemist, Larabee Flour Mills Corp., Kans., 20-21; asst. instr. chem., Kansas, 23-24; prof., Junior Col., Flat River, Mo., 24-27; assoc. prof., Wittenberg Col., 27-32, prof. and head dept., 32- Chem. Soc. Electrophysical chemistry; super-heating in the Brown-Duval moisture tester; electrolytic valve action; absolute value of an electrode potential.

Barker, Dean J(oseph) W(arren), Columbia University, New York, N. Y. *Electrical engineering*. Lawrence, Mass., June 17, 91. Chicago; B.S., Mass. Inst. Tech., 16, M.S., 25. From 2nd lieut. to major, Coast Artil. Corps, 16-25; assoc. prof. elec. eng., Mass. Inst. Tech., 25-29; prof. and head dept., Lehigh, 29-30; dean faculty eng., Columbia, 30- Director, Personnel Research Federation, Inc.; Nat. Research Council. Trustee, Knickerbocker Hosp. A.A. (chairman, M. 37); fel. Elec. Eng.; Civil Eng.; Illum. Eng. Soc. (v. pres., 29, pres., 32); Mech. Eng.; Min. and Metal. Eng.; Eng. Educ. Education; technique of illumination in industry.

Barker, Dr. Lewellys F(ranklin), Johns Hopkins Hospital, Baltimore, Md. *Medicine*. Norwich, Ont., Can., Sept. 16, 67. M.B., Toronto, 90, hon. M.D., 05; fellow, Hopkins, 92-94; Leipzig, 95; Munich and Berlin, 04; LL.D., Queen's (Can), 07,

McGill, 11, Glasgow, 30. Assoc. anat., Hopkins, 94-97, assoc. prof., 97-99, path., 99-00; prof. anat., Chicago, and head dept., Rush Med. Col., 00-05; prof. med., Hopkins, 05-14, clin. med., 14-21, emer. prof. med., 21- physician in chief, Hopkins Hosp., 05-14, visiting physician, 14- Asst. res. pathologist, Hopkins Hosp., 94-99; Hopkins med. commissioner to Philippine Islands, 99; special fed. commissioner from U. S. Treasury Dept. for investigation of plague in San Francisco, 01; visiting prof. med. sch., California, 29; physician in chief, Peter Bent Brigham Hosp., Boston, 29. Assoc. ed., Am. Jour. Anat., 02- Chairman med. council, U. S. Veterans Admin., 29- Trustee, Mem. Inst. for Infectious Diseases, Chicago. Soc. Nat.; Asn. Anat.; Asn. Path. and Bact.; Am. Physicians (v. pres., 11); Soc. Biol. Chem.; Soc. Clin. Invest.; Neur. Asn.; Med. and Chirurg. Faculty Md. (pres., 25); cor. mem. Edinburgh Medico-Chirurg. Soc.; cor. mem. Vienna Imp. Med. Soc.; cor. mem. Budapest Royal Soc. Physicians; for. mem. Swedish Med. Soc. Structure, physiology and pathology of the nervous system; infectious diseases; morbid anatomy of hereditary ataxia; amino-acids in urine; pathological physiology of the heart; clinical diagnosis of internal diseases.

Barker, Dr. M. Herbert, 303 E. Superior St., Chicago, Ill. *Medicine*. Villisca, Iowa, Aug. 20, 99. B.S., South Dakota, 23; M.D., Rush, Chicago, 25; Elizabeth Ward fellow, Northwestern, 29-31, M.S., 30. Research, Peter Bent Brigham Hosp. and Harvard Med. Sch., 27-30; instr. med., med. sch., Northwestern, 30-31, assoc., 31-35, asst. prof., 35-, director renal-vascular clinic, 31-, director lab. cardio-renal-vascular research, 31-, director oxygen research lab. and oxygen service, med. sch. and Passavant Mem. Hosp., 33- Attending staff, Passavant Mem. Hosp., and consultant, diagnostic center, Edward Hines Mem. Hosp., 31-36. Assoc. Col. Physicians; Am. Heart Asn.; Cent. Soc. Clin. Research. Mineral and nitrogen metabolism in edema of cardiac and renal disease; factors in cholesterol metabolism; effects of anoxia with special reference to clinical and experimental pneumonia; pharmacology of the thiocyanates; oxygen in epilepsy; altitude and anoxia.

Barker, Major M(aurice) E(ugene), Ft. Sam Houston, Texas. *Chemistry*. Humboldt, Tenn., May 20, 94. B.S., Valparaiso, 15; A.M., South Carolina, 24; Sc.D., Mass. Inst. Tech., 30. Teacher, high schs. P. I., 16-17; battery officer, heavy artil., U.S.A., 17-20, troop duty, 20-21, special instr., Coast Artil., 21-24; instr. chem. and war gases, Chem. Warfare Service Sch., 24-25, tech. director, Chem. Warfare Service, 25-27; research work on activated charcoal, 27-30; instr. Chem. Warfare Service Sch., 30-35; chem. officer, 2nd div., U.S.A., Ft. Sam Houston, 35- Chem. Soc. Chemical warfare; air purification.

Barker, Dr. Paul S(hirmer), University Hospital, Ann Arbor, Mich. *Internal medicine*. St. Louis, Mo., Aug. 22, 95. A.B., Westminster Col. (Mo.), 15; M.D., Washington (St. Louis), 20. Intern, Presb. Hosp., New York, 20-22; asst. med., Washington (St. Louis), 22-24, instr., 24-25; asst. prof., Michigan, 25-29, assoc. prof., 29- A.A.; Am. Med. Asn.; Soc. Clin. Invest.; Cent. Soc. Clin. Research. Cardiac physiology; diseases of the heart.

Barker, Dr. Prince P(atanilla), Veterans Administration Facility, Tuskegee, Ala. *Psychiatry*. Barbados, B. W. I., Dec. 13, 97. A.B., Col. City of N. Y., 18; M.D., Howard, 23. Neuropsychiatrist, Veterans Admin. Facility, 24- 1st Int. Cong. Mental Hygiene. Fel. Psychiat. Asn.; Asn. Mil. Surg.; Nat. Med. Asn. Personality changes in physical disorders; the influence of neuropsychiatry on general medicine; syphilis.

Barker, Dr. Roger G(arlock), State University of Iowa, Iowa City, Iowa. *Psychology*. Macksburg, Iowa, March 31, 03. A.B., Stanford, 28, A.M., 30, Ph.D., 34. Asst. Stanford, 32-33, research assoc., 33-35; Gen. Educ. Board fellow, Iowa, 35- A.A.; assoc. Psychol. Asn. Personality in children and adolescents; animal psychology; psychology of individual differences.

Barker, Dr. W(illiam) H(alsey), Rockefeller Institute, New York, N. Y. *Medicine*. Jan. 3, 07. A.B., Princeton, 28; M.D., Hopkins, 32. Asst. med., Hopkins, 33-35; hosp., Rockefeller Inst., 36- Harvey Soc. Experimental anemia; clinical study of blood diseases.

Barkley, J(ohn) F(erdinand), 541 Maple Ridge Road, Bethesda, Md. *Engineering*. Chanute, Kans., Jan. 21, 88. Kansas; B.S., Mich. Col. Mines, 10. Instr., N. Mex. Sch. Mines, 10-11; asst., Westinghouse Elec. and Mfg. Co., Pittsburgh, 11-

13; junior engineer, U. S. Bur. Mines, 13-17; asst. efficiency engineer, Carnegie Steel Co., Pittsburgh, 17-23; supervising engineer, U. S. Bur. Mines, 23- Mech. Eng.; Min. and Metal. Eng.; Fuels and utilization; heat transmission; blast furnace gases.

Barkley, Prof. Key L(ee), 1207 W. Market St., Greensboro, N. C. *Psychology*. Statesville, N. C., Feb. 24, 00. A.B., Berea Col., 26; A.M., North Carolina, 27, Ph.D., 30. Instr. psychol., North Carolina, 27-30; Illinois, 30-31; asst. prof., *Woman's Col., North Carolina*, 31-35; assoc. prof., 35- Assoc. Psychol. Asn. Psychology of advertising.

Barksdale, Henry C(ompton), State Water Policy Commission, Trenton, N. J. *Hydraulic engineering*. Carters Bridge, Va., July 26, 98. C.E., Virginia. Instrument man and computer, Albemarle Co., Va., 22; asst. city engineer, Charlottesville, 23; junior engineer, U. S. Geol. Surv., 24-26; asst. hydraul. engineer, State Dept. Construction and Develop., N. J., 27-29; *State Water Policy Cmn.*, 29- Summer, rodman, topographic branch, U. S. Geol. Surv., 21. Assoc. Civil Eng.; Geophys. Union. Ground-water hydrology; ground-water resources of Atlantic City and Runyon areas, New Jersey.

Barksdale, Prof. Julian D(evreux), University of Washington, Seattle, Wash. *Geology*. Beaumont, Texas, Sept. 28, 04. A.B., Stanford, 30; Ph.D., Yale, 36. Field geologist, H. L. Doherty, Cities Service, 30-32; instr. geol., Yale, 35-36; asst. prof., *Washington (Seattle)*, 36- Summers, asst. director, Stanford Geol. Surv., 35, director, 36, 37. Petrology and structural geology.

Barlett, Dr. Helen Blair, AC Spark Plug Co., Flint, Mich. *Petrography*. Butler Co., Pa., Dec. 14, 01. A.B., Ohio Wesleyan, 27; U. S. Bur. Standards fellow, Ohio State, 27-28; Ph.D., 31. *Petrographer*, AC Spark Plug Co., 28- A.A.; Ceramic Soc.; Chem. Soc.; Miner. Soc. Phase relations in fused silicate mixtures.

Barlow, Dr. Claude Heman, Public Health Laboratories, Cairo, Egypt. *Tropical medicine*. Lyons, Mich., Oct. 13, 76. Michigan; M.D., Northwestern, 06; certificate, London Sch. Trop. Med., 14; Sc.D., Hopkins, 29. Health officer, Mich., 07; supt. hosp., Am. Baptist For. Mission Soc., Huchow, China, 08-19; Shaohsing, 19-26; Ningpo, 26; head hookworm studies, *Rockefeller Foundation*, Egypt, 29- Chinese Maritime Customs; port physician, Port of Ningpo. Soc. Trop. Med.; Helminth. Soc.; Soc. Parasitol. (China branch); Ornith. Soc. Mich.; Royal Soc. Trop. Med.; Med. Soc. China. Surgery; helminthology; Fasciolopsis buski; Schistosoma mansoni and Schistosoma haematobium.

Barlow, Dean John, Rhode Island State College, Kingston, R. I. *Zoology*. Amenia, N. Y., Nov. 28, 72. B.S., Middlebury Col., Sc.D., 32; A.M., Brown. Prof. science, Fairmount Col., 98-01; zool., R. I. State Col., 01-, dean men, 25-, v. pres., 30-, acting pres., 30-31; dean sch. science and business, 31- A.A.; Entom. Soc. Amer.

Barlow, Prof. M(yclon) C(all), University of Utah, Salt Lake City, Utah. *Psychology*. Idaho, Sept. 18, 87. A.B., Utah, 14; A.M., Peabody Col., 24; Ph.D., Chicago, 26. Prof. psychol., Utah, 26- Factors of learning in higher mental processes; measurement of character and personality.

Barlow, Prof. O(rpheus) W(illiam), Winthrop Chemical Co., Rensselaer, N. Y. *Pharmacology*. Webb City, Mo., Oct. 30, 96. A.B., Missouri, 20, A.M., 23; Ph.D., Chicago, 26, M.D., Rush, 35. Instr. physiol. and pharmacol., Missouri, 21-24; pharmacol., Western Reserve, 24-29; asst. prof., 29-34; assoc. prof., 34-36; biochem., Albany Med. Col., Union (N. Y.), 36-; director research labs., Winthrop Chem. Co., 36- Soc. Pharmacol.; Soc. Exp. Biol.; Asn. Study Int. Secretions. Cardiac poisons; barbiturates and opium derivatives; nutritional anemia; antiasthmatics.

Barlow, Prof. W(illiam) E(dward), Virginia Polytechnic Institute, Blacksburg, Va. *Chemistry, Metallurgy*. Bury, Eng., May 11, 70. B.A., Cambridge, 95, M.A., 99; Ph.D., Göttingen, 03. Demonstrator and asst. prof. chem., Iowa, 92-01, asst. prof. chem. and metal, 03-04; assoc. prof. indust. chem. and metal, Va. Polytech., 04-06; prof. metal. and metallog., 06-, dean grad. dept., 08-16. A.A.; Eng. Educ.; Va. Acad. Metallurgy; correlation of physical properties of alloys with constitution, heat treatment and mechanical treatment.

Barmore, Dr. Mark A(lfred), 312 Garfield Ave., Ft. Collins, Colo. *Chemistry*. Orangeville, Ill., Dec. 10, 05. A.B., Whit-

tier Col., 27; A.M., Stanford, 29, Ph.D., 31. Asst. chem., Whittier Col., 25-27; biochem., Stanford, 27-29; control engineer, Fox Film Corp., 31; sound technician, Warner Brothers and First Nat. Studios, 32; research assoc., div. home econ., Exp. Sta., Colo. Agr. Col., 32-36; Colo. State Col., 36- Chem. Soc. Thermodynamics of hydrocarbons; entropies and free energies of hydrocarbons; rôle of the phosphate ion in biological oxidations; effect of altitude on baking processes; chemistry of the cooking of potatoes.

Barnard, Dr. Daniel P(adcock), 4th, Standard Oil Company of Indiana, Whiting, Ind. *Chemistry*. Wilmington, Del., June, 98. B.S., Delaware, 19, Ch.E., 30; M.S., Mass. Inst. Tech., 21, Sc.D., 25. Div. director research lab., applied chem., Mass. Inst. Tech., 23-25; asst. director research, Standard Oil Co. of Ind., 25- Chem. Soc.; Soc. Automotive Eng. (chairman, Chicago sect., 29, v. pres., 35). Automotive fuels and lubricants.

Barnard, Dr. H(arry) E(verett), II. E. Barnard, Inc., Indianapolis, Ind. *Chemistry, Public health*. Dunbarton, N. H., Nov. 14, 74. B.S., New Hampshire Col., 99, Sc.D., 28; hon. Ph.D., Hanover Col., 14. Asst. chemist, Exp. Sta., New Hampshire Col., 00; U. S. Naval Smokeless Powder Factory, Md., 01; chemist, State Board Health, N. H., 01-05; Ind., 05-19, state food and drug commissioner, 07-19; pres., Am. Inst. Baking, 19-27; food consultant, H. E. Barnard, Inc., 28- Director, Corn Indust. Research Foundation, 32-34; director research, Farm Chemurgic Council, 35-; food and drug inspection chemist, U. S. Dept. Agr. Standards cmt., U. S. Govt.; Lake Mich. Water Cmn., 08-09. Chem. Soc. (pres., Ind. sect., 06, director, 17-); Chem. Eng.; Agr. Chem. (referee food adulteration); Ind. Sanit. and Water Supply Asn. (pres.). Food adulteration; sanitation; water supply; fruit syrups; beer analysis; benzoate of soda in foods; technical problems of the food industries; child health and protection.

Barnard, Dr. John W(alter), University of Michigan, Ann Arbor, Mich. *Anatomy*. Asbestos, Que., Can., Feb. 12, 12. B.S., Michigan, 32, M.S., 33, Ph.D., 35. Asst. anat., Michigan, 33-36; instr., 36- A.A.; Asn. Anat. Phylogeny of visceral areas in the nervous system.

Barnard, Prof. R(aymond) W(alter), University of Chicago, Chicago, Ill. *Mathematics*. Ont., Can., May 31, 90. A.B., Michigan, 16, M.S., 18; Ph.D., Chicago, 26. Instr. math., Michigan, 17-23; Chicago, 25-, assoc. prof. Math. Soc.; Math. Asn.

Barnard, Dr. William H(erschel), Taylor University, Upland, Ind. *Psychology*. Arab, Ala., June 26, 92. B.S., Alabama, 22; A.M., Columbia, 26, fellow, 27; Ed.D., Indiana, 35. Prof. educ. and dean, Athens Col., 28-31; prof. psychol. and director summer sch. and exten., 31-33; prof. educ. and head dept., Taylor, 35- Ind. Acad. Emotional life; length of study and achievement in English; achievements of pupils attending short and long terms; teaching improvement; analysis of vocabulary and language usage tests.

Barnard, Prof. W(illiam) N(ichols), Cornell University, Ithaca, N. Y. *Mechanical engineering*. Canton, Ill., April 24, 75. M.E., Cornell, 97. Instr. machine design, Cornell, 97-00; chief draftsman, The Russell Engine Co., Massillon, Ohio, 01-03; assoc. prof. machine design, Cornell, 03-05; power eng., 05-07; prof. 07-, acting director mech. eng., col. eng., 37-38; director, 38- Mech. Eng.; Eng. Educ. Machine design; steam machinery; heat-power engineering.

Barnes, Dr. A(rlie) R(ay), 508 Ninth Ave., S. W., Rochester, Minn. *Internal medicine*. Paris Crossing, Ind., April 24, 92. A.B., Indiana, 15, A.M., 16, M.D., 19; M.S., Minnesota, 29. Instr. anat., sch. med., Indiana, 16-17; fellow, Mayo Clinic, 20-22, consultant internal med., 25; assoc. prof. med., Minnesota, 30-36; prof., 36- Am. Med. Asn. fel. Col. Physicians; Am. Heart Asn.; Cent. Soc. Clin. Research; Cent. Clin. Research Club; Minn. Soc. Int. Med.; Minn. Heart Soc. (pres., 30). Cardiology; clinical, pathological and electrocardiographic investigations of heart disease.

Barnes, Dr. B(entley) T(iffany), 16272 Glynn Road, E., Cleveland, Ohio. *Physics*. New York, N. Y., Jan. 23, 01. A.B., Park Col., 21; fellow, Rice Inst., 21-23, A.M., 23; Loomis fellow, Yale, 24-25, Ph.D., 25. Asst., Yale, 23-24; research physicist, Gen. Elec. Co., Cleveland, 25- Physical Soc. Conductivity of flames; pressure shifts in the nickel arc spectrum; carbonized tungsten; total radiation from nickel; sources of ultra-violet radiation; discharges in mercury vapor.

Barnes, Dr. Carl E(dmund), The Norton Co., Worcester, Mass. *Organic chemistry*. Lewiston, Maine, Feb. 16, 08. B.S., Bates Col., 30; A.M., Harvard, 33, Ph.D., 35. Asst. chem., Harvard, 30-35; *research chemist*, Norton Co., 36—Chem. Soc. Sensitization of photographic latent image; addition of Grignard reagents to mesitylenic ketones; tautomerism of metallic enolates; preparation, chemical structure and properties of high polymers.

Barnes, Dr. Clifford A(drian), 505 King Ave., Columbus, Ohio. *Chemistry*. Goldendale, Wash., Oct. 14, 05. B.S., Washington (Seattle), 30, Ph.D., 36. Teaching fellow anal. chem., Washington (Seattle), 30-36; *research chemist, fuels div*, Battelle Mem. Inst., 36—Summers, oceanographer, exped. to Aleutian Islands, U.S.N., 33, oceanographic cruise of U. S. Coast Guard cutter 'Chelan,' 34. Geophys. Union. Ocean currents, distribution of temperature, of chlorinity, of dissolved oxygen and nutrient salts in the Bering Sea and portions of the North Pacific Ocean.

Barnes, D(onald) P(orter), U. S. Bureau of Reclamation, Denver, Colo. *Civil engineering*. New York, N. Y., Jan. 31, 07. B.S., Oregon State Col., 28; M.S., Calif. Inst. Tech., 30. Designer, Morris Dam, Water Dept., Pasadena, 30-31, 32, 33; instr. civil eng., Mo. Sch. Minea., 31-32; John R. Freeman traveling scholar, Soc. Civil Eng., Germany, 32-33; asst. engineer, struct. research, Metropolitan Water Dist., S. Calif., 33-34; earth dam research, *bur. reclamation*, U. S. Dept. Interior, 34-36; *assoc. engineer, hydraulic research*, 36—Civil Eng. Soil mechanics; hydraulic laboratory practise; stresses in concrete gravity dams; soil mechanics pertaining to earth dams; hydraulic structures.

Barnes, Dwight F(letcher), U. S. Department of Agriculture, 712 Elizabeth St., Fresno, Calif. *Entomology*. Hubbardston, Mass., Jan. 23, 90. B.S., Mass. Col., 16. State deputy nursery inspector, Mass., 16-17; insecticide salesman, Devoe and Reynolds Co., New York, 20-22; sci. asst., gipsy moth lab., *bur. entom. and plant quarantine*, U. S. Dept. Agr., 17, 19-20, 22-23; asst. entomologist, 23-30, dried fruit insect lab., Fresno, 30—U.S.A., 17-19. Asn. Econ. Entom. Insects of fruit and stored products.

Barnes, Dr. Earl E(lmer), Ohio Agricultural Experiment Station, Wooster, Ohio. *Agronomy*. Waterford, Pa., April 17, 92. B.S. (Agr.), Ohio State, 17, M.S. 23, Ph.D. 29. Asst. agr. chem., Ohio State, 17-18; county agr. agent, Sandusky County, Ohio, 18-20; exten. agronomist, Ohio State, 20-27; asst. prof. soils, 27-29; asst. agronomist, Ohio Exp. Sta., 27-29; *assoc. agronomist*, 29—A.A.; Soc. Agron. Pasture rejuvenation; soil reaction; fertilizers.

Barnes, Dr. F(arrell) F(rancis), U. S. Department of Agriculture, Washington, D. C. *Geology*. Prineville, Oregon, 05. A.B., Oregon, 29, A.M., 30; Ph.D., Northwestern, 35. Instr. geol., Oregon, 29-30; Northwestern, 31-33; Cincinnati, 34-35; asst. geologist, U. S. Engineers, War Dept., 35; junior soil conservationist, *soil conservation service*, U. S. Dept. Agr., 35-37; asst. geologist, 37—Precambrian of Sawatch Range, Colorado.

Barnes, Prof. Fred Asa, Cornell University, Ithaca, N. Y. *Railroad engineering*. Stockbridge, Mass., June 17, 76. C.E., Cornell, 97, M.C.E., 98. Rodman, D. C., 98; draftsman, U.S.N., 99; asst. res. engineer, Santiago de Cuba, 99-01; engineer, Ponupo Mining Co., Cuba, 01; H. J. Reilly Co., Cienfuegos, Cuba, 02; instr. ry. eng., Cornell, 02-05, asst. prof., 05-15, prof., 15—director civil eng., 21-30. A.A.; Ry. Eng.; Civil Eng.; Asn. Eng.; Eng. Educ. Railroad surveying and construction.

Barnes, Prof. G(arnett) F(reeman), 102 Clay St., Marion, Ala. *Physics*. Graves Co., Ky., 87. A.B., A.M., Indiana, 20, Ph.D., 31; Chicago, 24. Asst. prof. physics, Miss. Agr. and Mech. Col., 17-20; assoc. prof., 20-30; asst., Indiana, 30-31; prof. math. and physics, Judson Col., 31—A.A.; Math. Asn.; Asn. Physics Teachers; Ala. Acad. Absorption of x-rays; velocity of sound in gases and mixtures of gases.

Barnes, Prof. George E(ric), Case School of Applied Science, Cleveland, Ohio. *Civil engineering*. Washington, D. C., April 17, 98. B.S., Mass. Inst. Tech., 23; C.E., Case, 35. From instr. to assoc. prof. civil eng., Florida, 23-29; designing engineer, Fuller and McClinton, New York, 29-32; sanit. dept., New York, 32-33; prof. hydraul. and sanit. eng. and head dept. civil eng., Case, 33—Construction engineer, Boston Metro. Dist. Cmn., 23; assoc. engineer, Main Eng. Co., Day-

Btona, Fla., 24-25; designing engineer, Metcalf and Eddy, Boston, Mass., 27; consulting engineer, Fla., Honduras and Nicaragua, 27-28. Civil Eng.; Eng. Educ.; Water Works Asn.; New Eng. Water Works Asn. Hydraulic models for dams built for flood control; sanitary engineering; design of treatment plants for water and sewage.

Barnes, Dr. Harry Elmer, Auburn, N. Y. *History of science*. Auburn, N. Y., June 15, 89. A.B., Syracuse, 13, A.M., 14; Harvard, 16-17; Ph.D., Columbia, 18. Instr. sociol., Syracuse, 13-15; lecturer hist., Columbia and Barnard Col., 17-18; assoc. prof., Clark, 18-19; prof., New Sch. for Social Research, 19-20; hist. thought and culture, Clark, 20-23; hist. sociol., Smith Col., 23-29; ed. writer, *Scripps-Howard Newspapers*, 29—Prof., Amherst Col., 23-25; lecturer, New Sch. for Social Research, 22-24, 26—Springfield Col., 23. Summers, prof., Montana, 19; Oregon, 20; California, 23; Wisconsin, 24; Cornell, 25; Kentucky, 37. Hist. Sci. Soc.; fel. Ethnol. Soc.; Anthropol. Soc.; Am. Hist. Asn.; Econ. Asn.; Sociol. Soc.; Polit. Sci. Asn.; Acad. Polit. Sci.; N. Y. Acad.; London Sociol. Soc.; fel. Royal Econ. Soc.; fel. Gesell für Soziol.; fel. Soc. de Sociol. Masaryk; fel. Inst. int. de Sociol. History of culture and social thought; methodology of the social sciences; criminology.

Barnes, Dr. H(oward) T(urner), McGill University, Montreal, Que., Can. *Physics*. Woburn, Mass., July 21, 73. B. A.Sc., McGill, 93, M.A.Sc., 96, D.Sc., 00. Demonstrator physics, McGill, 95-98, lecturer, 00-01, asst. prof., 01-06, assoc. prof., 06-07. Macdonald prof., 07-19, director, Macdonald Physics Bldg., 09-19, emer. prof. physics, 19—Assoc. ed., *Jour. Physical Chem.* Joule studentship, Royal Soc. London, 00. Pres., Can. nat. cmt., Int. Electrotech. Cmn.; sec'y, sect. A, Int. Elec. Cong., St. Louis, 04. A.A.; fel. Physical Soc.; Can. Inst. Eng.; fel. Royal Soc. Can. (pres. math. and physics sect., 09); fel. Royal Soc.; fel. Royal Meteorol. Soc. Standards of electro-motive force; continuous electric calorimetry; specific heats of water and mercury; variation of the specific heat of liquids with temperature; critical velocity of liquids; thermal and electrical measurements; ice formation and prevention; ice navigation; iceberg research.

Barnes, Dr. James, Franklin Institute, Parkway at 20th St., Philadelphia, Pa. **Physics*. Halifax, N. S., Can., Dec. 11, 78. B.A., Dalhousie, 99, M.A., 00, 1851 Exhib. scholar, 00-03; fellow, Hopkins, 03-04, Ph.D., 04; Cambridge, 14; Manchester, 15. Instr. physics, Hopkins, 04-06; assoc., Bryn Mawr Col., 06-10, assoc. prof., 10-17, prof., 17-31; head physics sect. and assoc. director, *Franklin Inst.*, 31—A.A.; Physical Soc.; Optical Soc.; Franklin Inst. Electrical conductivity and freezing points of mixtures of electrolytes; spectrum analysis with interferometers; emission and absorption spectra.

Barnes, Prof. John L(andes), 132 Brookings St., Medford, Mass. *Mathematics, Electrical engineering*. Haddonfield, N. J., Oct. 16, 06. B.S., Mass. Inst. Tech., 28, M.S., 29; fellow, Princeton, 29-30, A.M., 30, Ph.D., 34. Asst. math., Princeton, 32-33, asst. elec. eng., 33-34; instr., Mass. Inst. Tech., 34-35; asst. prof. math., Tufts Col., 35—Math. Soc.; Radi Eng. Application of the Laplacian transformation to integral and differential equations of mathematical physics; electric wave filters.

Barnes, Prof. Kenneth B(oyd), 52 Ohio Ave., Tiffin, Ohio. *Chemistry*. Rockford, Ill., July 28, 96. B.S., Beloit Col., 20; M.S., Chicago, 24. Instr. chem., Beloit Col., 20-25; asst., Chicago, 25-26; asst. prof., Des Moines, 26-27; Heidelberg Col. (Ohio), 27-28, prof., 29—head dept., 31—A.A.; Chem. Soc. Inorganic complex compounds.

Barnes, Dr. L(a Verne) A(lmon), 375 South St., Jamaica Plain, Boston, Mass. *Bacteriology*. St. John, Wash., July 13, 01. B.S., State Col. Wash., 25, M.S., 28, Ph.D., 29. Demonstrator bacter., sch. med., Western Reserve, 25-26; teaching fellow, State Col. Wash., 26-29; senior instr., sch. med., Western Reserve, 29-31; senior bacteriologist, State Dept. Pub. Health, Mass., 31—Soc. Bact.; Asn. Immunol.; Pub. Health Asn. General and medical bacteriology and immunology; local immunity; dormancy in bacteria; anthrax infection; inhibitory culture filtrates; antipneumococcal serum production and testing.

Barnes, Dr. LeRoy Lesher, Cornell University, Ithaca, N. Y. *Physics*. Wakeman, Ohio, Oct. 23, 02. A.B., Oberlin Col., 26; Ph.D., Cornell, 32. Asst. physics, Amherst Col., 26-27; Cornell, 27-28, instr., 28—Physical Soc. Thermionics; positive ion emission from heated substances; biophysics.

- Barnes, Prof. Milford E(dwin)**, State University of Iowa, Iowa City, Iowa. *Public health*. Columbus Junction, Iowa, Nov. 28, 83; A.B. Monmouth Col., 05; B.S. Chicago, 12, M.D., Rush, 14; grad. London Sch. Trop. Med., 19; Dr.P.H. Hopkins, 25. Director for Siam, int. health div, Rockefeller Foundation, 16-25; Straits Settlements and Siam, 25-26; director, Ohio Training Sta. for Health Officers, 27-29; Mich. Training Sta. for Health Workers, 29; prof. hygiene and prov. med. and head dept., Iowa, 30- Pub. Health Assn; Am. Med. Assn; British Med. Assn; Royal Soc. Trop. Med. and Hygiene (local sec'y, 20-25); Nat. Hist. Soc. Siam. Preventive medicine; public health administration.
- Barnes, Prof. O(tis) A(very)**, Colorado College, Colorado Springs, Colo. *Chemistry*. Auburn, Ill., April 15, 94. B.S. Illinois, 16, M.S., 18, Ph.D., 22. Asst. chem., Illinois, 16-22; Instr., Utah, 22-25; asst. prof. and assoc. prof., Colo. Col., 25; chemist, Alexander Industries, 29— Summers, State Highways Lab., Ill., 17, 23-26. Lieut. col., C.W.S.R. Chem. Soc. (sec'y-tras, northwest, Utah sect., 23). Chlorine and creosothrix; piperidine derivatives of cocaine and procaine; catalytic reduction.
- Barnes, Prof. Ralph M(esser)**, 107 Engineering Bldg., Iowa City, Iowa. *Mechanical engineering*. Clifton Mills, W. Va., Oct. 17, 00. B.S. West Virginia, 23, M.E., 28; M.S. Cornell, 24, Ph.D., 33. Mech. engineer, Bausch and Lomb Optical Co., Rochester, N. Y., 24-25; indust. engineer, Gleason Gear Works, Rochester, N. Y., 25-26; instr. indust. management, Illinois, 26-28; asst. prof. indust. eng., Iowa, 28-30; assoc. prof., 30-34; prof., 34— Summers, indust. engineer, Eastman Kodak Co., Rochester, N. Y., 27-30, 34-35; Kodak, Ltd., London, 36. Mech. Eng. (chairman, tri-cities sect., 34-37); Eng. Educ.; Management Assn; Soc. Adv. Management; Nat. Inst. Indust. Psychol. Gt. Britain. Industrial engineering and management; time and motion study; wage incentives; standard costs; personnel administration.
- Barnes, Dr. R(obert) Bowling**, American Cyanamid Co., Stamford, Conn. *Physics*. Montgomery, Ala., June 9, 06. A.B. Birmingham-Southern Col., 25; Ph.D. Hopkins, 29. Instr. physics, Hopkins, 28-30; nat. research fellow, Berlin, 30-32; Instr., Hopkins, 32-33; Princeton, 33-36; with Am. Cyanamid Co., 37- Fel. Physical Soc., Chem. Soc. Infra-red.
- Barnes, Prof. Robert Percy**, 131 16th St., N.E., Washington, D. C. *Chemistry*. Washington, D. C., Feb. 26, 98. A.B. Amherst Col., 21; A.M. Harvard, 30, Ph.D., 33. Asst. chem., Amherst Col., 21-22; asst. prof., Howard, 22- Reactions and keto-enol equilibria of an alpha diketone; oxime cleavage; steric hindrance in alpha diketones.
- Barnes, Dr. Sidney W(illson)**, University of Rochester, Rochester, N. Y. *Physics*. Chicago, Ill., 02. A.B. Oberlin Col., 24; A.M. Amherst Col., 25; Ph.D. Cornell, 30. Hecksher ass. physics, Cornell, 27-34; research assoc., Rochester, 34- Physical Soc. Nuclear physics; x-ray line widths; mitogenetic radiation.
- Barnes, Prof. T(homas) Cunliffe**, Yale University, New Haven, Conn. *Physiology*. Montreal, Que., Can., June 4, 04. McGill, 22-24; A.B. Cornell, 26; Sc.D. Harvard, 28; Cambridge, 29-30. Ass. gen. physiol. Harvard, 27-29; tutor Med., 28-29; instr., Yale, 30-35; asst. prof., 35- A.A.; Soc. Zool.; Bot. Soc. Tropisms of ants; impulses in crustacean nerve; physiology of water.
- Barnes, Dr. Virgil E(verett)**, University of Texas, Austin, Texas. *Geology*. Chehalis, Wash., June 11, 03. B.S. State Col. Wash., 25, M.S., 27; Ph.D. Wisconsin, 30. Teaching fellow, State Col. Wash., 25-27; research fellow, Am. Petrol. Inst., 30-31; U. S. Geol. Surv., 34-35; geologist, bar. econ. geol. Team, 35— Summers, ass. geologist, Wash. Geol. Surv., 24-28; geologist, Wis. Geol. Surv., 28; Dom. Explorers, Ltd., Can., 29. A.A. Changes in hornblende at about 800 degrees centigrade; oil field waters and earth temperatures of north central Texas; metallic minerals in anhydrite cap rock, Winnfield Salt Dome, Louisiana.
- Barnes, Prof. William H(oward)**, McGill University, Montreal, Que., Can. *Chemistry*. Montreal, Que., Jan. 9, 03. B.Sc. McGill, 24, M.Sc., 25, Nat. Research Council Can. fellow, 26-27, Ph.D., 27. Demonstrator chem., McGill, 24-26; Kennedy mem. fellow, Royal Institution, London, 27-29; sectional lecturer physics, McGill, 29-30, lecturer chem., 30-35; asst. prof., 35- Adiabatic calorimetry; x-ray crystallography.
- Barnes, Dr. William Hutt**, Chico, Calif. *Urology*. Gratiot Co., Mich., Sept. 7, 77. A.B. Stanford, 16; A.M. California, 17, M.D., 21. Teacher, high sch., P. I., 11-13; bacteriologist, Cutter Lab., 15-17; instr. bacter., California, 17-20; asst. urologist, Calif. Infirmary, 21-33; practising physician. Assoc. gynec., Merritt Hosp., 22-30. Am. Med. Assn; Butte County Med. Soc. (pres. 35). Surgery; medicine.
- Barnett, Dr. C(harles) E(dward)**, New Jersey Zinc Co., Palmerston, Pa. *Physical chemistry*. Chicago, Ill., Aug. 23, 05. A.B. Hiram Col., 26; Hecksher fellow, Cornell, 28-30, Ph.D., 30. Asst. chem., Cornell, 26-28; physical chemist, research dir., N. J. Zinc Co., 30- Chem. Soc. Physical chemistry of the proteins; adsorption on crystals; properties of pigments in rubber and paint.
- Barnett, Claribel R(uth)**, 1661 Crescent Place, N. W., Washington, D. C. *Library economy*. Kent, Ohio, March 26, 72. Ph.B. Michigan, 93; B.L.S. N. Y. Library Sch., 20. Cataloguer, library, U. S. Dept. Agr., 95-01, asst. librarian, 01-07, librarian, 07- Library advisory wage cmt., U. S. Congressional Joint Comm. Assoc. ed., Agr. Hist., 32- A.A.; Agr. Hist. Soc. Library Assn. (2nd v. pres., 21, chairman, Oberly Mem. Fund cmt., 23-34; agr. libraries sect., 10-14, 27); Library Inst. Biblio. Soc.; Wash. Acad.; N. Y. Library Sch. Assn. (2nd v. pres., 21); D. C. Library Assn. (2nd v. pres., 12, 19, pres., 29). Library economy; agricultural biography.
- Barnett, Dr. George D(e Forest)**, Stanford University, Calif. *Medicine*. Santa Rosa, Calif., July 12, 84. A.B. Stanford, 06, A.M., 09, M.D., 13; Hopkins, 10-12. Instr. chem., Stanford, 09-10, med., 15-19, assoc. prof., 24-26, prof., 26- Lieut. M.C. 17-19. Am. Med. Assn; Soc. Exp. Biol.; Soc. Clin. Invest. Renal function; hydrogen ion concentration.
- Barnett, Prof. George E(rnest)**, 827 Park Ave., Baltimore, Md. *Statistics*. Cambridge, Md., Feb. 19, 73. A.B. Randolph-Macon Col., 91; Ph.D. Hopkins, 01. Instr., Hopkins, 00-03, assoc. and later assoc. prof., 03-11, prof. statis., 11- Summer, lecturer, California, 21. Statist. Assn; Econ. Assn. (pres., 32); Assn. Labor Legis. Economics; labor; trade unionism; cost of living; machinery and labor.
- Barnett, Dr. Harold M(ontgomery)**, Barnett Laboratories, Long Beach, Calif. *Biochemistry*. Pawnee City, Nebr., Sept. 7, 03. A.B. Neb., Wesleyan, 25; M.S. Minnesota, 27, Ph.D., 31. Ass. agr. biochem., Minnesota, 25-27; instr. org. chem. and biochem., Valparaiso, 27-28; research chemist, S. M. A. Corp., 29-36; director, Barnett Labs., 36- Summers, bur. plant indust., U. S. Dept. Agr., Utah and Ariz., 25, 26. A.A.; Chem. Soc. Physical-chemical properties of plant saps; proteins; isolation and purification of amino acids; chemical condiments; isolation and properties of carotene; vegetable juices.
- Barnett, Prof. I(isaac) A(lbert)**, University of Cincinnati, Cincinnati, Ohio. *Mathematics*. London, Eng., May 7, 94. B.S. Chicago, 15, M.S., 16, Ph.D., 18. Instr. math., Washington (St. Louis), 18-19; Pierce fellow, Harvard, 19-20; asst. prof., Saskatchewan, 20-23; Cincinnati, 23-28, assoc. prof., 28- Math. Soc.; Math. Assn. Calculus variations; continuous group in function space.
- Barnett, Prof. Joseph, Jr.**, 226 West St., Stillwater, Okla. *Mathematics*. Jarvisville, W. Va., Dec. 27, 83. A.B. West Virginia, 14; A.M. Columbia, 23. Teacher, high sch., W. Va., 14-20; La., 23-24; asst. prof. math., Okla. Agr. and Mech. Col., 25- Okla. Acad.
- Barnett, Lella Jefferson Harvie (Mrs. S. J. Barnett)**, 939 Thayer Ave., Westwood Hills, Los Angeles, Calif. *Physics*. Amelia Co., Va. A.B. Cornell, 01. Teacher math. and physics, Va. State Nor. Sch., 93-00; computer, U. S. Naval Observatory, 01-02; U. S. Coast and Geod. Surv., 02-04; collaborator with S. J. Barnett, 06- A.A. Geodesy; experimental electricity and magnetism.
- Barnett, Prof. R(obert) J(ohn)**, Manhattan, Kans. *Palaeontology*. Deacon, Kans., Jan. 16, 74. B.S. Kans. State Col., 95, M.S., 11. Prof. palaeol., State Col. Wash., 14-20; hort., Kans. State Col., 20-, head dept., 30- A.A.; Soc. Hort. Sci. Agricultural teaching; own-rooted apple trees.
- Barnett, Prof. S(amuel) J(ackson)**, 939 Thayer Ave., Westwood Hills, Los Angeles, Calif. *Physics*. Woodson Co., Kans., Dec. 14, 73. Col. of Emporia, 89-91; Chicago, 92-93; A.B. Denver, 94; Virginia, 95-96; fellow, Cornell, 97-98.

Ph.D., 98. Instr. physics and biol., Denver, 94-95; asst. astron. observatory, Virginia, 95-96; from instr. to prof. physics, Colo. Col., 98-00; Stanford, 00-05; Tulane, 05-11; Ohio State, 11-18; physicist, Carnegie Institution, 18-26; prof. physics, California at Los Angeles, 26—Research assoc., Calif. Inst. Tech., 23—Magnetic observer, U. S. Coast and Geod. Surv., 02-04. Nat. Research Council. Comstock prize, Nat. Acad., 18. A.A. (exec. cmte., Pacific div.); Physical Soc.; Geophys. Union; Am. Acad.; Philos. Soc. Wash.; Wash. Acad. Experimental and theoretical electricity and magnetism.

Barnette, Dr. R(obert) M(arlin), University of Florida, Gainesville, Fla. Soil chemistry. Rock Hill, S. C., Nov. 30, 00. B.S., Clemson Col., 20; M.S., Rutgers, 22. Ph.D., 23. Asst. soil chemist, Exp. Sta., Tennessee, 24-25; Exp. Sta., Florida, 25-29; assoc. soil chemist, 29-32; chemist, 32—A.A.; Int. Soc. Soil Sci. Plant physiology.

Barney, Dr. A(rchie) F(ay), 2657 Alden St., Salt Lake City, Utah. Agronomy. Kanosh, Utah, July 4, 92. B.S., Utah Col., 20; Ph.D., Cornell, 24. Plant breeding, Exp. Sta., Utah Col., 24; agronomist, dept. agr. research, Am. Smelting and Ref. Co., 25—The inheritance of smut resistance in oats; the effects of smelter fumes and gases on vegetation.

Barney, Dr. Edgar S(tarr), Hebrew Technical Institute, 36 Stuyvesant St., New York, N. Y. Engineering. April 10, 61. A.B., C.E., Union (N.Y.), 84. A.M., 87; Sc.D., 04. Teacher, Gramercy Park Sch., New York, 84-87; instr. English, math. and science, Hebrew Tech. Inst., 87-92; prin., 92—Clerk, Hudson River Day Line, 83-88; auditor, 88-20, sec'y and director, 19; gen. passenger agent, 21—Trustee, Union (N.Y.), 97—Albany Med. Col., 15—A.A.; Eng. Educ.; Geog. Soc.; Am. Inst.; Nat. Vocational Guidance Assn.; N. Y. Elec. Soc.

Barney, Dr. I(da), 110 Linden St., New Haven, Conn. Astronomy. New Haven, Conn., Nov. 6, 86. A.B., Smith Col., 08; Ph.D., Yale, 11. Prof. math., Rollins Col., 11-12; asst., Smith Col., 12-13; instr., 13-17; prof., Lake Erie Col., 17-19; Meredith Col., 19-20; asst. prof., Smith Col., 20-21; research ast., observatory, Yale, 22—A.A.; Astron. Soc.; Math. Assn.; Royal Astron. Soc. Formation of star catalogues by means of photography.

Barney, Prof. R(aymond) L(ivington), Middlebury College, Middlebury, Vt. Limnology. Providence, R. I., Oct. 21, 91. B.S., R. I. State Col., 15; M.S., Brown, 16; Ph.D., 25. Instr. biol., Brown, 15-16; asst., Bur. Fisheries, 16; sci. asst., 16-18; director, Beaufort lab., 18-20; Fairport lab., 20-24; asst. prof. biol., Middlebury Col., 24-25; assoc. prof., 25-26; prof., 26—Investigator, Fish and Game Dept., Conn., 24-25. Fisheries Soc.; Green-gilled oysters; life history of Elasoma; Gambusia; diamond-back terrapin; fresh-water mussels and fishes; shad; mosquito control.

Barnhart, Prof. C(harles) A(nthony), 115 S. Maple St., Albuquerque, N. Mex. Mathematics. Mansfield, Ill., Jan. 4, 83. A.B., Illinois, 05. A.M., 11. Prof. math., Carthage Col., 12-16; instr., Col. Col., 17-18; prof., New Mexico, 18—Math. Soc.; Math. Assn. Graphical differentiation and integration in engineering and scientific problems.

Barnhart, Dr. John Hendley, New York Botanical Garden, Bronx Park, New York, N. Y. Botany. Brooklyn, N. Y., Oct. 4, 71. A.B., Wesleyan, 92. A.M., 93; M.D., Columbia, 96. Ed. asst., N. Y. Bot. Garden, 03-12; librarian, 06-12; bibliographer, 13—N. Y. Bot. Garden del., Int. Bot. Congr., Vienna, 05; Brussels, 10; Cambridge, England, 30. A.A.; Soc. Nat.; Bot. Soc.; Torrey Bot. Club (ed. in chief, 03-07, v. pres., 08-26, 32, pres., 37-); Biol. Soc. Wash.; Conn. Bot. Soc.; Vt. Bot. Club; Phila. Bot. Club; cor. mem. Acad. Nat. Sci. Phila.; fel. N. Y. Acad. (ed., 37). Botanical bibliography and nomenclature; taxonomy of flowering plants; Lentibulariaceae; local floras of North America.

Barnhart, P(erey) S(pencer), Scripps Institution of Oceanography, La Jolla, Calif. Biology. Berkley Heights, N. J., Sept. 17, 81. A.B., Southern California, 11. A.M., 14. Asst. prof. biol., Southern California, 07-11; instr. zool., 11-13; asst. prof. marinae biol., Venice Marine Biol. Sta., 13-14; sci. asst., Bur. Fisheries, 14; assoc. oceanog. and curator, Scripps Institution, California, 14—West. Soc. Nat. Marine biology.

Barnhill, Prof. John Firman, 310 N. Hamilton St., Ypsilanti, Mich. Mathematics. Bloomington, Ind., Feb. 17, 76. A.B., Kansas, 10; Chicago, 15; A.M., Columbia, 22. Prin. and

sch. supt., Kans., 01-21; prof. math., Mich. State Nor. Col., Ypsilanti, 22—Summers, prof., Kans. State Teachers Col., Pittsburg, 18-22. State Board Educ., Kans., 19-21. Math. Assn. Elementary, secondary and industrial mathematics.

Barnum, Clyde C(raig), 1926 Ferry St., Martinez, Calif. Agriculture, Genetics. French Corral, Calif., Dec. 24, 86. B.S., California, 21. Asst. pathologist, Exp. Sta., Hawaiian Sugar Planters' Assn., Honolulu, 24-29; assoc. pathologist, 29-33; land bank appraiser, Fed. Land Bank, Berkeley, Calif., 33-34; island rep., Exp. Sta., Hawaiian Sugar Planters' Assn., 34-36; asst. farm adviser, Contra Costa County, 36—Sugar cane pathology; rat control in cane fields; penicillium decay of apples; stem end rot of apples; control of the wild morning glory.

Barnum, Prof. Harry H(untington), Robert College, Istanbul, Turkey. Mathematics. Van, Turkey, Dec. 24, 77. A.B., Amherst Col., 00; A.M., Chicago, 09; Princeton, 09-11. Instr. math., Robert Col., Constantinople, 00-04, acting prof., 06-08; prof. and head dept., 11—Exchange prof., Denison, 24-25; Middlebury Col., 35.

Barnwell, Dr. John B(lair), University Hospital, Ann Arbor, Mich. Internal medicine. Selma, Ala., March 15, 95. A.B., Trinity Col. (Conn.), 17; M.D., Pennsylvania, 23. Research instr. pediat., Pennsylvania, 25-26; asst. res., Trudeau Sanatorium, 26-28; from instr. to assoc. prof. int. med., Michigan, 28—Bell medal, Pennsylvania, 23. A.A.; Clin. and Climat. Assn.; fel. Am. Med. Assn.; Am. Sanatorium Assn.; Miss. Valley Sanatorium Assn. (sec'y, 36-37). Physiology of the kidney; tuberculin and tuberculin proteins; tuberculosis of the lungs; artificial pneumothorax; pulmonary collapse.

Baron, Dr. A(braham) Louis, 213 W. 16th St., New York, N. Y. Genetics. Brooklyn, N. Y., June 27, 07. B.S., N. Y. Univ., 28. M.S., 30; Ph.D., 34. Asst. instr., N. Y. Univ., 28-33; asst. prof. biol., First Inst. Podiatry, 34—Genetics Soc. Developmental genetics in Drosophila; variation in bacteria.

Barott, Herbert G(eorge), 5922 Broad Branch Road, Chevy Chase, D. C. Physics. Burton, Ohio, July 13, 81. E.E., Syracuse, 09. Asst. physicist, Bur. Standards, 10-17; physicist in charge respiration calorimeter lab., U. S. Dept. Agr., 17—Physical Soc. Heat measurements; physics of incubation of hen's eggs; energy metabolism; gaseous metabolism of birds; specific dynamic action of feeding stuffs.

Barr, Dr. C(alvin) G(uinn), Colorado State College, Ft. Collins, Colo. Plant physiology. Lineville, Iowa, March 26, 04. B.S., Iowa State Col., 31; fellow, 31-34; M.S., 33; Ph.D., 35. Teacher science, high sch., 26-30; plant physiologist and asst. botanist, Colo. State Col., 34-37; assoc. bot., 37—Soc. Plant Physiol. Plant chemistry; plant carbohydrates; photosynthesis; translocation; weed control.

Barr, Prof. Clarence F(oster), 563 N. Eighth St., Laramie, Wyo. Mathematics. Ind., March 12, 93. A.B., 20; M.S., Chicago, 23. Secondary teaching and admin. work, 12-23; instr. math., Purdue, 23-26; asst. prof., Wyoming, 26-36; assoc. prof., 36—Summers, teacher, Southwest. State Nor. Sch., Pa., 24-27; Ind. State Teachers Col., 30. Math. Assn. (v. pres., Rocky Mt. sect., 30, 37). Algebraic errors of college freshmen; placement of college freshmen in mathematics; the imaginary in geometry.

Barr, Prof. D(avid) P(reswick), 600 S. Kingshighway Boulevard, St. Louis, Mo. Internal medicine. Ithaca, N. Y., Aug. 23, 89. A.B., Cornell, 11. M.D., 14. Instr. med., Cornell, 16-23; asst. prof., 23-25; prof., sch. med., Washington (St. Louis), 25—physician in chief, Barnes Hosp., St. Louis, 25—Research fellow, Russell Sage Inst., 16-24; asst. physician, Bellevue Hosp., 21-24; consultant, Barnard Free Skin and Cancer Hosp.; Jewish Hosp. Soc. Clin. Invest. (treas., 23-25); Soc. Exp. Biol.; Harvey Soc.; Am. Physicians; Col. Physicians (regent); N. Y. Acad. Med. Cardiac diseases; muscular exercise; fever; calcium metabolism.

Barr, Dr. E(rnest) Scott, 2520 Audubon St., New Orleans, La. Physics. Lincolnton, N. C., Nov. 27, 05. A.B., North Carolina, 26. A.M., 33; Ph.D., 36. Instr. physics, North Carolina, 35-36; Tulane, 36-37; asst. prof., 37—Physical Soc. Infra-red studies of solutions.

Barr, Dr. Frank T(homas), Standard Oil Development Co., Elizabeth, N. J. Chemical engineering. Elwood, Ind., July 1, 10. B.S., Washington (St. Louis), 29. M.S., 31; Ph.D., Illinois, 34. Asst. chem., Washington (St. Louis), 29-31; chem. eng.

Illinois, 31-34; instr., Armour Inst. Tech., 34-36; chem. engineer, Standard Oil Co., 36, *Standard Oil Develop. Co.*, 36-Chem. Soc.; Chem. Eng. (soc'y-treas., Chicago sect., 36). Applied physical chemistry; equilibria and free energy changes in organic reactions; heat transmission; temperature measurement.

Barr, Dr. Percy M(unson), University of California, Berkeley, Calif. *Forestry*. Watertown, Conn., July 22, 97. B.A.Sc., British Columbia, 24; M.F., Yale, 25, fellow, 27-28, Ph.D., 29. Asst. forester in charge research, Forest Service, B.C. Can., 27-32; asst. prof. *forestry, California*, 32-35, assoc. prof., 35. Soc. Foresters; Can. Soc. Forest Eng. Silviculture of Douglas fir; silviculture of pine forests; forest management; financial aspects of forestry practice.

Barr, Dr. Richard Alexander, Vanderbilt University, Nashville, Tenn. *Surgery*. Sumner Co., Tenn., Sept. 8, 71. A.B., Vanderbilt, 92, M.D., 94. Prof. surg., Vanderbilt, 93-Major surgeon, 1st Tenn. Vol. Inf., 98-99; lieut. col., U.S.A., 17-18. Fel. Am. Med. Assn.; fel. Am. Col. Surg.; South. Surg. Assn.; Tenn. Acad. Teaching of surgery.

Barr, Dr. William M(ilton), 120 S. 51st St., Omaha, Nebr. *Chemistry, Chemical engineering*. West Union, Iowa, Aug. 26, 78. B.S., Iowa, 02; A.M., Grinnell Col., 04; Harrison fellow, Pennsylvania, 07-08; Ph.D., 08. Instr. chem., Grinnell Col., 02-03; asst., Pennsylvania, 05-06; chemist, Mallinckrodt Chem. Works, Mo., 07, 08-09, 12; assoc. prof. in charge eng. chem., Iowa State Col., 09-11; manager, Mallinckrodt Chem. Works, N. J., 13-16; consulting chemist, *Union Pacific System*, 16-17, asst. to v. pres. operations, 32-33, asst. to exec. v. pres., 33. U.S. Geol. Surv., 05-08. By, Rev.' prize, 26. Chem. Soc.; Chem. Eng.; Ry. Eng.; Water Works Assn.; Soc. Test. Mat. The spectrum and bromides of columbium; the disintegration of concrete in septic tanks; the treatment of railway water supplies; pitting and corrosion in locomotives; alloy steels in locomotive construction.

Barre, H(enry) W(alter), U.S. Department of Agriculture, Washington, D. C. *Agriculture*. Lexington, S. C., May 5, 81. B.S., Clemson Col., 05; B.S., Nebraska, 07. A.M., 10. Agent, Crop Pest and Disease Bur., Nebr., 07; assoc. prof. bot. and bacter., Clemson Col., 07-08, prof., 11-29, botanist and plant pathologist, Exp. Sta., 08-29, director, 17-34; prin. pathologist in charge, dir. cotton and other fiber crops and diseases, bur. plant indust., U.S. Dep't. Agr., 35- Plant pathologist, War Emergency Board, 18-19. A.A. (C emt., 23); Phytopath. Soc. (assoc. ed., 14-16, councilor, 16-18, advisory board, 19-21); Bot. Soc.; Soc. Test. Mat. (chairman, emt. on raw cotton, 27-31); Am. South. Agr. Workers (soc'y-treas., 23-26, v. pres., 26, pres., 27), chairman, cotton research correlation emt., 25-30); S. C. Acad. (v. pres., 26). Plant diseases; cotton anthracnose; water requirements of cotton.

Barre, J'Prof. Roger, 4290 Notre-Dame E, Montreal, Que., Can. *Organic chemistry*. Montreal, Que., Nov. 6, 99. B.A. Montreal, 19, B.Ph., 23, L.Sc., 25; D.Sc., Paris, 27. Rockefeller fellow, 25-28; research worker, Prof. Kohler, Harvard, 28; prof. chem., Montreal, 28- Fel. Can. Inst. Chem.; Soc. de Physique et de Chim. Montreal (v. pres., 35, pres., 36-); Soc. chim. de France. Synthesis of alpha and beta ketonic acids; analysis and coloring matter of beeswax; organic mercury antiseptics; reducing sugars combinations; anesthetics.

Barret, Dr. Harvey Park, Box 973, Charlotte, N. C. *Bacteriology, Pathology*. Louisville, Ky., May 18, 85. A.B., Centre Col., 04; M.D., Louisville, 08. Assoc. prof. bacter. and path., Louisville, 08-11; practising clin. pathologist, 17-A.A.; Soc. Bact.; fel. Am. Med. Assn.; Soc. Trop. Med.; Soc. Parasitol. The cultivation of intestinal Protozoa.

Barrett, Dr. Charles Stanborn, Carnegie Institute of Technology, Pittsburgh, Pa. *Physica*. Vermilion, S. Dak., 02. B.S., South Dakota, 25; Charles A. Coffin fellow, Chicago, 27-28, Ph.D., 28. Asst. physicist, Naval Research Lab., 28-32; research physicist and lecturer, metal. research lab., Carnegie Inst. Tech., 33- Physical Soc.; Min. and Metal. Eng.; Soc. Metals. Crystal physics; x-ray scattering and reflection; radiography with gamma rays; crystal structure of alloys.

Barrett, Edward P(hilip), 600 S. Highland Ave., Pittsburgh, Pa. *Metallurgy*. Ft. McPherson, Nebr., Aug. 22, 83. B.S., Mo. Sch. Mines, 09, Met.E., 22. Instr. chem., Mo. Sch. Mines, 09-10; Okla. Sch. Mines, 10-11, mining, 11-12, acting

pres., 13-15; chemist, U. S. Bur. Mines, Salt Lake City, 16-18, Seattle, 19, metal. chemist in charge chloride volatilization, Salt Lake City, 20-21, asst. metallurgist, Seattle, 22-23, acting supt., 24. metallurgist, Minneapolis, 25-33, Tuscaloosa, 34, Pittsburgh, 35- Analytical chemistry; chloride volatilization; sponge iron; manganese; rates of deoxidation of iron oxides in ores; sinters; briquettes; laboratory equipment.

Barrett, Dr. Elliott P(ercy), Mellon Institute, Pittsburgh, Pa. *Physical chemistry*. New York, N. Y., Aug. 12, 02. A.B., Columbia, 24, A.M., 26, Ph.D., 33. Ass't. chem., Columbia, 22-25, 26-30; Wash. Sq. Col., N. Y. Univ., 25-26; develop. engineer, West. Elec. Co., 30-31; ass't. fuel technol., Pa. State Col., 31-32, research assoc., 32-35; instas. fellow, Mellon Inst., 35-A.A.; Chem. Soc.; Ceramic Soc. Calorimetry of slow reactions; sorption of water vapor by solids; design of telephone cable sheath and laboratory gas furnaces; condition of moisture in bituminous coal; mineralogical components of coal; fusion and clinkering of coal ash.

Barrett, Dr. Harold J(amies), E. I. du Pont de Nemours and Co., Niagara Falls, N. Y. *Chemistry*. Frankton, Ind., Sept. 10, 98. A.B., West Virginia, 19, M.S., 20; Ph.D., Ohio State, 27. Instr. chem., Iowa State Col., 20-21; chemist, Exp. Sta., West Virginia, 21-22; asst. chem., Ohio State, 22-25; asst. prof., S. Dak. Col., 25-26; research chemist, exp. sta., E. I. du Pont de Nemours and Co., 26-35, research supervisor, Roessler and Hasslacher chem. dept., 35-36, develop. dir., 36- Chem. Soc. Synthetic resins; cellulose derivatives; sodium; chlorinated hydrocarbons; peroxy compounds.

Barrett, Prof. J(ames) T(hophilus), University of California, Berkeley, Calif. *Plant pathology*. Butler, Ill., Nov. 14, 76. A.B., Illinois, 03, A.M., 07; fellow, Cornell, 08-10, Ph.D., 10. Asst. bot. Exp. Sta., Illinois, 03-08; Cornell, 08-10; assoc., Illinois, and asst. Exp. Sta., 10-13; prof. plant path., sch. trop. agr., California, and plant pathologist, Citrus Exp. Sta., 13-19, acting dean grad. sch. trop. agr. and acting director, Citrus Exp. Sta., 19-22; assoc. director, 22-26, prof. plant path., 26-, plant pathologist, Exp. Sta., 26- A.A.; Bot. Soc.; Phytopath. Soc.; Mycol. Soc.; West. Soc. Nat. Mycology; Phycomycetes.

Barrett, Leonard I(mrie), U. S. Forest Service, Asheville, N. C. *Forestry*. Chicago, Ill., Sept. 21, 01. B.S. (Forestry), Michigan, 24, M.S. (Forestry), 26. Junior forester, South. Forest Exp. Sta., U. S. Forest Service, 26-28, junior forester and asst. silviculturist, Cent. States Forest Exp. Sta., 28-30, assoc. silviculturist, Appalachian Forest Exp. Sta., 31-35, silviculturist, 35- Soc. Foresters; Soc. Mammal. Silviculture; timber growth; forest management.

Barrett, Prof. Leslie B(urns), Connecticut College of Pharmacy, New Haven, Conn. *Botany*. Winsted, Conn., Sept. 3, 95. Ph.G. Mass. Col. Pharmacy, 20, Ph.C., 22; Duquesne, 27-30. Instr. chem., Mass. Col. Pharmacy, 20-22; bot. and mat. med., col. pharmacy, Columbia, 23-25; prof. mat. med., Duquesne, 25-31; bot. and mat. med., Conn. Col. Pharmacy, 31-C.W.S., U.S.A., 18, A.A.; Pharmaceut. Assn. Materia medica; histology of medicinal plants.

Barrett, L(eslie) P(ark), Jones and Laughlin Steel Corp., Pittsburgh, Pa. *Geology*. Boston, Mass., June 20, 87. B.S., Michigan, 13. Geologist, Mich. Geol. Surv., 13-17; asst. state geologist and state mine appraiser, Mich., 19-27; geologist, Jones and Laughlin Steel Corp., 27-, v. pres., iron mining subsidiaries, 35- U.S.A., 17-19, capt. A.A.; Geol. Soc.; Soc. Econ. Geol.; Min. and Metal. Eng.; Mich. Acad.; Lake Superior Min. Inst. Economic geology; iron and manganese ores; economics of iron mining industry.

Barrett, Dr. O(tis) W(arren), North Clarendon, Vt. *Agriculture*. North Clarendon, Vt., April 18, 72. B.S., Vermont, 96, Sc.D., 34. W. India Improv. Co., 94; hon. curator entom. collections, Museo de la Comisión Geográfico-Exploradora, Tacubaya, Mex., 98-00; botanist and entomologist, Exp. Sta., Puerto Rico, 01-05; plant introducer, U. S. Dept. Agr., 05-08; director agr., Monambique, 08-10; chief div. hort. Bur. Agr., Manila, P. I., 10-14; horticulturist, C. Z., 14-17; agr. adviser, Liberian Govt., 20-22; director agr., Insular Dept. Agr. and Labor, P. R., 23-29; horticulturist, Hawaii, 29-30. Mex. agente viagero, Paris Expos., 98. C.W.S. and U. S. Dept. Agr., 17-19. Sec. Mammal; Entom. Soc. Wash.; Philippine Acad.; Ateneo de P. R. Tropical agriculture; zootechny; coconut, cacao and coffee culture; pomology.

- Barrett, Prof. Sampson K(lrby)**, New York University, New York, N. Y. *Physics, Electrical engineering.* Saratoga Springs, N. Y., Sept. 7, 86. B.E. Polytech. Inst. Brooklyn, 10; N. Y. Univ., 13-16. *Instr. physics and elec. eng.* Polytech. Inst. Brooklyn, 10-15; asst. prof., 15-17; *elec. eng.*, N. Y. Univ., 19-22; assoc. prof., 22-27; prof., 27-; director evening eng. div., 27-36; asst. dean in charge evening div., 36-; *consulting engineer*, 15-; Lieut. U.S.N.R., 19. A.A.; Elec. Eng.; Illum. Eng. Soc. (chairman, finance cmt., 27-32; chairman, N. Y. sect., 27, 28-33); Mech. Eng.; Eng. Educ.; Naval Inst. Brown-councilor, 28-33); *Mech. Eng.*; Educ.; Naval Inst. Brownian movements; commutation phenomena; induction motors; shading coils; single-phase and polyphase relays; ozonators; electrical dryers; magnetos for aeroplanes; insulating paints and varnishes; oscillograph; naval fire control apparatus; gunnery; automotive starting and lighting systems; illumination and production.
- Barrett, Dr. Samuel A(lfred)**, Public Museum, Milwaukee, Wis. *Anthropology.* Little Rock, Ark., Nov. 12, 79. California, 00-04, B.S., 05. LeConte fellow, 05-06, M.S., 06, Ph.D., 08; Sc.D., Lawrence Col., 29. Asst. anthrop., California, 06-08; ethnologist, George G. Hevey expd., S. Amer., 08-09; curator anthrop., Pub. Museum, Milwaukee, 09-20, director, 20-; Anthrop. Asn.; Ethnol. Soc.; Folk-Lore Soc.; Asn. Mus.; Explorers Club; Wis. Archeol. Soc.; Wis. Hist. Soc.; Wis. Acad.; fel. Royal Geog. Soc.; fel. Royal Astron. Soc. Indians of Ecuador, California and Wisconsin; Wisconsin archeology.
- Barrett, Dr. Willard B(rehlman)**, 2100 Elston Ave., Chicago, Ill. *Chemistry.* Tully, N. Y., Dec. 18, 99. Ch.B. Cornell, 20, fellow, 22-23, Ph.D., 23. Chem. research dept., E. I. du Pont de Nemours and Co., 23-27, production dept., 27-; Chem. Soc. Phthalains.
- Barrett, Dr. William C(lark), Jr.**, Western Reserve University School of Medicine, Cleveland, Ohio. *Histology, Embryology.* Norfolk, Va., Sept. 12, 06. B.S., Virginia, 29, M.S., 30; Ph.D., Harvard, 34. Asst. biol., Virginia, 28-30; Austin teaching fellow, Harvard, 30-31; asst. zool. and tutor biol., 31-34; Parker traveling fellow, 34-35; *instr. histol. and embryol. sch. med.*, Western Reserve, 35- A.A.; assoc. Soc. Zool.; cor. mem. Soc. philomat. Paris. Cytology; comparative hematology; osteogenesis in tissue culture.
- Barringer, Lawrence E(ugene)**, 1 River Road, Schenectady, N. Y. *Ceramics.* Washington, D. C., March 1, 76. E.M., Ohio State, Cer. E., 33. Chemist, Columbus Brick and Terra Cotta Co., 00-02; *Gen. Elec. Co.*, Schenectady, 02-09, engineer insulations, 09- Director, Locke Insulator Corp.; Monowatt Elec. Corp. Silver medal, Panama-Pacific Expos., 15. Fel. Ceramic Soc. (pres., 16); Soc. Test. Mat. (mem. cmt. D-9); N. Y. Soc. Ceramic Arts. Electrical insulating materials; porcelain; enamels; varnishes; mica.
- Barris, Prof. Ralph W(aldo)**, 1631 Euclid St., N. W., Washington, D. C. *Anatomy.* Omaha, Nebr., March 6, 06. A.B., Grinnell Col., 28; M.S., Northwestern, 32, Ph.D., 34. Teaching asst. zool., Iowa, 28-29; instr. chem., Bucknell, 29-31; asst. inst. neur. med. sch., Northwestern, 31-34; nat. research fellow med., 34-35; instr. *anat.*, med. center, Louisiana, 35-36; asst. prof. sch. med., George Washington, 36- A.A.; Asn. Anat.; Soc. Exp. Biol. Optic connections of mid-brain and thalamus; hypothalamus and carbohydrate metabolism.
- Barron, Dr. Donald H(enry)**, Wetenhall Cottage, Brooklands Ave., Cambridge, Eng. *Anatomy.* Ward, S. Dak., April 9, 05. A.B., Carleton Col., 28; M.S., Iowa State Col., 29; Ph.D., Yale, 32; M.A., Cambridge, 35. *Instr. anat.* Albany Med. Col., Union (N. Y.), 32-33, asst. prof., 34-35; nat. research fellow, 33-34; demonstrator, Cambridge, 35- Asn. Anat. Impulse conduction in the spinal cord; the histology of the posterior roots.
- Barrón, Dr. E. S. Guzmán**, University of Chicago, Chicago, Ill. *Biochemistry.* Huari, Peru, 98. M.D., Univ. San Marcos, Peru, 24. Peruvian Govt. fellow, Europe, 24-26; Rockefeller Foundation fellow, 27-28; fellow, Hopkins, 29-30; research assoc. med., Chicago, 30-31, asst. prof., 31- A.A.; Soc. Exp. Biol.; Soc. Biol. Chem.; Soc. Clin. Invest.; Chem. Soc. Jaundice; cell metabolism; biological oxidations.
- Barron, Leonard**, Rockville Centre, L. I., N. Y. *Horticulture.* Chiswick, Eng., Sept. 29, 68. Birkbeck Inst., London; gardens, Royal Hort. Soc., England. Asst. ed., 'Gardeners' Chronicle', London, 85-94; ed., 'Am. Gardening', 94-04; 'Garden Magazine', N. Y., 05-25; 'Garden and Home Builder', 25-28; *hort.* ed., 'Am. Home,' 28-36; 'Country Life,' 28-36; 'Flower Grower,' 37- Sec'y, Int. Conf. on Plant Breeding, N. Y., 02; Int. Conf. Plant Hardiness, N. Y., 07. A.A.; Soc. Hort. Sci.; Am. Rose Soc. (pres.); Am. Inst.; N. Y. Hort. Soc. (sec'y, 98-09); fel. Royal Hort. Soc. Adaptation of plants to ornamental gardening; methods of horticulture.
- Barron, Dr. Louis E(dward)**, New Haven Hospital, New Haven, Conn. *Surgery.* Cambridge, Mass., Feb. 22, 06. A.B., Harvard, 28; M.D., Chicago, 32. Intern, Billings Hosp., Chicago, 32-33; asst. res. surg. research, Ohio State, 33-34, res., 34-35, asst., 35-36; with *New Haven Hosp.*, 36- Asn. Study Int. Secretions. Anoxemia; thirst; gastric motility in hyperthyroidism; iodine metabolism; blood iodine; urinary iodine; amyloidosis; gastric motility in man; vagotonia; applied physiology of the innervation of the stomach.
- Barron, Prof. Moses**, 2101 Pillsbury Ave., Minneapolis, Minn. *Internal medicine.* Kovno, Russia, Nov. 8, 83. B.S., Minnesota, 10, M.D., 11. Demonstrator path. and bacter., Minnesota, 12-13; instr. path., 13-16; asst. prof., 16-20, med., 20-25, assoc. prof., 25-33, prof., 33- Director path. lab., City Hosp., Minneapolis, 13-14; City and County Hosp., St. Paul, 14-17; staff, outpatient dept., Univ. Hosp., 24-26; St. Mary's Hosp., 21-; Asbury Hosp., 26-; City Hosp., 27-; Eitel Hosp., 28- M.C., 17-19, major, chief lab., Base Hosp., Allergy. A.A.; Am. Med. Asn.; Asn. Path. and Bact.; Asn. Cancer Research; fel. Col. Physicians; Cent. Soc. Clin. Research; Minn. Acad. Med.; Minn. Path. Soc. (pres. 25); Minn. Soc. Int. Med. Pathology; lymphangiomatosis; carcinomas of lung; organ weights in disease; islands of Langerhans and diabetes; heart.
- Barrow, Prof. David F(rancis)**, University of Georgia, Athens, Ga. *Mathematics.* Athens, Ga., Nov. 14, 88. A.B., B.S., Georgia, 10; A.M., Harvard, 11, Ph.D., 13. *Instr. math.*, Texas, 14-16; Sheffield Sci. Sch., Yale, 16-18; prof., Georgia, 20- Math. Asn.; Ga. Acad. (past sec'y).
- Barrow, Prof. Elva E(udora)**, Woman's College, University of North Carolina, Greensboro, N. C. *Physiological chemistry.* Danville, Va., 89. A.B., Randolph-Macon Woman's Col., 11; M.S., Chicago, 23; Columbia; Cornell; California. Teacher science, Blackstone Inst., Va., 11-13; Cent. Col. (Mo.), 14-16; assoc. prof. chem., Woman's Col., North Carolina, 16- Chem. Soc.; N. C. Acad. Maltose and the invertase activity of growing yeast.
- Barrow, Dr. W(ilmer) L(anier)**, Massachusetts Institute of Technology, Cambridge, Mass. *Electrical engineering.* Baton Rouge, La., Oct. 25, 03. B.S., Louisiana, 26; M.S., Mass. Inst. Tech., 29; Redfield Proctor traveling fellow, 29-30; D.Sc., Technische Hochschule, Munich, 31. *Instr. elec. eng.*, Mass. Inst. Tech., 28-29, 31-, with Round Hill research div., 31- Elec. Eng.; Radio Eng. Electroacoustics; variable electric circuits; antennas and high-frequency engineering.
- Barrows, Dr. Albert L(lloyd)**, National Research Council, Constitution Ave. and 21st St., Washington, D. C. *Zoology.* Nordhoff, Calif., May 28, 83. B.S., Pomona Col., 06; Cornell, 06-07; fellow, California, 11-12, M.S., 12, Ph.D., 17. Teacher, high sch., P. I., 07-10; asst. zool., California, 12-14, instr., 14-19; asst. sec'y, Nat. Research Council, 19-34, exec. sec'y, 34- Sci. staff, 'Albatross,' 08-09. A.A. (sec'y, Pacific div., 14-17); Paleont. Soc.; Polit. Sci. Asn.; Calif. Acad.; Biol. Soc. Wash. Marine Protozoa; marine rock- and wood-boring mollusks.
- Barrows, Prof. E(dward) Fletcher**, 140 N. Echols St., Monmouth, Oregon. *Biology.* Brattleboro, Vt., April 8, 00. Ph.B., Brown, 23, Ph.D., 32; A.M., Harvard, 28. Grad. asst. English, Oregon, 28-29; *biol.*, Brown, 29-30; instr., Oregon Nor. Sch., Monmouth, 32-35, assoc. prof., 35- A.A.; Genetics Soc. Genetics; body temperature and the absorption of ether.
- Barrows, Dr. Florence L(ouise)**, Boyce Thompson Institute for Plant Research, 1086 Broadway, Yonkers, N. Y. *Botany.* Providence, R. I., March 19, 88. A.B., Smith Col., 11; M.S., Conn. Agr. Col., 27; Ph.D., Columbia, 35. Teacher, high schs., N. Y., N. J. and Conn., 12-19; teaching fellow chem., Conn. Col., 19-20, instr., 20-21, bot., 21-26; asst., Conn. Agr. Col., 26-27; instr., Conn. Col., 30, asst. prof. and director bot. garden, 30-32; asst. plant physiologist, Boyce Thompson Inst., 33-36, *microscopist, cellulase lab.*, 36- Librarian, dept. genetics, Carnegie Institution, Cold Spring Harbor. A.A.; Bot. Soc. Distribution of cellulose particles in the plant kingdom; propagation of *Lycopodium* and *Epigaea*; inheritance of *Cucurbita* pollen.

BARROWS — BARTELMEZ

- Barrows, Prof. Harlan H.**, University of Chicago, Chicago, Ill. *Geography.* Armada, Mich., 77. B.S., Chicago, 03; hon. Pd. M., Mich. Nor. Col., 12. Asst. geol., Chicago, 03-07; instr. geol. and geog., 07-08; asst. prof., 08-10; assoc. prof. geog., 10-14; prof., 14-; head dept., 19-. Mem. Miss Valley cmt., Pub. Works Admin., 33-34; water planning cmt., Nat. Resources Board, 34-. Head country sect., bur. research, W.T.B., 18. Am. Geog. (v. pres., 20; pres., 22). Historical geography; geographical text-books; conservation of natural resources.
- Barrows, Prof. H(arold) K(librith),** 6 Beacon St., Boston, Mass. *Hydraulic engineering.* Melrose, Mass., Nov. 9, 73. B.S., Mass. Inst. Tech., 95. Asst. and assoc. prof. civil eng., Vermont, 01-04; dist. engineer, U. S. Geol. Surv., 04-09; consulting hydraulic engineer, 07-; assoc. prof. hydraulic eng., Mass. Inst. Tech., 09-21; prof., 21- Civil Eng.; Inst. Consulting Eng.; Eng. Educ.; New Eng. Water Works Assn.; Boston Soc. Civil Eng. Water power engineering.
- Barrows, Prof. W(illiam) E(dward),** 40 Myrtle St., Orono, Maine. *Electrical engineering.* Ludlow, Vt., Feb., 20, 78. B.S., Maine, 02, E.E., 06. Student engineer, Gen. Elec. Co., 02-04; instr. elec. eng., Pennsylvania, 04-06; asst. prof. Armour Inst. Tech., 06-12; prof., Maine, 12- Elec. Eng.; Eng. Educ. Light; photometry; illuminating engineering.
- Barrows, Prof. William Morton,** Ohio State University, Columbus, Ohio. *Zoology.* Rochester, N. Y., April 7, 83. B.S., Mich. State Col., 03; M.S., Harvard, 06, Sc.D., 20. Teacher, sch. Ind., 06-07; instr. zool., New Hampshire, 07-09; asst. prof., Ohio State, 09-23; prof., 23- A.A.; Soc. Zool. Reactions of *Drosophila* to odorous substances; reactions of spiders to vibrations of web; color in cocker-spaniels; spiders of Ohio.
- Barrows, Prof. W(illiam) M(orton), Jr.**, Florida State College for Women, Tallahassee, Fla. *Physics.* Columbus, Ohio, March 27, 10. A.B., Ohio State, 29. M.S., 31, Ph.D., 34. Fellow physiol., Rochester, 34-35; research assoc., vital econ., 35-37; asst. prof. physics and curator physics labs., Fla. State Col. for Women, 37- Biophysics; spectroscopy; physiological calorimetry.
- Barrus, Prof. M(ortier) F(ranklin),** Forest Home Drive, Ithaca, N. Y. *Plant pathology.* Forestville, N. Y., March 17, 79. A.B., Wabash Col., 08; Ph.D., Cornell, 11. Asst. bot., Wabash Col., 07-08; plant path., Cornell, 08-10, instr., 10-11; asst. prof., 11-14; prof., 14- Part-time specialist, U. S. Dept. Agr., 16, path. adviser, 17-19; in charge potato inspection, N. Y. State Col. Agr., Cornell, 19-24; Nat. Research Council, 24-26; specialist, Dept. Agr. and Labor, P. R., 27-28; director agr. exten., Puerto Rico, 34-36. U.S.A., 18-19. A.A.: Phytopath. Soc. (councilor, 22-23; advisory board, 23-27; chairman, 24-27, v. pres., 25; pres., 27); Potato Assn. (chairman, cmt. on seed improv. and certification, 15-18); Crop Protection Inst. (governor, 24-26). Bean and potato diseases.
- Barry, Prof. Frederick,** Columbia University, New York, N. Y. *Chemistry, History of science.* Lynn, Mass., Feb., 13, 76. A.B., Harvard, 97, A.M., 09, Ph.D., 11. Asst. chem., Carnegie Institution, 11-12; instr., Columbia, 12-18; asst. prof., N. Y. Univ., 18-19; Columbia, 23-28; assoc. prof. hist. science, 28- A.A.; Hist. Sci. Soc. Chemical energetics; calorimetry; thermochemistry.
- Barry, Prof. H(erbert), Jr.**, 14 Kirkland Place, Cambridge, Mass. *Psychology.* New York, N. Y., Nov. 14, 98. A.B., Harvard, 20, Ph.D., 29. Asst. psychol. clinic, Harvard, 28-29; instr. psychol., Tufts Col., 29-32; asst. prof., 32- Assoc. Psychol. Assn. Individual differences in humor; negativism and complaisance; hypnotizability; affective influence of repetition; euphoria; bermoullism in psychoses.
- Barry, John G(erald),** 808 Mills Bldg., El Paso, Texas. *Geology.* Boston, Mass., April 9, 84. B.S., Mass. Inst. Tech., 07. Topman, Red Top Mine, Nov., 07; instr. miner. and ore deposits, North Dakota, and asst. state geologist, N. Dak., 07-09; sci. asst., Ray Construction Copper Co., 09-10; chief engineer and geologist, Cortez Associated Mines, 10-11; geologist and engineer, J. E. Spurr, 11-15; traveling engineer, Cia Minera de Peñoles, 15-16; instr. miner. and field geol., Mass. Inst. Tech., 16-20; chief geologist, A. S. and R. Co., 20-24; consulting mining geologist and engineer, 24-31; pres., col. mines and metal, Texas, 31-34; prospecting geologist, 34- U.S.A., 17-18; lect. col., A.A.; Am. Eng. (pres., El Paso chap., 26); Min. and Metal. Eng.; Soc. Mil. Eng.; Min. and Metal. Soc.; Am. Cong. Soc.; Reserve Officers Assn.; Am. Min. Cong. Limestone deposits of northern Mexico.
- Barry, Dr. Lee W(Hill),** 814 Lowry Medical Arts Bldg., St. Paul, Minn. *Obstetrics, Gynecology.* Elbridge, Mich., Feb., 19, 86. M.D., Michigan, 11; fellow, Minnesota, 16-19, Ph.D., 19. Intern, St. Francis Hosp., Pittsburgh, Pa., 11-12; assoc. path., Indiana, 12-14; asst. prof. obstet. and gynec., Minnesota, 19- Fel. Am. Med. Ass.; fel. Col. Surg. Effect of inanition on size of offspring of the pregnant albino rat.
- Barsky, Dr. George,** 202 E. 44th St., New York, N. Y. *Chemistry.* New York, N. Y., Aug., 26, 96. B.S., Columbia, 16, Ch.E., 18, Bridgeman fellow, 19-21, A.M., Ph.D., 22. Research chemist, Am. Cyanamid Co., 22-26, research director, 26-33; consulting chemist and chem. engineer, 33- A.A.; Chem. Soc. Industrial chemistry; cyanides; cyanamid; synthetic resins.
- Barss, Prof. A(liden) F(orrest),** University of British Columbia, Vancouver, B. C., Can. *Horticulture.* Hoosick, N. Y., March 29, 88. A.B., Rochester, 10; B.S.A., Cornell, 12; M.S., Oregon State Col., 14; Ph.D., Chicago, 29. Asst. hort., Oregon State Col., 14-17; asst. prof. pomol., 17-18; assoc. prof. hort., British Columbia, 18-26, acting head dept., 20-26; prof. and head dept., 26- A.A.; Soc. Hort. Sci.; Can. Soc. Tech. Agr.; fel. Royal Hort. Soc.
- Barss, Howard P(hillips),** U. S. Department of Agriculture, Washington, D. C. *Botany, Plant pathology.* Victoria, B. C., Can., April 20, 85. A.B., Rochester, 07; M.S., Harvard, 09; Wisconsin, 27-28. Austin teaching fellow, Harvard, 09-10; instr. bot. and asst. plant path., State Col. Wash., 10-12; asst. plant pathologist, Exp. Sta., Oregon State Col., 12-14; assoc. pathologist, 14-15; plant pathologist, 15-34, prof. bot. and plant path. and head dept. col., 15-34; prin. botanist, office exp. stations, U. S. Dept. Agr., 34- Summer instr., Dartmouth, 10. Mem. div. biol. and agr. Nat. Research Council, 34- A.A.; Bot. Soc. (chairman, Pacific div., 30); Soc. Nat.; Phytopath. Soc. (v. pres., 27; pres., 28; secy., 35-); New Eng. Bot. Club; Northwest Sci. Assn.; Bot. Soc. Wash.; Biol. Soc. Wash. Plant physiology; coordination of research.
- Barts, Dr. Edward J.**, University of Cincinnati, Cincinnati, Ohio. *Chemical engineering.* Lina Co., Iowa, Nov. 16, 99. B.S., Iowa, 21, M.S., 22, Ph.D., 25. Head dept. chem., Midland Col., 25-27; instr. chem. eng., Cincinnati, 27-32, asst. prof., 32- Utilization of beet sugar wastes; orthophenylphenol condensations; thermal conductivities of solutions; dehydration of ethyl alcohol by means of trichlorethylene.
- Bartel, A(thur) T(hedore),** U. S. Department of Agriculture, Tucson, Ariz. *Agronomy.* Newton, Kans., June 13, 05. B.S., Idaho, 28; M.S., Kans. State Col., 30. Junior agronomist, west. irrig. agr. bur. plant indust., U. S. Dept. Agr., Bard, Calif., 29-30, div. cereal crops and diseases, Tucson, Ariz., 30-35; asst. agronomist, 35- Soc. Agron. Production and improvement of small grains; plant physiology.
- Bartel, F(rank) O(cleve),** Box 765, Stateville, N. C. *Agricultural engineering.* Blue Earth, Minn., July 15, 93. C.E., Notre Dame, 15. Asst. engineer, Jones and Curtis, Fairmont, Minn., 16-17; junior drainage engineer, U. S. Dept. Agr., 17-18; drainage engineer, State Dept. Agr., N. C., 18-21; assoc. drainage engineer, U. S. Dept. Agr., 21-30, agr. engineer, Piedmont soil erosion exp. sta., soil conservation service, 30-35, supt., 35- Acting city engineer, Blue Earth, Minn., 15-16; tech. adviser, U. S. Forest Service, 33. Assoc. Agr. Eng.; N. C. Soc. Eng. (director, 33-). Ground-water in eastern North Carolina; tile drainage; run-off; silting in dredged Piedmont streams; engineering phases of soil erosion.
- Bartell, Prof. F(loyd) E(arl),** University of Michigan, Ann Arbor, Mich. *Chemistry.* Concord, Mich., June 16, 83. A.B., Albion Col., 05; A.M., Michigan, 08, Ph.D., 10. Instr. chem., Simpson Col., 05-07; gen. and physical chem., Michigan, 10-16; asst. prof., 16-18; assoc. prof., 18-24; prof., 24- Capt. nitrate div., Ordnance Dept., 17-18; consultant, 28- A.A.; Chem. Soc. Permeability of membranes and osmotic pressure; electrochemistry; colloids; nitrogen fixation; adsorption; interfacial tension; adhesion; wetting of solids by liquids.
- Bartelmez, Dr. George W(Hill),** University of Chicago, Chicago, Ill. *Anatomy.* New York, N. Y., March 23, 85. B.S., N. Y. Univ., 06; fellow, Chicago, 07-10, Ph.D., 10. Asst. biol., N. Y. Univ., 06-07; instr. anat., Chicago, 10-19, assoc. prof., 19-23; prof., 23- Lecturer, California, 25. Asn. Anat. (2nd v. pres.); Soc. Zool. Development and structure of the nervous system; development of the human embryo and placentae; histology of the uterus.

- Bartels, Dr. Henry A(rthur)**, 57 W. 57th St., New York, N. Y. *Bacteriology*. New York, N. Y., Jan. 22, 95. B.S., R. I. State Col., 17; B.S., Columbia, 25, D.D.S., 27. Asst. research lab, Health Dept., New York, 17; bacteriologist, U. S. Pub. Health Service, 18-19; asst. bacter., div. labs. and research, State Dept. Health, N. Y., 19-; asst. oral path, Columbia, 27-28; instr., 28-36, asst. prof., 36-, lecturer bacter., sch. oral hygiene, 27- Attending dental surgeon, Bryson Day Nursery, 28- A.A.; Dental Asn.; N. Y. State Dental Soc.; Int. Asn. Dental Research. *Staining of spirochetes; sterilization and germicides; etiology of oral infections.*

Barth, Carl G(eorge) L(ange), 900 N. 63rd St., Philadelphia, Pa. *Mechanical engineering*. Oslo, Norway, Feb. 28, 60. Grad., Horten's Tech. Sch., Norway, 76. Draftsman and chief designer, Wm. Sellers and Co., Phila., 81-95; chief draftsman and engineer, Rankin and Fritz Foundry and Machine Co., St. Louis, 95-97; prof. applied mech., Int. Correspondence Schs., 97-99; shop engineer, Bethlehem Steel Co., 99-02; consulting mech. and indust. engineer, 02-23; retired. A.A.; Mech. Eng.; Franklin Inst.; Econ. Asn.; hon. mem. Taylor Soc.; Eng. Club Phila. Theoretical and applied mechanics; strength of columns; transmission of power by leather belting; art of cutting metals; standardization of machine tools; mathematical approximations; mathematics of graded income tax.

Barth, Prof. L(easter) G(eorge), Columbia University, New York, N. Y. *Zoology*. Detroit, Mich., 05. A.B., A.M., Michigan, 27; Ph.D., Chicago, 29. Nat. research fellow, Chicago, 29-31; instr. zool., Columbia, 31-35, asst. prof., 35- A.A.; Soc. Zool.; Soc. Exp. Biol. Experimental embryology.

Barthelmeiss, Dr. Harriet M(ay), Board of Education, Parkway at 21st St., Philadelphia, Pa. *Psychology, Education*. Boston, Mass., Nov. 3, 92. Boston, 13-15; B.S., Columbia, 21, A.M., 22, Ph.D., 31. Teacher, pub. schs., Mass., 11-16, asst. dept. measurement, 16-21; Teachers Col., Columbia, 21-22, instr. elementary educ., 22-23; educ. measurements and psychol., N. J. State Teachers Col., Trenton, 23-27; special asst. to director research, Board Pub. Educ., Phila., 27- Lecturer, Bryn Mawr Col., 28. Summer, instr., N. Y. State Col. for Teachers, 23. Mem., White House Conf., 30. A.A.; Educ. Research Asn. Educational and psychological measurement; statistical and experimental methods of research; standardized tests; text-books.

Bartholomew, Earl, 723 E. Milwaukee Ave., Detroit, Mich. *Engineering*. Norman, Okla., Jan. 1, 01. A.B., Oklahoma, 21, B.S., 22. M.S., 23. Instr. mech. eng., Oklahoma, 22-23; Harvard, 23-26; director eng. labs., Ethyl Gasoline Corp., 26- Soc. Automotive Eng.; Mech. Eng.; Petrol. Inst.; Soc. Test. Mat. Fuels for and design of internal combustion engines.

Bartholomew, Dr. E(lbert) T(homas), Citrus Experiment Station, Riverside, Calif. *Botany*. Stockton, Kans., Oct. 18, 78. A.B., Kans. State Teachers Col., 09; fellow, Wisconsin, 10-11; Ph.D., 14. Asst. prof. bot., Kans. State Teachers Col., 09-10; instr., Wisconsin, 11-15, asst. prof., 15-20; asst. prof. plant path., Citrus Exp. Sta., California, 20-25; assoc. plant pathologist, 25-28; assoc. plant physiologist, 28-37, *plant physiologist*, 37-, head div. plant physiol., 35- Acting instr., Stanford, 17-18. A.A. (chairman, physiol. sect., Pacific div., 22-24; sec'y., bot. sect., 30, chairman, 31); Bot. Soc.; Phytopath. Soc.; Soc. Plant Physiol.; West. Soc. Nat.; S. Calif. Bot. (director). Diastase; pathological and physiological diseases of the lemon; acidity, water content and growth rate of lemon fruits; physiological effect of hydrogen cyanide on citrus; transpiration; physiological maladies of the Valencia orange.

Bartholomew, Dr. L(ucille) K(eene), Citrus Experiment Station, Riverside, Calif. *Plant pathology*. St. Louis, Mo., July 23, 88. B.S., Missouri, 09, A.B., 10, A.M., 12, Ph.D., 16; fellow, Wisconsin, 13-14. Asst. bot., Missouri, 10-13; instr., 14-16; asst. pathologist, cereal disease investigations, bur. plant indust., U. S. Dept. Agr. Cytology of fungi; cereal diseases; smuts.

Bartholomew, Prof. R(obert) P(erclval), 604 Whitham St., Fayetteville, Ark. *Agronomy*. Lancaster, Pa., July 7, 99. B.S., Pa. State Col., 21; M.S., Wisconsin, 23, Ph.D., 26. Instr. soils, Wisconsin, 21-26; asst. prof. agron., Arkansas, 26-35; assoc. prof., 35- Potassium in plant nutrition; soil chemistry; availability of rock phosphate.

Bartholomew, Tracy, 808 Diamond Bank Bldg., Pittsburgh, Pa. *Entomology*. Austin, Texas, Nov. 14, 84. Ohio State:

E.M., Colo. Sch. Mines, 06. Construction and metal. engineer, Fed. Lead Co., Mo., 06-07; Nev. Consol. Copper Co., 07-09; gen. manager alkali-proof dept., Colo. Portland Cement Co., 09-11; manager, Rico Trop. Fruit Co., P. R., 12-21, pres., 21-; senior indust. fellow, Mellon Inst., 21-; manager research, Duquesne Slag Products Co., 29- Soc. Munic. Eng.; Ceramic Soc.; Mech. Eng.; Soc. Test. Mat.; Concrete Inst.; Eng. Soc. West. Pa. Utilization of blast-furnace slag; concrete; roads.

Bartky, Prof. Walter, University of Chicago, Chicago, Ill. *Astronomy*. Chicago, Ill., Sept. 21, 01. B.S., Chicago, 23, Ph.D., 26. Instr., Lewis Inst. (Ill.), 20-23; asst. astron., Chicago, 23-26; instr., 26-27; asst. prof., 27-33; assoc. prof., 33- Math. consultant, West. Elec. Co., 26-30. A.A.; Astron. Soc.; Math. Soc.; Math. Asn. Mathematical astronomy; mathematics; probability.

Bartle, Dr. Glenn G(ardner), University of Kansas City, Kansas City, Mo. *Geology*. Borden, Ind., Feb. 7, 99. A.B., Indiana, 21, A.M., 23, Ph.D., 32; Chicago, 24-25. Sch. supt., Ill., 22-24; asst., Chicago, 24-25; instr. geol., Kansas City Junior Col., 25-33; consulting geologist, Panhandle East Pipe Line Co., 29-; Phoenix Joint Stock Land Bank, 36-; chairman dept. geol. and geog., Univ. Kansas City, 33- A.A.; Asn. Petrol. Geol.; Mo. Acad.; Ind. Acad. Economic geology of Missouri and Kansas; stratigraphy and paleobotany of Missouri and Indiana; physiography of Indiana.

Bartlett, Prof. Boyd W(heeler), 183 Maine St., Brunswick, Maine. *Physics*. Castine, Maine, June 20, 97. A.B., Bowdoin Col., 17; grad. U. S. Mil. Acad., 19; B.S. Mass. Inst. Tech., 21; A.M., Columbia, 26, Ph.D., 33; Munich, 34-35. Lieut., C. Eng., 19-22; physicist, Bell Tel. Labs., 22-27; asst. prof. physics, Bowdoin Col., 27-29; assoc. prof., 29-31, prof., 31- A.A.; Physical Soc.; Asn. Physics Teachers; assoc. mem. Optical Soc. Measurement of capacitance in terms of resistance and frequency; shielded bridge for the measurement of inductance in terms of capacity and resistance; rotating sectored disc; principal susceptibilities of crystals; change of resistance in magnetic fields.

Bartlett, Dr. C(harles) J(oseph), 183 Bishop St., New Haven, Conn. *Medicine, Pathology*. Sutton, Vt., Dec. 18, 64. A.B., Yale, 92, A.M., 94, M.D., 95. Asst. and instr. path., Yale, 95-97; asst. prof., 97-00; prof., 00-17, emer. prof., 17-; director labs., State Dept. Health, Conn., 17-24; attending physician, Grace Hosp., New Haven, 19-26; director labs., 21- Pathologist, New Haven Hosp., 00-17. A.A.; Am. Med. Asn.; Am. Path. and Bact.; Publ. Health Asn.; Col. Physicians; N. Y. Path. Soc.; Conn. Acad. Phagocytosis in vivo; fate of bacteria in the blood stream; blood spots; family pernicious anemia; acute trichiniasis without eosinophilia; rabies; bacterial vaccines in the treatment of disease; medical missions history; osteitis deformans; effect of commercial pasteurization on tubercle bacilli in milk.

Bartlett, Dr. Edward P(ayson), E. I. du Pont de Nemours and Co., Wilmington, Del. *Physical chemistry*. Belchertown, Mass., Oct. 17, 84. A.B., Dartmouth Col., 08; A.M., Harvard, 13, Ph.D., 15. Teacher science, Blesee Mil. Acad., 08-09; instr. chem., Pomona Col., 09-11; Austin teaching fellow, Harvard, 11-13; asst. prot., Pomona Col., 14-19, assoc. prof., 19-24; assoc. chemist, fixed nitrogen research lab., U. S. Dept. Agr., 24-27; chemist, 27-28, senior chemist, 28-29; research chemist, exp. sta., E. I. du Pont de Nemours and Co., 29- Acting dean, Pomona Col., 16-18. Capt., U.S.A., 18-19. A.A.; Chem. Soc. Piezo-chemistry.

Bartlett, Dr. Emily M(ary), University of California at Los Angeles, Los Angeles, Calif. *Zoology*. Orono, Maine. A.B., A.M., Maine, 17; Ph.D., Stanford, 25. Asst. sta. for exp. evolution, Carnegie Institution, 16-17; technician anat., Minnesota, 17-18; asst., Stanford, 19-23, bot. and acting instr., 24-25; instr., Wellesley Col., 25-26; California at Los Angeles, 26- Base Hosp., Texas, 18-19. A.A.; Bot. Soc. Cytology; micro-technique.

Bartlett, Prof. Harley Harris, University of Michigan, Ann Arbor, Mich. **Botany*. Anaconda, Mont., March 9, 86. A.B., Harvard, 08. Asst., Gray Herbarium, Harvard, 05-08; chem. biologist, bur. plant indust., U. S. Dept. Agr., 09-15; asst. prof. bot., Michigan, 15-17; botanist, Hollandsch-Amerikaansche Plantage Maatschappij, Sumatra, 18; assoc. prof. bot., Michigan, 19-21, prof., 21-, chairman dept., 23-, director bot. gardens, 19- Exchange prof., Univ. Philippines, 35. A.A.; Soc. Nat. Bot. Soc. (sec'y. 15-17, v. pres., 19, pres. 27); Philos.

- Soc; New Eng. Bot. Club; Mich. Acad. (pres, 24); Wash. Acad. Genetics of Oenothera; systematic botany, especially Maya area and Indonesia.**
- Bartlett, Prof. James H(olley), Jr.**, University of Illinois, Urbana, Ill. *Physica*. Brooklyn, N. Y., Nov. 2, 04. B.C.E., Northeastern, 24; A.M., Harvard, 26, Parker traveling fellow, 28-30, Ph.D. 30. Ass't. prof. *theoret. phys.*, Illinois, 30-37; assoc. prof., 37-. Fcl. Physical Soc; Math. Soc. Ionization; quadrupole radiation; chemical valency; nuclear structure.
- Bartlett, Dr. J(effrey) Hobart**, 402 High St., Cranford, N. J. *Organic chemistry*. Laurel Hill, Tenn., Sept. 9, 00. B.S., Utah State Col., 24; M.S., Mich. State Col., 26; fellow, Columbia, 29-30. Ph.D. 31. *Research chemist, Standard Oil Develop. Co.* Elizabeth, 30- Chem. Soc. Peri-naphthoquinones.
- Bartlett, Prof. J(ohn) F(rank)**, Marshall College, Huntington, W. Va. *Organic chemistry*. Flatwoods, W. Va., Aug. 25, 02. A.B., West Virginia, 25. A.M., 27. Ph.D. 32. Teacher, high sch., W. Va., 25-26, 27-28; prin., 28-30; instr. and ass't. prof. chem., Marshall Col., 32- A.A.; Chem. Soc.; W. Va. Acad. Alkyl phenols.
- Bartlett, Prof. John W(alden)**, 130 N. Sixth Ave., New Brunswick, N. J. *Dairy husbandry*. Granville, N. Y., Aug. 1, 91. B.S., Vermont, 14; A.M., Columbia, 28; Ph.D., N. Y. Univ., 33. Exten. specialist dairy husbandry, N. J. Exp. Sta., 16-21; held sec'y, N. J. Holstein Breeders Assn., 21-22; prof. dairy husbandry, Rutgers, and dairy husbandman, N. J. Exp. Sta., 22- director north. branch, Dairy Sci. Assn. Animal breeding; nutrition and growth of animals; genetics; use of fly repellants in relation to milk production.
- Bartlett, Dr. Kenneth A(lden)**, U. S. Department of Agriculture, Mayaguez, P. R. *Entomology*. Dorchester, Mass., March 26, 07. B.S., Mass. Col., 28; M.S., Harvard, 29. Ph.D. 31. Ass't. entomologist, bur. entom. and plant quarantine, U. S. Dept. Agr., 30-36; assoc. entomologist, office of exp. stations, P. R. Exp. Sta., 36- Ass't. Econ. Entom. Insect parasites; fungal diseases of insects.
- Bartlett, Prof. Marion E(achel)**, Wagner College, Staten Island, N. Y. *Psychology*. Oct. 30, 98. B.S., Columbia, 24. A.M., 25. Ph.D. 35; Paris, 27-28. Prof. Vt. State Teachers Col., Frederickburg, 25-27; research, N. Y. State Psychiatr. Inst. and Hosp., and med. center, Columbia, 32-34; Yale, 34-35; assoc. prof. psychol., Wagner Col., 36- Assoc. Psychol. Assn.; Anal. Psychol. Assn. Abnormal psychology; audition; suggestibility; personality; sleep.
- Bartlett, Dr. Paul D(ouglas)**, Harvard University, Cambridge, Mass. *Chemistry*. Ann Arbor, Mich., Aug. 14, 07. A.B., Amherst Col., 28; A.M., Harvard, 29. Ph.D. 31. Nat. research fellow chem., Rockefeller Inst., 31-32; instr., Minnesota, 32-34; Harvard, 34-37; assoc. prof., 37- Chem. Soc. Stereochemistry; kinetics and mechanism of organic reactions; molecular rearrangements.
- Bartlett, Dr. Perry G(oodell)**, 8359 Cadwalader Ave., Elkins Park, Pa. *Inorganic chemistry*. Holyoke, Mass., 03. B.S., Mass. Col., 24; M.S., Pa. State Col., 26. Ph.D. 29. Instr. chem., Pa. State Col., 26-29; research chemist, Nat. Carbon Co., 29-30; Chas. Lenox Co., 30- Chem. Soc. Adsorption of electrolytes; porcelain enamels.
- Bartlett, Dr. Russell S(turgis)**, Phillips Exeter Academy, Exeter, N. H. *Physics*. New York, N. Y., Sept. 25, 96. A.B., Yale, 17. Ph.D. 24. Instr. physics, Yale, 24-26; assoc. prof., 26-35; instr. science, Phillips Exeter Acad., 32- A.A.; fcl. Phys. Soc. Electrical conduction in thin metallic films; thermal emission.
- Bartley, H(astings) N(ewcomb)**, U. S. Department of Agriculture, Boston, Mass. *Entomology*. Sandwich, Mass., Jan. 15, 92. B.S., Mass. Col., 15. Entomologist, East Highlands Orange Co., Calif., 16-17; in charge Japanese beetle and gipsy moth inspection and certification, New Eng. states, bar. entom. and plant quarantine, U. S. Dept. Agr., 19- U.S.N., 19-20. Entom. Soc. Amer.; Ass't. Econ. Entom. European corn borer.
- Bartley, Dr. S(amuel) Howard**, Washington University School of Medicine, St. Louis, Mo. *Psychology*. Pittsburgh, Pa., June 19, 01. A.M., Kansas, 28. Ph.D. 31. Ass't. instr. medical, Kansas, 26-28; instr., 29-31; nat. research fellow biol., Dept. ophthalmol., sch. med., Washington (St. Louis), 31-33; re-
- search assoc. psychol. and biophys., 32- Psychol. Assn; Physiol. Soc; Soc. Exp. Biol; S. Soc. Philos. and Psychol.; Soc. Psychol. Study Social Issues; Midwest. Psychol. Assn. Vision; physiological psychology; theory, vision and electrophysiology of the brain.
- Bartol, Prof. William C(yrus)**, 110 University Ave., Lewisburg, Pa. *Mathematics, Astronomy*. Huntingdon, Pa., Nov. 24, 47. A.B., Bucknell, 72. A.M., 75; Ph.D. Adrian Col. Prof. math., Salisbury Acad., Conn.; sch. prin., Pa., 74-75; Wis., 75-76; Huntingdon Acad., 76-77; prof. math., Pa. State Nor. Sch., 77-81; math. and astron., Bucknell, 81-30, emer. prof., 30-. director, Bucknell Observatory, 87-30. Perspective; differential calculus; solid geometry.
- Barton, Prof. Arthur W(illis)**, Ft. Hayes Kansas State College, Hayes, Kans. *Biochemistry*. Abilene, Kans., June 8, 73. Ph.C. Washington (Seattle), 97. A.B., 02; Ph.D. Northwestern, 18. Instr., high sch., Wash., 02-04, 07-16, 22-25; prof. chem. and biol., Col. of Puget Sound, 04-07; bot. and pharmacog., Northwestern, 13-14, 16-17, instr. chem., med. sch., 17-18; ass't. prof., Washington (Seattle), 18-22; v. pres. and biochemist, J. C. Robinson Lettuce Farms, Inc., Snohomish, Wash., 25-27; director biochem. lab., Seattle, 27-29; prof. biol., Ft. Hayes Kans. State Col., 29- A.A.; Chem. Soc.; Soc. Plant Physiol.; Kans. Acad. (councilor, 30). Proteolytic enzymes; autolysis; hydrogen ion content.
- Barton, Dr. Donald C(hnton)**, Humble Bldg., Houston, Texas. **Geology, Geophysics*. Stow, Mass., June 29, 89. A.B., Harvard, 11. A.M., 12. Sheldon traveling fellow, Ph.D. 14. Instr. eng. geol., Washington (St. Louis), 14-16; geologist, Empire Gas and Fuel Co., 16-17; div. geologist, Gulf Coast, Amerada Petrol. Corp., 19-23; chief geologist, Ryecade Oil Corp., 23-26, consulting geologist, 26-27; chief magnetic and gravimetric sect., Geophys. Research Corp., 26-27; consulting geologist and geophysicist, 27-34; research and consulting geologist and geophysicist, Humble Oil and Ref. Co., 34- Geol. Soc. rep., Nat. Research Council, 34-37. U.S.A., 17-19. A.A.; fcl. Geol. Soc.; fcl. Soc. Econ. Geol.; fcl. Assn. Petrol. Geol.; fcl. Min. and Metal. Eng.; Meteorol. Soc.; Soc. Econ. Palentol. and Miner.; Geophys. Union; Soc. Explor. Geophys. (pres, 30); Petrol. Technol.; Boston Soc. Nat. Hist.; Houston Geol. Soc.; Deuts. Geophysik. Gesell.; Soc. géol. de France. Palaeontology; Cheliruridae; geology of arkose, of disintegration of granite, of chert, of oil, of salt domes; geology and physiography of coastal plain area of Texas; oil fields of Texas and Louisiana; geophysical methods of prospecting; origin of petroleum.
- Barton, G(eorge) E(stes)**, 227 Pine St., Millville, N. J. *Chemistry*. Worthington, Mass., May 9, 71. B.S., Worcester Polytech., 91; M.S. George Washington, 95. Ass't. chemist, Naval Torpedo Sta., Newport, R. I., 91-92; chemist, Aetna Powder Co., Chicago, 92-94; chief chemist and later chem. engineer, Whitall Tatum Co., 96- Ass't. ed. 'Chem. Abstracts,' 07-; assoc. ed. 'Jour. Indust. and Eng. Chem.', 09-11. A.A.; Chem. Soc. (councilor, 08- chairman, Phila. sect., 21); Chem. Eng.; Soc. Chem. Indust.; fcl. Ceramic Soc. (chairman, glass div., 24); British Soc. Glass Technol.; Soc. de Chim. indust. Glass and glass manufacture.
- Barton, Dr. G(eorge) S(amuel) H(orace)**, Department of Agriculture, Ottawa, Ont., Can. *Animal husbandry*. B.S.A., Toronto; hon. D.Sc.A. Laval. Lecturer animal husbandry, Macdonald Col., McGill, 07-11; prof., 11-32, dean faculty agr., 25-32; deputy minister agr. Dom. Can., 32- Commander, Order Agr. Merit, Que., 29. A.A.; Can. Soc. Tech. Agr. (pres, 23-25). Social and economic problems in agriculture.
- Barton, Prof. Helen**, Woman's College, University of North Carolina, Greensboro, N. C. *Mathematics*. Baltimore, Md., Aug. 9, 91. A.B., Goucher Col., 13; Harvard, 20; A.M., Hopkins, 22. Ph.D. 26. Ass't. physics, Goucher Col., 13-14; head dept. physics and chem., Salem Col., 15-19; instr. math., Wellesley Col., 19-21; assoc. prof. and dean women, Albion Col., 21-25; prof. and head dept., Ala. Col., 26-27; Woman's Col., North Carolina, 27- Degenerate curve; a circle attached to a collapsible four-bar; Kronecker's relation among the minors in a symmetric determinant; Grassmann's tensor analysis.
- Barton, Dr. Henry A(shew)**, American Institute of Physics, 175 Fifth Ave., New York, N. Y. **Physics*. Pittsburgh, Pa., June 27, 98. B.S., Princeton, 19. E.E., 21. A.M., 24. Ph.D., 25. Engineer, Am. Tel. and Tel. Co., 21-23; nat. research

fellow physics, 25-27; Bartol Research Foundation fellow, 27-29; asst. prof., Cornell, 29-31; director, *Am. Inst. Physics*, 31- V. chairman, div. physical sciences, Nat. Research Council, 33- A.A. (sec'y, B, 32-); Physical Soc; Optical Soc; Acoustical Soc; Asn. Physics Teachers. Ionization of gases; emission of ions from surfaces; x-rays; the atomic nucleus.

Barton, Prof. J(oseph) Wesley, University of Idaho, Moscow, Idaho. *Psychology*. Greenville, Utah, 81. B.S. Utah, 15; Ph.D., Peabody Col, 23. Prof. psychol. and educ, Branch Nor. Sch, Utah, 09-13; instr, Utah, 13-15; prof. psychol, Idaho, 20- Psychol. Asn; Northwest Sci. Asn. The psychology of learning; effects of endocrine feeding on ability to learn.

Barton, Lela V(iola), 1086 N. Broadway, Yonkers, N. Y. *Plant physiology*. Farmington, Ark, Nov. 14, 01. A.B. Arkansas, 22; A.M. Columbia, 27. Teacher, high sch, Ark, 22-27; asst. plant physiologist, Boyce Thompson Inst, 28- Bot. Soc; Torrey Bot. Club. Seed germination.

Barton, Prof. O(rla) A(very), North Dakota Agricultural College, Fargo, N. Dak. *Poultry husbandry*. Mexico, N. Y, July 7, 76. B.S. N. Dak. Col, 25. Teacher, pub. schs, N. Y, 96-00; high sch, Iowa, 04-05; manual training and math, N. Dak. State Nor. Sch, Valley City, 05-09; county supt. schs, N. Dak, 09-18; state leader 4H junior clubs, N. Dak, 18-21; prof. *poultry husbandry*, N. Dak. Col, 21- Poultry Sci. Asn; Poultry Asn. (sec'y, N. Dak. branch, 20-); hon. mem. Inst. Poultry Indust; N. Dak. Poultry Asn. (sec'y, 29); N. Dak. Sci. Asn. Shrinkage in dressing turkeys; rate of growth and cost of growing turkeys; rations for laying hens.

Barton, Prof. Samuel G(oodwin), 33 N. 61st St, Philadelphia, Pa. *Astronomy*. Ivyland, Pa, Jan. 1, 82. A.B. Temple, 03; fellow, Pennsylvania, 05-06; Ph.D. 06. Fellow, Pennsylvania, 06-07; prof. math, Clarkson Tech, 07-11; asst. prof, Swarthmore Col, 11-13; instr. astron, Pennsylvania, 13-14, asst. prof, 14-31; assoc. prof, 31- Acting director, Flower Observatory, Pennsylvania, 20-28. Summers, asst. U. S. Naval Observatory, 07, 08, 11. Director, U. S. Shipping Board Navig. Sch, 17-19. A.A; Astron. Soc. Double stars; orbits of asteroids; star positions.

Barton, Prof. T(homas) F(rank), 809 S. Forest Ave, Carbondale, Ill. *Geography, Geology*. Dec. 3, 05. Ed.B. Ill. State Nor. Univ, 30; Ph.M. Wisconsin, 31; Ph.D. Nebraska, 35. Asst. geog, Wisconsin, 30-32; Nebraska, 32-34; assoc. prof. social science, Nebr. State Teachers Col, Kearney, 34-35; prof. geog. and geol. and chairman dept, South. Ill. State Nor. Univ, 35- Summers, prof. West. Tenn. State Teachers Col, 32, 33. A.A; Ill. Acad. Conservation.

Barton, Prof. Vola Price, 2500 Ken Oak Road, Station E, Baltimore, Md. *Physics*. Baltimore, Md, Dec. 19, 93. A.B. Goucher Col, 15; A.M. Mt. Holyoke Col, 17; Ph.D. Hopkins, 23. Asst. physics, Mt. Holyoke Col, 15-17; Goucher Col, 17-19, instr, 19-23, asst. prof, 23-26, assoc. prof, 26-31, prof, 31- chairmn. dept, 32- Summers, asst. Bur. Standards, 18, asst. physicist, 20, research assoc, 24, 25. A.A; Physical Soc; Optical Soc; Asn. Physica Teachers; Md. Acad. Soft x-rays; light sensitivity of cuprous oxide and selenium; molecular dimensions of celluloid; dependence of secondary structure in x-ray absorption on crystal form.

Bartoo, Prof. D(orr) R(aymond), E. Broad St, Cookeville, Tenn. *Botany*. Mills, Pa, Aug. 25, 88. B.S. Grove City Col, 23, M.S, 24; Ph.D. Chicago, 28. Prof. bot, Tenn. Polytech, 28- A.A; Tenn. Acad. Plant morphology; root structures of the Schizaceae, including *Schizaea rupestris*, *Schizaea pusilla* and *Lygodium palmatum*.

Bartow, Prof. Edward, State University of Iowa, Iowa City, Iowa. **Chemistry*. Glenham, N. Y, Jan. 12, 70. A.B. Williams Col, 92, Sc.D, 23; Ph.D. Göttingen, 95. Asst. chem, Williams Col, 92-94, instr, 95-97; Kansas, 97-99, assoc. prof, 99-05; prof, Kansas City Med. Col, 02-05; assoc. prof, Illinois, 05-06, prof, 06-20; prof. and head dept, Iowa, 20- Director, State Water Surv, Ill, 05-17, chief, 17-20; acting assoc. prof, Kansas, 97. Cmn. on Coal Mine Explosions, Kans; sec'y-treas, Lake Mich. Water Cmn; Cmn. on Standards of Water for Common Carriers in Interstate Commerce. Major, Sanit. C, 18, lieut. col, 19. A.A; Chem. Soc. (pres, 36); Soc. Chem. Indust; Chem. Eng. (director, 23-25, 36, chairman, sanit. div, 33); Soc. Munic. Eng; Eng. Educ; Pub. Health Asn; Water Works Asn. (v. pres, 20, pres, 21); Franklin Inst; Iowa Eng. Soc; Ind. Chem. Soc; Ill. Water Supply Asn. (sec'y-treas);

Iowa Acad. (v. pres, 34, pres, 35); Ill. Acad; Kans. Acad. (v. pres, 02, pres, 04); Soc. de Chim. indust; Int. Chem. Union (councilor, v. pres, 34-). Crystals of white arsenic; formation of amids in anhydrous ammonia; derivatives of m-isocymene; synthetical preparation of quinolin derivatives; Kansas petroleum; water supplies of southeastern Kansas; derivatives of m-ethyltoluene; water analysis and treatment; activated sludge method of sewage treatment; disposal of organic trade wastes.

Bartow, Dr. Virginia, University of Illinois, Urbana, Ill. *Chemistry*. Rochester, N. H, Dec. 20, 96. A.B, Vassar Col, 18; A.M. Illinois, 21, Ph.D, 23. Asst. chem, Goucher Col, 18-20; instr, Rockford Col, 23-24; Iowa, 24-25; Illinois, 25-31, assoc, 31- A.A; Chem. Soc; Hist. Sci. Soc; Ill. Asn. Chem. Teachers. Organic chemistry; chemical literature; history of chemistry.

Bartram, Edwin B(unting), Bushkill, Pa. *Botany*. Philadelphia, Pa, July 28, 78. A.A; Bot. Soc; Torrey Bot. Club; Sullivan Moss Soc. (pres, 30-); New Eng. Bot. Club; Phila. Bot. Club. Mosses.

Bartram, John G(reer), 1244 S. Wolcott St, Casper, Wyo. *Geology*. Lakeville, Conn, Nov. 27, 93. A.B, Williams Col, 14, 14-15; Hopkins, 15-16. Asst. geol, Williams Col, 14-15; asst. geologist, Md. Geol. Surv, 15; geologist, Roxana Petrol. Corp, 16-23; Midwest Ref. Co, 23-32; Stanolind Oil and Gas Co, 32- Fel. Geol. Soc; Asn. Petrol. Geol. Petroleum geology; geology of the Rocky Mountain area; oil fields in Oklahoma and Wyoming.

Bartsch, Dr. C(harles) E(dward), 116 Livingston Ave, New Brunswick, N. J. *Physical chemistry*. Neenah, Wis, May 2, 10. A.B, Lawrence Col, 31; Ph.D, Minnesota, 35. Instr. chem, Minnesota, 31-35; research chemist, E. I. du Pont de Nemours and Co, Parlin, N. J, 35- Chem. Soc. Thermodynamic properties of solutions; solubility of electrolytes in mixed solvents; nitrocellulose.

Bartsch, Dr. Paul, U. S. National Museum, Washington, D. C. **Biology*. Tuntschendorf, Germany, Aug. 14, 71. B.S. Iowa, 96, M.S, 99, Ph.D, 05; hon. Sc.D, George Washington, 37. Aid, div. mollusks, U. S. Nat. Museum, 96-05, asst. curator, 05-14, curator div. marine invertebrates, 14-20, div. mollusks, Cenozoic invertebrates, helminths and corals, 20-; prof. zool, George Washington, 99- Director histol. lab. and lecturer med. zool, sch. med, Howard, 01-30, prof. histol. and parasitol, 30-33. Walter Rathbone Bacon fellow, 28-30; assoc, Carnegie Institution. Assoc. ed, 'Osprey,' 00- In charge pearl mussel inquiry, Miss. Valley, Bur. Fisheries, 07; Smithsonian Inst. rep, Philippine exped, 07-09; 'Albatross' exped, Gulf Calif, 11, Bahamas, 12; director, Johnson-Smithsonian deep-sea exped, Puerto Rican Deep, 33; Smithsonian-Roebling explor. exped, 37. Del. Pan-Am. Sci. Cong, Washington, D. C, 16; Smithsonian del, Pan-Pacific Sci. Cong, Honolulu, 20. War gas experiments, U. S. Bur. Mines; lecturer, Y.M.C.A, U.S.A; biol. rep, U. S. Bur. Efficiency, 19. A.A; Malacol. Union (v. pres, 31, pres, 32); Wild Flower Preservation Soc. (pres, 20-24); Biol. Soc. Wash. (pres, 13-15); Wash. Acad. (v. pres, 13-15).

Bartunek, Dr. Paul F(ranklin), 305 Pearl St, Cambridge, Mass. *Physics*. St. Paul, Nebr, Nov. 7, 03. B.S. Nebraska, 30, M.S, 32; Ph.D, Michigan, 35. Asst. physics, Nebraska, 30-32; Michigan, 34-35; research asst, Mass. Inst. Tech, 35- Zeeman effect; infra-red spectroscopy; far ultra-violet spectroscopy.

Bartz, Dr. Fritz Willi, Reed College, Portland, Oregon. *Geography*. Thumar, Germany, April 8, 08. Berlin, 26-27; Vienna, 27; Kiel, 28-30; M.A, Bonn, 35, Ph.D, 34. Junior research assoc, Stanford, 35-37; instr. econ, Reed Col, 37- Animal geography; fisheries of the Pacific coast; human and economic geography.

Bartz, Dr. Quentin (Royal), University of California, Berkeley, Calif. *Chemistry*. Near Rockville, Mo, Jan. 25, 09. A.B, Tarkio Col, 30; M.S, Nebraska, 31; Ph.D, Illinois, 35. Research assoc, inst. exp. biol, California, 34- Chem. Soc. Rearrangement of ethers; hypophyseal hormones.

Barwick, Prof. Arthur R(ichardson), Catholic University of America, Washington, D. C. *Geology*. New York, N. Y, March 9, 96. B.S, Col. City of N. Y, 17; M.S, N. Y. Univ, 22, Ph.D, 26. Chief chemist, Secaw Chem. Co, 19-21; asst. instr. geol, N. Y. Univ, 21-24, instr, 24-29; assoc. prof, Catholic Univ, 29-, acting head dept, 35- Instr. Col. City of N. Y, 21-24. Summer, British-Am. Chem. Co, 17. U.S.A, 17-19. A.A; Min. and Metal. Eng; Geol. Soc. Wash. Paleontology.

- Bascom, Dr. F(lorence) R. 3, North Adams, Mass.** "Geology." Williamstown, Mass., July 14, 62. A.B., B.L., Wisconsin, 82; B.S., 84; A.M., 87; Ph.D., Hopkins, 93. Instr. geol. and petrog. Ohio State, 93-95; lecturer and assoc. prof. geol., *Bryn Mawr Col.*, 95-06, prof. 06-28, emer. prof., 28-; geol. asst., U. S. Geol. Surv., 96-01, assoc. geologist, 01-09, geologist, 09-32; retired. Div. geol. and geog. Nat. Research Council, 36. Assoc. ed. 'Am. Geologist' 96-05. Nat. Acad.; A.A.; Geol. Soc. (councilor, 24-27, v. pres. 30); Seismol. Soc.; Am. Geog. Soc.; Geophys. Union; Min. and Metal. Eng.; Geol. Soc. Wash.; Wash. Acad.; Geog. Soc. Phila.; Acad. Nat. Sci. Phila. Ancient lavas and the crystalline schists; geology of eastern Pennsylvania; petrography of the Neponset area, Boston basin; geologic folios of the Pennsylvania Piedmont province.
- Bascom, Dr. K(ellogg) F(inley), 426 Houston St., Manhattan, Kans.** *Micrology, Embryology.* Fargo, N. Dak., Sept. 22, 91. A.B., Fargo Col., 16; M.S., Chicago, 19, fellow, 20-22; Ph.D., 22; M.B., M.D., Minnesota, 29. Instr. biol., Allegheny Col., 19-20; asst. zool., Chicago, 20-22; asst. prof. biol. and acting head dept., Allegheny Col., 22-23; instr. anat., Pennsylvania, 23-24; assoc. prof., Med. Col. of Va., 24-28; *Northwest Clin.*, 30- Anan. Anat.; Am. Med. Assn. Interstitial cells of the gonads in cattle; structure and growth of the testis.
- Bashour, Dr. Joseph T(amir), 1950 Andrews Ave., New York, N. Y.** *Organic chemistry.* Hartford, Conn., Jan. 6, 06. B.S., Trinity Col. (Conn.), 27; Ph.D., N. Y. Univ., 34. Chemist, food and drug admin., U. S. Dept. Agr., 27-30; asst. chem., N. Y. Univ., 30-34; research chemist, dept. surg. col. physicians and surg., Columbia, 34-; instr. org. chem., evening eng. div., N. Y. Univ., 35- Chem. Soc. Condensation reactions in organic chemistry; bile acids.
- Basinger, A(limon) J(ay), Citrus Experiment Station, Riverside, Calif.** *Entomology.* Mahoning Co., Ohio, March 23, 86. A.B., Ohio State, 18, M.S., 20. Beet leaf-hopper investigations, Alameda Sugar Co., 20-21; asst. entomologist, State Dept. Agr., Calif., 21-23; asst. and assoc. entom., Citrus Exp. Sta., California, 23- Nat. Geog. Soc. exped., Valley of Ten Thousand Smokes and Mount Katmai, Alaska, 19. A.A.; Entom. Soc. Amer.; Am. Econ. Entom.; West. Soc. Nat. Scale; orange worms; mealybugs.
- Baskett, Dr. E(dgar) D(rane), 16 S. Tenth St., Columbia, Mo.** *Internal medicine.* McFall, Mo., Feb. 15, 91. A.B., Missouri, 15, A.M., 16; M.D., Hopkins, 19. Asst. physiol., Missouri, 15-16; instr., Iowa, 16-17; asst. med., Yale, 20-21; res. physician, Univ. Hoop, Minnesota, 21-22; instr. bacter., Missouri, 24-25; asst. prof. psychiat., 31-32; practising physician, 32- Am. Med. Assn. Hypothyroidism in young women.
- Basore, Prof. Miguel A(ntonio), University of Nebraska, Lincoln, Neb.** *Mathematics.* Mex., July 10, 00. A.B., California, 24; fellow, Chicago, 25-26, M.S., 26; fellow, Calif. Inst. Tech., 27-29, Ph.D., 29. Assoc. math., California at Los Angeles, 24-25, 26-27; research fellow, Calif. Inst. Tech., 29-30; asst. prof., Nebraska, 30-33; assoc. prof., 33- Math. Soc.; Math. Assn. Doubly periodic and pseudo-periodic functions and their applications to theory of numbers.
- Basore, Prof. C(leburne) A(nthon), 113 Mitchem Ave., Auburn, Ala.** *Chemical engineering.* Broadway, Va., May 13, 93. B.S., Ala. Polytech, 14, M.S., 15; Ph.D., Columbia, 29. Chemist, Tenn. Coal, Iron and R. R. Co., 15; research chemist, Koppers Co., 17-20; asst. prof. chem. and chem. eng., Ala. Polytech, 20-29, prof., 29- Chem. Eng.; Chem. Soc.; Ala. Acad. (v. pres., 34). Purification of ammonia still waste; quantitative separation of iron from nickel; fuel briquettes from southern pine sawdust; high grade decolorizing carbon made from cotton seed hulls after extraction of the xylein; black opaque and transparent glass from blast furnace slag; coal industry; metal wastes; utilization of low-grade manganese ores; hard surfacing of and removal of sulfur from iron and steel.
- Basquin, Dr. Otto H(anzen), 225 Kedzie St., Evanston, Ill.** "Physics." Dowa, Iowa, Jan. 30, 69. A.B., Ohio Wesleyan, 92; Harvard, 94; A.M., Northwestern, 95. Ph.D., 01, hon. Sc.D., 30. Assoc. prof. physics, Northwestern, 01-09, prof. applied mechanics, 09-26; engineer, Haskellite Mfg. Corp., Chicago, 26-, v. pres., 28-
- Bass, Prof. C(harles) C(assidy), 1406 Seventh St., New Orleans, La.** "Medicine." Carley, Miss., Jan. 29, 75. M.D., Tulane, 99; hon. Sc.D., Cincinnati, 30; LL.D., Duke, 37. Instr. med., sch. med., Tulane, 05-07, lab. clin. med., 07-09, director, 09-, prof. exp. med., 12-, dean, 22- Head, Tulane exped. study of malaria, 12- A.A.; Am. Med. Assn. (cmte. on sci. researches, 13); Am. Physicians; Soc. Bact.; Soc. Trop. Med. (pres., 17); Soc. Clin. Invest. (pres., 25); Micro. Soc.; South. Med. Ass. (pres., 26); New Orleans Acad. Hookworm; pellagra; typhoid fever; malaria; pyorrhea alveolaris; intestinal flora; laboratory methods; medical education.
- Bass, Prof. Frederic (Herbert), University of Minnesota, Minneapolis, Minn.** *Engineering.* Hyde Park, Mass., June 19, 75. B.S., Mass. Inst. Tech., 01. Eng. asst., Metropolitan Water Works, Mass., 96-99, 01; instr. and asst. prof. civil eng., Minnesota, 01-11, prof. munici. and sanit. eng., 11-, chairman dept. civil eng., 18- Engineer and director eng. div., State Board Health, Minn., 06-15, v. pres., 31-36, pres., 36-38; mem. board engineers, Minneapolis-St. Paul sanit. dist., Pub. Works Admin., 34- Civil Eng. (past pres., northwest. sect.); Eng. Educ.; Water Works Assn.
- Bass, Dr. Lawrence W(adde), Mellon Institute, Pittsburgh, Pa.** *Chemistry.* Streator, Ill., June 18, 98. Tulane; Ph.B., Yale, 19. Loomis fellow, 21-22, Ph.D., 22. Asst., Yale, 19-21, nat. research fellow chem., 22-23; Am. Field Service fellow and Int. Educ. Board fellow, Lille, Paris and Pasteur Inst., 23-25; asst., Rockefeller Inst., 25-27, assoc., 27-29; exec. asst., Mellon Inst., 29-31; asst. director research, Borden Co., 31-32, director, 32-36; asst. director, Mellon Inst., 36- Consulting ed. board, 'Chem. Industry.' A.A.; Chem. Soc.; Inst. Chem.; Chem. Eng.; Soc. Chem. Indust.; Econ. Assn.; Statist. Assn.; Pub. Health Assn.; Dairy Sci. Assn.; Pa. Acad.; Chemists' Club. Photochemistry; complex salts; nucleic acids; proteins; stereochemistry; electrolytic dissociation of organic compounds; dairy products; chemical economics; industrial research administration.
- Bass, N(athan) W(oold), U. S. Geological Survey, Washington, D. C.** *Geology.* Bourbon Co., Kans., June 8, 93. M.S., George Washington, 22, U. S. Geol. Surv., 17-29; geologist, Pure Oil Co., 29-31; U. S. Geol. Surv., 31- Assn. Petroil. Geol.; Geol. Soc. Wash.; Kans. Geol. Soc. Geology of coal, oil and gas deposits; Rocky Mountain and mid-continent regions; physiography and stratigraphy of Kansas.
- Bass, Dr. Shaffer L(inwood), Dow Chemical Co., Midland, Mich.** *Organic chemistry.* A.B., Butler, 26; Ph.D., Yale, 29. Asst., Yale, 28-29; research chemist, Dow Chem. Co., 29- Chem. Soc. Pharmaceutical chemicals; antiseptics; plasticizers; cellulose ethers.
- Basset, Dr. G(ardner) C(heney), Gettysburg College, Gettysburg, Pa.** *Psychology.* Boston, Mass., June 17, 73. A.B., Clark, 11; fellow, Hopkins, 12-13, Ph.D., 13; hon. A.M., Dartmouth Col., 22. Res. investigator psychol. and neur. sta. for exp. evolution, dept. genetics, Carnegie Institution, 13-14; prof. psychol., Pittsburgh, 14-19; asst. prof., Stanford, 19-20; prof., Reed Col., 20-21; vocational counselor, Dartmouth Col., 21-23; assoc. prof. and prof. psychol., Kentucky, 26-30; assoc. prof. philos., Gettysburg Col., 30- Psychol. Assn.; Eugenics Research Assn.; Neurology; eugenics.
- Bassett, Dr. Charles F(ernando), University of Kansas City, Kansas City, Mo.** *Geology.* Castile, N. Y., May 13, 00. A.B., Cornell, 22; A.M., Illinois, 24; Ph.D., Michigan, 33. Geologist, Lago Petrol. Corp., Maracaibo, Venezuela, 26-31; Mich. Conservation Dept., 33-35; teacher geol., Univ. Kansas City, 35- Field work, Ill. Geol. Surv. and Ky. Geol. Surv.; asst., Cornell and Illinois. Assn. Petrol. Geol.; Paleont. Soc.; Min. and Metal. Eng. The Devonian formations of the Alto Pass; Illinois Quadrangle; the stratigraphy and paleontology of the Dundee limestone of southeastern Michigan.
- Bassett, Dr. Lewis G(ordon), 33 Newman St., Mechanicville, N. Y.** *Analytical chemistry.* Mechanicville, N. Y., Sept. 22, 02. Ch.E., Rensselaer Polytech, 23, Ph.D., 35; A.M., Columbian, 31. Instr. math., Rensselaer Polytech, 23-24, chem. and chem. eng., 24- Chem. Soc. (v. chairman, east. N. Y. sect., 33-35). Analytical chemistry of tin and antimony; mineralogical analysis in connection with geochemical data.
- Bassett, Dr. Samuel H(ophkins), 260 Crittenden Blvd., Rochester, N. Y.** *Internal medicine.* Coleman's Station, N. Y., Dec. 7, 97. A.B., Cornell, 20, M.D., 24. Asst. anat. med. col., Cornell, 20-21; intern, Reconstruction Hosp., 24-25; intern, junior asst. physician and house physician, New York Hoop, 25-27; instr. med., sch. med. and dentistry, Rochester, 27-30, asst. prof., 30-, res. med. Strong Mem. Hosp., 27-28,

asst. physician, 28- Asst. res., Lane Hosp., 27. Mineral metabolism; water metabolism; Bright's disease; idiopathic steatorrhea.

Bassler, Dr. Harvey, American Museum of Natural History, New York, N. Y. *Geology, Paleontology*. Myerstown, Pa., April 21, 83. B.E. Albright Col., 03, M.S. 10; E.M. Lehigh, 08; Ph.D. Hopkins, 13. In charge dept. geol. and biol., Albright Col., 08-10; U. S. Geol. Surv. and Md. Geol. Surv., 11-20; Standard Oil Co. of N. J. S. Amer., 20-32; research assoc., Am. Museum Nat. Hist., 34- Chief geologist, Standard Oil Co. of Peru, 25-31. A.A.; Assn. Petrol. Geol.; Paleont. Soc.; Am. Geog. Soc.; Antiq. Soc.; Acad. Nat. Sci. Phila.; fel. Royal Geog. Soc.; Soc. des Américanistes de Paris; Soc. Geol. de Peru; Soc. Geog. de Lima. Geology and paleontology of eastern Peru; natural history of tropical America.

Bassler, Prof. R(ay) S(mith), U. S. National Museum, Washington, D. C. *"Geology"*. Philadelphia, Pa., July 22, 78. A.B. Cincinnati, 02; M.S. George Washington, 03, Ph.D., 05, Sc.D., 32. Asst. curator stratig. paleont., U. S. Nat. Museum, 03-07, curator, 07-29, head curator geol., 29-; asst. prof. and prof., George Washington, 04- A.A.; Geol. Soc. (v. pres., 31); Paleont. Soc. (sec'y, 10, pres., 31); Wash. Acad.; Geol. Soc. Wash.; for cor. Geol. Soc. London. Ordovician and Silurian stratigraphy and paleontology; fossil Bryozoa and Ostracoda.

Bassoe, Prof. Peter, 1031 Michigan Ave., Evanston, Ill. *Neurology*. Drammen, Norway, May 18, 71. B.S. Christiania, Norway, 92; M.D., Illinois, 97. *Clin. prof. nervous and mental diseases*, Rush Med. Col., Chicago. Neurologist, Presb. Hosp., Chicago, 07- A.A.; Neur. Asn.; Chicago Path. Soc.; Chicago Neur. Soc. Gigantism; leontiasis osca; blastomycosis; poliomyelitis; caisson disease; encephalitis.

Bast, Prof. T(héodore) H(ieronymus), University of Wisconsin, Madison, Wis. *Histology, Neurology*. Rockfield, Wis., Sept. 1, 90. A.B. Ripon Col., 12; Ph.D. Chicago, 21. Prof. biol., Piedmont Col., 15-19; asst. anat., Chicago, 19-20; asst. prof., Wisconsin, 20-25; assoc. prof., 25-33; prof., 33- A.A.; Soc. Exp. Biol.; Assn. Anat. Structure, function, growth and repair of bone cells; the maxillary sinus; traumatic muscle injuries; morphology of Nissl bodies, the thyroid gland and adrenal in extreme fatigue; osteogenesis and ossification centers of the otic capsule; the structure and function of the utriculo-endolymphatic valve; pitch localization in the ear by the Wever and Bray method.

Bastedo, Dr. Walter A(rthur), 33 E. 68th St., New York, N. Y. *Medicine*. Newmarket, Ont., Can., March 8, 73. Ph.G. Columbia, 94, M.D., 99, hon. Sc.D., 29, hon. Ph.M., 34. Curator, N. Y. Bot. Garden, 97-98; instr. pharmacol., Cornell, 01-03; from instr. to asst. prof. pharmacol. and therapeut., Columbia, 03-21, asst. prof. clin. med., 21- Asst. and attending physician, St. Luke's Hosp., 04-27, consulting physician, 27-; attending physician, City Hosp., 16-22; consulting physician, Staten Island Hosp. and St. Vincent's Hosp., 12- Lecturer, Torrey Bot. Club, 96-98. Mem. advisory council, Health Dept., New York, 14-18. V. pres., U. S. Pharmacopoeial Convention, 10-30, pres., 30- Mem. Int. Med. Cong.; Int. Physiol. Cong. Med. advisory board, 17-18. Am. Med. Asn. (chairman, pharmacol. and therapeut. sect., 19); Gastro-Enterol. Asn. (pres., 19); fel. Col. Physicians; hon. assoc. Proctologic Soc.; Assn. Mil. Surg.; N. Y. Acad. Med.; N. Y. Gastro-Enterol. Asn. (pres., 20-22). Action of drugs on the heart and the gastrointestinal tract, and in treating pneumonia; materia medica, pharmacology and therapeutics; Bastedo's test for chronic appendicitis; certified pharmacies.

Basterfield, Prof. Steward, University of Saskatchewan, Saskatoon, Sask., Can. *Chemistry, Pharmacology*. Halesowen, Eng., Oct. 22, 84. B.Sc., London, 08; Ph.D., Chicago, 20. Instr. chem., Saskatchewan, 14-19, prof. org. chem., 20- Fel. Can. Inst. Chem. (councilor, 28-31, v. pres., 29); Can. Chem. Assn.; fel. Royal Soc. Can.; British Asn. Iso-ureas and urethanes.

Bastin, Prof. Edson S(underland), University of Chicago, Chicago, Ill. *"Geology"*. Chicago, Ill., Dec. 10, 78. A.B. Michigan, 02; M.S., Chicago, 03, Ph.D., 09. Geologist, U. S. Geol. Surv., 05-20; prof. econ. geol., Chicago, 20-, chairman dept. geol. and paleont., 22- Board Conservation and Natural Resources, Ill.; chairman, geol. and geog. div., Nat. Research Council, 34-37, mem. exec. cmt., 37- A.A. (v. pres., E. 30); Geol. Soc. (v. pres., 35); Soc. Econ. Geol. (pres., 33); Min. and Metal. Eng. Chemical composition as a criterion in identifying metamorphosed sediments; geology of Rockland and Eastport

quadrangles, Maine; origin of graphite deposits; genesis of the ores of Tonopah, Nevada; silver ores of Cobalt and South Lorraine, Ontario; metallic minerals as precipitants of gold and silver; economic geology of Gilpin County, Colorado; geology of Braden Copper Mine, Chili; sulfate reducing bacteria in oil field waters; fluor spar deposits of Illinois; criteria of mineral paragenesis.

Bastress, Prof. Alfred W(illiams), College, Alaska. *Chemistry*. Pittsburgh, Pa., July 29, 00. B.S. Pa. State Col., 22, M.S., 27; Ph.D., Yale, 35. Instr., American Univ., Beirut, 22-25; asst., Yale, 27-28; prof. chem., Alaska Agr. Col., 28-35, *Alaska*, 35-Chem. Soc. Derivatives of thiophen.

Basye, Dr. R(obert) E(ugene), 5529 Brooklyn, Kansas City, Mo. *Mathematics*. Kansas City, Mo., Sept. 25, 08. A.B., Missouri, 29; A.M., Princeton, 31; Ph.D., Texas, 33. Instr. math., Texas, 32-36. Math. Soc. Point set theory.

Batchelder, Charles Foster, Peterborough, N. H. *Ornithology*. Cambridge, Mass., July 20, 56. A.B., Harvard, 78, C.E., 82. Assoc. mammal. and ornith., museum comp. zool., Harvard. A.A.; fel. Ornith. Union (past pres); Soc. Mammal; fel. Am. Acad.

Batchelder, Dr. C(harles) H(oward), 56 Hillhouse Ave., New Haven, Conn. *Entomology*. Amesbury, Mass., 91. B.S. New Hampshire, 13, M.S., 15; Ph.D., Cornell, 25. Instr., New Hampshire, 14-17; Maine, 19, assoc. prof., 20-25, prof., 26; assoc. entomologist, bur. entom. and plant quarantine, U. S. Dept. Agr., 27- Sci. asst., bur. entom., U. S. Dept. Agr., 20. A.A.; Entom. Soc.; Assn. Econ. Entom. Ecology; morphology; migration of Mollusca; the life-history of Ostrea virginica; distribution of the Colorado potato beetle; arsenic ingestion in insects.

Batchelder, Prof. Esther L(ord), Rhode Island State College, Kingston, R. I. *Chemistry*. Hartford, Conn., May 19, 97. B.S. Conn. Col., 19; A.M., Columbia, 25, Ph.D., 29. Chemist, East Malleable Iron Co., 19-20; Henry Souther Eng. Co., 20-24; asst. chem., Columbia, 24-25, food chem., 25-29; nutrition specialist, "Delineator," 29-32; assoc. prof. nutrition, State Col. Wash., 32-34; Arizona, 34-36; head dept. home econ., R. I. State Col., 36- Chem. Soc.; Inst. Nutrition; Home Econ. Assn.; Dietetic Assn. Nutrition; vitamins A and C.

Batchelder, Prof. Paul M(ason), 808 W. 22nd St., Austin, Texas. *Mathematics*. Portsmouth, N. H., Jan. 10, 86. A.B., Dartmouth Col., 08; A.M., Princeton, 10; Ph.D., Harvard, 16. Instr. math., Northwestern, 13-15; Texas, 16-23, adj. prof., 23-30, assoc. prof., 30- Acting asst. prof., Brown, 24-25. A.A.; Math. Soc.; Math. Assn. Difference equations.

Batcheller, Prof. J(ames) H(ervey), Box 307, Point Lookout, Corvallis, Oregon. *Mining engineering*. Boston, Mass., Dec. 10, 78. B.S. Mass. Inst. Tech., 00. Mining engineer and metallurgist; prof. mining eng., sch. eng., Oregon State Col. Sec'y, State Mining Board, Oregon, 33- Min. and Metal. Eng. (chairman, Oregon sect., 32-34, sec'y-treas., 34-37); Min. and Metal. Soc. (director, 37).

Batchelor, Prof. Harold W(inthrop), Ohio Agricultural Experiment Station, Wooster, Ohio. *Soil biology*. Victoria, Kans., June 30, 97. B.S. Kans. State Col., 22. Asst. bacteriologist, Idaho, 22-24; asst., Wisconsin, 24-26; asst. agronomist, Ohio Exp. Sta., 26-27, assoc. agronomist, 27-; asst. prof. agron., Ohio State, 29- Soil Sci. Soc.; Soc. Agron.; Soc. Bact.; Int. Soc. Soil Sci. Biochemical activities of forest and alkali soils; nitrogen fixing bacteria; physical factors in soils affecting the enumeration of bacteria.

Batchelor, H(arry) D(avid), National Carbon Co., Cleveland, Ohio. *Chemistry*. Garland, Maine, Aug. 13, 80. B.S. New Hampshire Col., 03. Asst. chemist, Exp. Sta., New Hampshire Col., 03; chem. engineer, New Eng. Gas and Coke Co., Everett, Mass., 04-05; chief chemist and chem. engineer, by-product coke dept., Carnegie Steel Co., Farrell, Pa., 05-10; chem. engineer, asst. director and director research and develop. labs., Nat. Carbon Co., Cleveland, 10-19; Union Carbide and Carbon Research Labs., N. Y., 20-25; director research, Nat. Carbon Co., 25- A.A.; Chem. Soc. (chairman, indust. sect., 12, Cleveland sect., 19); Chem. Eng.; Chemists' Club. Gas mask absorbent carbon.

Batchelor, Prof. L(eon) D(exter), Citrus Experiment Station, Riverside, Calif. *Agriculture*. Upton, Mass., May 8, 84. B.S. New Hampshire Col., 07; Ph.D., Cornell, 11. Instr. hort., Cornell, 07-10; horticulturist, Utah Col., 10-15; prof. plant

breeding, *California*, 15-19; orchard management and director *Citrus Exp. Sta.* and grad. sch. trop. agr. and horticulturist, *Exp. Sta.* Mem. Utah Agr. Cmn, 10-15. A.A.; Soc. Hort. Sci. Orchard management; variation and yield of fruit trees; field trials; irrigation.

Bateman, Prof. Alan M(arie), Yale University, New Haven, Conn., *⁵*Geology*. Kingston, Ont., Can. B.A., B.S., Queen's (Can), 10; Ph.D. Yale, 13. Mining and field geologist, 05-10; asst. geologist, Geol. Surv. Can, 11-12; geologist, secondary enrichment investigation, 13-15; instr. geol., Yale, 15-16, asst. prof., 16-21; assoc. prof., 22-25; prof. econ. geol., 25- Consulting geologist, Kennecott Copper Corp. Ed., *Jour. Econ. Geol.*; *Am. Jour. Sci.* Geol. Soc.; Soc. Econ. Geol. (v. pres., 30); Asn. Petrol. Geol.; Min. and Metal. Eng.; Min. and Metal. Soc.; Wash. Acad. Economic geology; ore deposits; ore formation; field investigations, Alaska, Canada, United States, Mexico, Africa and Europe.

Bateman, Dr. George Monroe, Tempe, Ariz. *Chemistry*. Bloomington, Idaho, Sept. 12, 97. B.S., Utah Col, 21; M.S., Cornell, 26, Ph.D., 27. Instr. chem., Utah Col, 21; high sch., Idaho, 21-22, sch. supt., 22-24; instr. chem., Cornell, 24-27; head dept. science, Ariz. State Teachers Col, Tempe, 27- A.A.; Chem. Soc. Apparent viscosity of milk as influenced by physical factors; consistency of cream and ice cream mixtures; trends in science teaching.

Bateman, Prof. H(arry), California Institute of Technology, Pasadena, Calif. *⁸*Mathematics*. Manchester, Eng, May 29, 82. Cambridge, 00-05, fellow, 05-11; Göttingen and Paris, 05-06; Johnston scholar, Hopkins, 12-15, Ph.D., 13. Lecturer, Liverpool, 06-07; reader math. physics, Manchester, 07-10; lecturer math, Bryn Mawr Col, 10-12; Hopkins, 15-17; prof. math., physics and aeronautics, Calif. Inst. Tech., 17-Nat. Acad.; Math. Soc. (councilor, 24-27, v. pres., 35-); Math. Asn.; Physical Soc.; Acoustical Soc.; Philos. Soc.; Astron. Soc. Pacific; British Asn.; Royal Soc. London; London Math. Soc. Geometry; mathematical physics; definite integrals; partial differential and integral equations; functions of Legendre and Bessel; electromagnetism; theory of relativity; dynamical meteorology; probability; seismology; sound; hydrodynamics; aeronautics.

Bateman, Dr. J(esse) Fremont, Columbus State Hospital, Columbus, Ohio. *Neurology, Psychiatry*. Columbus, Ohio, Dec. 28, 97. A.B., Ohio (Athens), 22; A.M., Cornell, 24; M.B., Cincinnati, 27, M.D., 28. Instr. biol., Ohio (Athens), 20-22; neur., Cornell, 22-24; anat., Cincinnati, 24-26, lecturer clin. psychiat., 29-35; clinician neuropsychiat., Cincinnati Gen. Hosp., 29-35; clin. director, Longview Hosp., 30-36; director mental hygiene clinic, Mercy Hosp., Hamilton, 30-; asst. attending neurologist, Christ Hosp., Cincinnati, 32-; supt., Columbus State Hosp., 36- Lecturer, Miami (Ohio); prof., Ohio State. Summers, assoc. prof., Ohio (Athens), 22, 23. Trustee, St. Edmund's Home for Boys, Cincinnati. Nat. Cmt. Mental Hygiene. Lieut., U.S.A., 17-18. Am. Med. Asn.; Psychiat. Asn.; Ohio State Med. Asn. (sec'y, sect. nervous and mental diseases, 31-32, chairman, 32-33); Cent. Neuropsychiat. Asn.; Asn. Ass't. Physicians of Ohio (pres., 30); Columbus Neuropsychiat. Soc. Organic neurology; the anatomy and physiology of the cerebrospinal fluid system; meningitis; the organic phase of psychiatry; the organic schizophrenic reaction types; effects of various endogenous and exogenous toxins on the central nervous system; personality changes associated with organic conditions of the central nervous system.

Bateman, Dr. R(obert) L(ake), Carbide and Carbon Chemicals Corp, 30 E. 42nd St, New York, N. Y. *Chemistry*. Port Norris, N. J. Oct. 19, 09. B.S., Ursinus Col, 31; M.S., Pennsylvania, 33, Ph.D., 35. Asst. instr. chem., Pennsylvania, 31-35; fellow org. synthesis, Mellon Inst, 35-37; tech. div., Carbide and Carbon Chem. Corp, 37- Chem. Soc. Medicinals; synthesis of aliphatic organic chemicals.

Bateman, Prof. W(illiam) G(eorge), University of Montana, Missoula, Mont. *Chemistry*. Salt Lake City, Utah, April 1, 83. A.B., Stanford, 07, A.M., 09; Ph.D., Yale, 16. Asst. and instr. chem., Stanford, 05-10; prof., Pei Yang Univ. Tientsin, 10-12; Montana, 12- Chem. Soc. Toxicity of thallium salt; copper in plants and soils of smelter regions; salts of the halogen acids; development of speech in children; digestibility of proteins.

Bates, Prof. William Dowell, 122 Frederick Ave, East Lansing, Mich. *Mathematics, Statistics*. Ft. Worth, Texas, 92.

A.B., Baylor, 14; A.M., Texas, 18; Ph.D., Michigan, 29. Head dept. math. and science, schs, Texas, 14-18; math, N. Texas Junior Agr. and Mech. Col, 19-22; instr. Agr. and Mech. Col. Texas, 23-24; head dept. Bessie Tift Col, 24-27; assoc. prof., Tennessee, 27-28; instr. Michigan, 28-30, asst. prof. math. and statist., 31-36; assoc. prof., Mich. State Col, 37- Math. Soc. Math. Asn.; Inst. Statist.; Statist. Asn.; Mich. Acad. Probability; biometry.

Bates, Prof. A(bram) Allan, 2208 Bellfield Ave, Cleveland, Ohio. *Metallurgy*. Elyria, Ohio, July 28, 01. A.B., Ohio Wesleyan, 23; B.S., Case, 25, M.S., 29; Am. Field Service fellow, univs, France, 30-31; D.Sc., Nancy, 31. Research metallurgist, Nat. Malleable and Steel Castings Co, 25-26; instr. metal., Case, 27-30, prof., 31- Metal. engineer, Rotary Elec. Steel Co., Detroit, Mich, 33-; manager chem. and metal. research, Westinghouse Elec. and Mfg. Co., Pittsburgh. Mem. program cmt, Int. Cong. Min. and Metal. Eng., Liège, Belgium, 30. Soc. Metals; Min. and Metal. Eng; Eng. Educ. Physical metallurgy and metallography of ferrous alloys; fundamentals of ferrous metallurgy.

Bates, C(arlos) G(lazier), U. S. Forest Service, St. Paul, Minn. *Forestry*. Topeka, Kans, Oct. 14, 85. B.S., Nebraska, 07. Forest asst., forest examiner and silviculturist, U. S. Forest Service, 07-35, research, *Lake States Forest Exp. Sta.*, 28- Assoc. ed., *Jour. Forestry*, 25-31. Soc. Foresters. Silviculture; ecology; physiology; forest influences.

Bates, Clifford W(hitman), 403 N. Narberth Ave, Narberth, Pa. *Electrical engineering*. Cleveland, Ohio, March 9, 84. Ph.B., Yale, 05, M.S., 08, E.E., 15. Instr. physics, applied elec. and elec. eng., Sheffield Sci. Sch., Yale, 08-16; special investigator and research engineer, Phila. Elec. Co, 16-29; research dept, Leeds and Northrup Co, 29-31; museum staff, Franklin Inst, 32-34; engineer, 35; advertising dept., *Leeds and Northrup Co.*, 36- Jury of awards, Sesqui-Centennial Expos. Elec. Eng; assoc. Radio Eng; Soc. Mil. Eng; Franklin Inst. Electrical engineering in the laboratory.

Bates, Prof. C(linton) O(wen), Coe College, Cedar Rapids, Iowa. *Chemistry*. Lincoln, Ark, June 4, 58. A.B., Arkansas, 83; Michigan, 85-86; Chicago, 94; hon. Ph.D., Coe Col, 94. Teacher, Male Sem., Okla, 83-85; high sch., Mich, 86-89; prof. chem., Coe Col, 89-24, emer. prof., 24- City chemist, Cedar Rapids, 24. Water Works Asn; Iowa Acad. (pres., 06). Clay for paving brick; water for engines; physiological effects of sulfur dioxide on the human system; market milk; city water supply; sewage analysis.

Bates, Frederick (John), National Bureau of Standards, Washington, D. C. *Physical chemistry*. Marysville, Kans, Jan. 2, 77. B.S., Kansas, 00; A.M., Nebraska, 02. Lab. asst., Bur. Standards, 03-08, chief magneto optical and carbohydrate sect., 03-, physicist, 08-24, senior physicist, 24-28, prin. physicist, 28- Prin. physicist and supervisor, govt. sugar labs, customs service, U. S. Treasury Dept, special agent, 05. Mem. Int. Cmn. for Uniform Methods Sugar Analysis, pres., 32-; Int. Union Pure and Applied Chem. Chem. Soc. (sec'y, sugar div, 20-27, chairman, 28); Physical Soc; Optical Soc; Philos. Soc. Wash; Int. Soc. Sugar Cane Technol. Natural and magnetic rotary polarization; sensitive strip polarizing system; quartz wedge polariscope with adjustable sensibility; cadmium-vapor arc lamp; no. Baumé scale; inversion of quartz; new point on the thermometric scale; electrolytic method for calcium gluconate.

Bates, H(arry) Clifford, Corning Glass Works, Corning, N. Y. *Physics*. Glanford, Ont., Can, 93. B.A., Toronto, 20, Nat. Research Council Can. student, 22-23, M.A., 23. Instr. De Veaux Acad, Niagara Falls, 20-21; demonstrator physics, Toronto, 21-22; instr., Lafayette Col, 23-24; asst., Toronto, 24-25; physical lab, Corning Glass Works, 25-36, chief fiber products lab, 36- Ceramic Soc; Chem. Eng. Compressibility of solids; thermal conductivity of pyrex; glass wool as insulator for refrigeration; thermal expansion of glasses; spectral transmission, especially in ultra-violet.

Bates, Harry H(oward), 309 Shaw Road, Ridley Park, Pa. *Mechanical engineering*. Middleway, W. Va, Aug. 10, 89. B.S., Va. Polytech, 13, M.E., 14. Test dept, Norfolk and West. Ry. Co, 14-17; asst. chief engineer, Westinghouse Elec. and Mfg. Co, 19-26, works engineer in charge construction and maintenance, 26- Mem. board managers, Taylor Hosp; director, Park Cmn, Ridley Park. Lieut., Ry. Artl, 17-19. Mech. Eng. Combustion of coal; coal-burning equipment; industrial use of x-rays; management of plant maintenance work.

- Bates, Dr. J(ames) C(harles)**, Kansas State College, Manhattan, Kans. *Botany*. Fairdale, Kans., Jan. 24, 98. A.B., Kansas, 27, A.M., 33; Ph.D., 35. Instr. biol., Caney Junior Col., Ky., 28-29; asst. instr. bot., Kansas, 30-35; instr., Kans. State Col., 35—Soc. Plant Physiol. Plant anatomy and physiology.
- Bates, Prof. John R(eginald)**, 715 Forest Ave., Ann Arbor, Mich. *Physical chemistry*. St. Ann's Bay, Jamaica, B.W.I., Dec. 17, 02. A.B., Amherst Col., 24; A.M., Princeton, 25; Ph.D., 27. Nat. research fellow, Hopkins, 27-28; Rockefeller Foundation Int. Educ. Board fellow, Berlin, 28-29; research assoc. physical chem., Princeton, 29-32; asst. prof. gen. and physical chem., Michigan, 32-35; assoc. prof., 35—Assoc. ed., 'Jour. Chem. Physics,' 34-36. Cmt. on deuterium research, Nat. Research Council, 34—Chem. Soc. Photochemistry; photo-sensitization by mercury; kinetics; effective cross section in second kind collisions; molecular properties and the bonds between atoms; mechanism of reactions and reactions of radicals; photo-oxidations; deuterium; properties of isotopic compounds; reactions of hydrogen and deuterium atoms.
- Bates, Dr. Marston**, Harvard University, Cambridge, Mass. *Entomology*. Grand Rapids, Mich., July 23, 00. B.S. Florida, 27; A.M., Harvard, 33; Ph.D., 34. Entomologist and director, Servicio Tecnico de Cooperacion Agr., United Fruit Co., 28-31; Sheldon traveling fellow, Harvard, 34-35; research asst., museum comp. zool., 35—Entomologist, int. health div., Rockefeller Foundation, 35-37. Entom. Soc. Amer. Tropical biology; taxonomy and zoogeography of the Lepidoptera and Diptera, especially the Trypetidae.
- Bates, Prof. O(scar) Kenneth**, 46 E. Main St., Canton, N.Y. *Physics, Mathematics*. Dorchester, Mass., Dec. 23, 00. B.S. Mass. Inst. Tech., 21; M.S., 22; Sc.D., 32. Instr. physics, Mass. Inst. Tech., 21-33; prof. and head dept. math., St. Lawrence, 33—Consulting physicist. Temperature, thermal conductivity and composition data of liquids; heat and temperature measurements.
- Bates, P(haon) H(lborn)**, National Bureau of Standards, Washington, D.C. *Chemistry*. Sipesville, Pa., Aug. 1, 79. A.B., Cent. High Sch., Phila., 98; B.S., Pennsylvania, 02. Asst. chemist, Pa. R.R., 02-06; struct. materials chemist, U. S. Geol. Surv., 06-10; chemist, Bur. Standards, 10—A.A.; Chem. Soc.; Ceramic Soc.; Soc. Test. Mat. (exec. cmt., 37—); Concrete Inst. Hydraulic properties of silica-lime-alumina compounds; Portland cement; concrete.
- Bates, Dr. Philip K(night)**, United Drug Co., Boston, Mass. *Bacteriology*. Cohasset, Mass., July 2, 02. B.S. Mass. Inst. Tech., 24; Ph.D., 29. Head dept. bacter., Frigidaire Corp., Dayton, Ohio, 28-32; research assoc., Mass. Inst. Tech., 33-35; bacteriologist, United Drug Co., 35—Pub. Health Asn.; Soc. Bact.; Chem. Soc. Bacteriology of frozen foods and of refrigeration of foods; bacteriology of fibers; antisepsics.
- Bates, Prof. Robert L(ee)**, Virginia Military Institute, Lexington, Va. *Psychology*. Middleway, W. Va., Nov. 7, 86. LL.B., West Virginia, 12; A.B., 16; A.M., Hopkins, 20, fellow, 20-21; Ph.D., 24. Asst. prof. psychol., Va. Mil. Inst., 21-22; assoc. prof., 22-25; prof., 25—Summers, prof., Duke, 26-29; 30; Arkansas, 29; Col. of William and Mary, 31, 32; Virginia, 33. Lieut. Sanit. C., 18-20; capt., O.R.C., 24. A.A.; Psychol. Asn.; S. Soc. Philos. and Psychol. (counselor, 28-30). Psychological problems of tobacco smoking; intelligence characteristics; personnel studies.
- Bates, Dr. Robert W(esley)**, Carnegie Institution, Cold Spring Harbor, N.Y. *Physiological chemistry*. Columbia, Iowa, Jan. 31, 04. A.B., Simpson Col., 25; Ph.D., Chicago, 31. Asst. prof. chem., Simpson Col., 26-27; physiol. chemist, E. R. Squibb and Sons, 27-29; research assoc., sta. for exp. evolution, Carnegie Institution, 31-32; investigator, 33—A.A.; Chem. Soc.; Soc. Biol. Chem.; Soc. Exp. Biol.; Asn. Study Int. Secretions. Internal secretions; enzymes.
- Bates, Prof. Stuart J(effery)**, California Institute of Technology, Pasadena, Calif. *Physical chemistry*. Toronto, Ont., Can., May 9, 87. B.A., McMaster, 07; M.A., 09; fellow, Illinois, 10-12; Ph.D., 12. Asst., McMaster, 09-10; research assoc. physical chem., Illinois, 12-13; instr. anal. chem., 13-14; prof. physical chem., Calif. Inst. Tech., 14—Asst., Bur. Standards, 13; research assoc., Mass. Inst. Tech., 22-23. A.A.; Chem. Soc.; Faraday Soc.; London Chem. Soc. Value of the faraday; iodin coulometer; thermodynamic properties of solution.
- Bathurst, Prof. J(ames) E(lmer)**, 955 Ninth Court, W., Birmingham, Ala. *Psychology, Education*. Alton, Kans., June 10, 98. A.B., McPherson Col., 22; A.M., Iowa, 23, fellow, 25; Ph.D., 26. Instr. educ. and dean men, Cent. Acad. and Col., Kans., 20-22; prof. and pres., Wessington Springs Junior Col., 23-25; prof., Dakota Wesleyan, 26-27; research assoc., Bur. Pub. Personnel Admin., 27-29; prof. psychol. and educ. and head dept., Birmingham-Southern Col., 29—Psychol. Asn.; Soc. Study Educ.; Soc. Col. Teachers Educ.; S. Soc. Philos. and Psychol. Testing; personnel; vocational guidance; integrity.
- Batjer, Dr. L(awrence) P.** Agricultural Experiment Station, Kearneysville, W. Va. *Horticulture*. Abilene, Texas, June 6, 07. B.S. Agr. and Mech. Col. Texas, 28; M.S. Mich. State Col., 30; Ph.D., Cornell, 33. Instr., Cornell, 30-33; research and exten. horticulturist, 33-35; asst. horticulturist, Exp. Sta., West Virginia, 35, exten. horticulturist, agr. exten., 35—Soc. Hort. Sci. Orchard soil; morphology and chemistry of pear fruits; rootstock.
- Batson, Dr. Oscar V(ivian)**, University of Pennsylvania Graduate School of Medicine, Philadelphia, Pa. *Anatomy*. Sedalia, Mo., Nov. 10, 94. A.B., Missouri, 16; A.M., 18; M.D., St. Louis, 20. Asst. anat., Missouri, 15-17; instr. path., St. Louis, 19-20; anat., Wisconsin, 20-21; asst. prof., Cincinnati, 21-24; assoc. prof., 24-27; prof., 27-28; grad. sch. med., Pennsylvania, 28—instr. otolaryngol., sch. med., 36—Prof., Ohio Col. Dental Surg., 23-26. A.A.; Asn. Anat.; Acad. Ophthal. and Otolaryngol.; fel. Am. Med. Asn.; Radiol. Soc. N. Amer.; Col. Physicians Phila.; Soc. d'Anthrop. de Paris. Histogenesis of sympathetic trunks; growth of bone; growth and architecture of fibrous tissue; synovial sheath; annular ligament; inter-process ligaments; roentgenographic anatomy; intramuscular injections; elastic tissue; diploic circulation; Paget's disease; cardiac veins; clinical applied anatomy.
- Batson, Prof. William H(oward)**, University of South Dakota, Vermilion, S. Dak. *Psychology*. Martinsville, Ohio, Sept. 18, 81. A.B., Antioch Col., 07; Ph.D., Michigan, 15. Sch. supt., Ohio, 07-11; prof. educ., Texas Christian, 13-17; prof. educ. and director training sch., Southwest. State Teachers Col., Okla., 17-18; prof. educ., South Dakota, 19—director sch. educ. and summer session, 28—Psychol. Asn.; S. Dak. Educ. Asn. (pres., 30). Acquisition of skill.
- Battle, Prof. Helen I(rene)**, 132 Mamelon St., London, Ont., Can. *Zoology*. London, Ont., Aug. 31, 03. B.A., Western Ontario, 23; M.A., 24; Ph.D., Toronto, 28. Demonstrator zool., Western Ontario, 23-24; instr., 24-27, 28-29; asst. prof., 29-33; assoc. prof., 33—A.A. Marine biology; embryology of teleosts; lethal temperatures and temperature coefficients for duration of life; spawning periodicity of teleosts and mollusks; teleostean digestion.
- Bauder, Prof. Arthur R(ussell)**, University of Alabama, University, Ala. *Electricity, Physics*. Cleveland, Ohio, June 23, 65. B.S., Case, 89; E.E., 18; A.M., Columbia, 96. Instr. math., Lafayette Col., 97-99; physics, Pennsylvania, 99-00; prof. physics and eng. and dean, J. B. Stetson, 03-06; elec. engineer, Boyd Elec. Co., New Haven, 06-07; asst. elec. engineer, New Haven, R. R., 07-18; prof. physics and elec. eng. and head dept. elec. eng., Alabama, 18—Measurement of the electrical resistance of all substances found in the earth's surface except compounds of the rare elements.
- Baudisch, Dr. Oskar**, 15 Spring St., Saratoga Springs, N.Y. *Chemistry*. Maffersdorf, Austria, June 3, 81. B.A., Zurich, 03; Ph.D., 04. Asst., Zurich, 05-06; research assoc., Owens Col. (Eng.), 06-07; privat-dozent, Zurich, 09-14; research director, Strahlenforschungs Inst., Hamburg, 15-19; research assoc., Yale, 21-23; assoc., Rockefeller Inst., 23-29; research assoc. org. chem., Yale, 29-34; research director, N.Y. State Research Inst. *Balneol. and Hydrotherapy*, 34—Summers, Bologna, Italy, 12; Mosso Inst., Monte Rosa, 13; Stockholm Biochem. Inst., 28, 34. Scheele medal, Stockholm Chem. Soc., 34. A.A.; Chem. Soc.; Harvey Soc.; Soc. Biol. Chem.; Deuts. Chem. Gesell. Diazo and nitroso compounds; chemistry of complex salts; photochemistry; catalytic oxidation; magneto chemistry; geochemistry.
- Bauer, Prof. C(harles) W.**, 5102 Capitol Ave., Omaha, Nebr. *Organic chemistry*. Hastings, Nebr., June 6, 99. Ph.G., Ph.C., Valparaiso, 21; Idaho, 23; B.S., Creighton, 27, A.M., 29; Chicago, 30; Iowa, 33. Purity chemist, Utah-Idaho Sugar Co., 21-22; anal. chemist, U. S. Steel Corp., Gary, Ind., 22; head dept. science, schs., Idaho, 22-24; prof. org. chem., Creighton,

24- Mem. med. research exped. among Eskimos, Lower Yukon and Bering Sea, 34. Chem. Soc; Pharmaceut. Asn; Nebr. Acad. Relationship of chemical structure to pharmacological action; borax on glycerine; pharmacological action of secondary alcohols; enzymes; hormones.

Bauer, Dr. C(lude) Max, Yellowstone Park, Wyo. *Geology*. Bristol, Ind, April 5, 86. B.S. Chicago, 08; Ph.D. Colorado, 32. Teacher and prin. high schs, Colo, 09-11; asst. geologist, U. S. Geol. Surv, 11-16; geologist, Empire Gas and Fuel Co, 16-18; consulting geologist, Bauer and Clark, Okla, 19-20; geologist, Midwest Ref. Co, 21-22; chief geologist, Midnorth. Oil Co, Mont, 22-25; Midwest Explor. Co, Texas, 25-29; instr. geol. Colorado, and consulting geologist, Midwest Ref. Co, 29-32; head naturalist, Yellowstone Nat. Park, Nat. Park Service, 32- A.A.; fel. Geol. Soc; Assn. Petrol. Geol; Colo-Wyo. Acad. Stratigraphy; coal and oil deposits; geodynamics.

Bauer, Prof. Edward L(ouis), 345 S. 19th St, Philadelphia, Pa. *Medicine*. Philadelphia, Pa, Dec. 9, 90. M.D. Jefferson Med. Col, 14. Prof. diseases of children, Jefferson Med. Col, 26- Physician, Lutheran Orphanage, 15-34; immunologist, Dept. Pub. Health, Phila, 18-32; consulting pediatrician, Germantown Hosp, 21-, Mem. Hosp, 25-, St. Christopher's Hosp. for Children, 35-; pediatrician, Phila. Hosp. for Contagious Diseases, 20-, Girard Col, 34-; asst. visiting pediatrician, Phila. Gen. Hosp, 24-26, Children's Hosp. of M. J. Drexel Home, 18-26. Lecturer, Pennsylvania. Mem. Phila. Milk Cmn. Am. Med. Asn; Acad. Pediat; Phila. Pediat. Soc. (pres, 25-27); Col. Physicians Phila; hon. fel. Pediat. Soc. Uruguay. Diphtheria; scarlet fever; erysipelas; rheumatic infections; heart disease; chorea; celiac disease; functional nervous diseases; appendicitis; encephalitis; care of the newborn.

Bauer, Prof. Frank S(tanley), 944 Lincoln Place, Boulder, Colo. *Mechanical engineering*. Blue Mound, Ill, Nov. 27, 88. B.S. Illinois, 11; M.E. Colorado, 15. Instr. mech. eng. Colorado, 11-14; asst. prof, 14-19; assoc. prof, 19-22; prof, 22-36, prof. eng. drawing and machine design and head dept, 36-Mech. Eng; Eng. Educ. Machine design.

Bauer, Prof. F(rederick) C(harles), University of Illinois, Urbana, Ill. *Soils*. Blue Mound, Ill, May 7, 86. B.S. Illinois, 09. M.S. 18; Ph.D. Wisconsin, 20. Instr. high sch, Idaho, 09-11; soils, Illinois, 11-18, in charge soils exten, 20-32, chief exp. fields, 23- prof. soil fertility, 32- A.A; Soc. Agron. Availability of mineral phosphates; productive levels of soils.

Bauer, Prof. Geo(rge) N(eander), University of New Hampshire, Durham, N. H. *Statistics, Mathematics*. Jordan, Minn, Jan. 8, 72. B.S. Minnesota, 94; M.S. Iowa, 98; Ph.D. Columbia, 00. Teacher, high sch, Minn, 94-95; instr. math, Iowa, 95-98; Minnesota, 00-02; asst. prof, 02-07; prof, 07-20; *New Hampshire*, 24- State chairman, War Savings Societies, Minn; assoc. director, War Loan Organization, 9th Fed. Reserve Dist. A.A; Math. Soc; Circolo Mat. di Palermo. The parallax of μ Cassiopeiae and the positions of fifty-six neighboring stars; analytic geometry; trigonometry; algebraic and transcendental numbers and equations; transcendental curves and numbers; mathematics preparatory to statistics and finance.

Bauer, Dr. Harry L(loyd), Santa Monica Junior College, Santa Monica, Calif. *Botany*. Blue Mound, Ill, June 14, 92. B.S. Illinois, 14; A.M. Colorado, 22; M.S. Southern California, 28, Ph.D. 34. Sch. supt, S. Dak, 19-20; instr, high sch, Wash, 21-23; Kern County Junior Col, Bakersfield, Calif, 24-28; biol. Long Beach Junior Col, 29-30; head dept, Santa Monica Junior Col, 31- Ecol. Soc; Calif. Bot. Soc; S. Calif. Acad. Plant ecology; taxonomy.

Bauer, Dr. Hubert (Anton), Alaska Planning Council, Juneau, Alaska. *Geography, Geophysics*. Bavaria, Germany, Nov. 3, 86. Munich, 05, 13-14; Greifswald, 20; M.S. Washington (Seattle), 28, Ph.D. 30. Assoc. geog. Washington (Seattle), 27-30; prof, New River State Col, 30-34; pres, Lower Columbia Junior Col, 34-36; director research, State Planning Board, Oregon, 36-37; special consultant, Alaska Planning Council, 37- Cadet, N. German Lloyd 'Bremen', 05-09, instr, 09-10, navigator, 10-12, lecturer, 22-24. Reserve officer, German Navy, 14-18. Geophys. Union; W. Va. Acad; Puget Sound Acad. Sci. Physical oceanography; world map of tides; tides of Puget Sound and adjacent inland waters.

Bauer, Dr. John C(onrad), Noxzema Chemical Co, Baltimore, Md. *Chemistry*. Baltimore, Md, Feb. 21, 02. B.S. Maryland, M.S, 30, Ph.D. 33. Instr. chem, sch. pharmacy,

Maryland, 26-36, lecturer physiol. chem, 28-36, food and drug anal, 33-36; chief chemist, Noxzema Chem. Co, 36- Chem. Soc; Pharmaceut. Asn; Md. Pharmaceut. Asn. Blood analysis; chemotherapy; synthesis of aliphatic sulfonic acid; cosmetics.

Bauer, Dr. Walter, Massachusetts General Hospital, Boston, Mass. *Medicine*. Crystal Falls, Mich, June 7, 98. B.S. Michigan, 20, M.D. 22. Intern, L. I. Col. Hosp, Brooklyn, 22-23; asst. res. med, 23-24; res. physician, Mass. Gen. Hosp, 24-27; nat. research fellow, England, 27-28; instr. med, Harvard Med. Sch, 28-30, med. tutor, 28-, faculty instr. med, 30-32; asst. prof, 32-36; assoc. prof, 36- Asst. physician, Mass. Gen. Hosp, 28-33, assoc. physician, 33 37, physician, 37-; director, Robert W. Lovett Mem. Foundation. Ed, Jour. Clin. Invest, '34- Am. Cmt. Contro! Rheumatism, 34- A.A; Am. Med. Asn; Am. Physicians; Physiol. Soc; Soc. Clin. Invest. (councilor, 34-); Am. Study Int. Secretions; Boston Biol. Soc. Internal medicine; diseases of calcium and phosphorus metabolism; acid-base metabolism in disease; mode of action of irradiated ergosterol; synovial fluid in health and disease; diseases of joints.

Bauer, Dr. Walter H(erman), Rensselaer Polytechnic Institute, Troy, N. Y. *Physical chemistry*. Red Oak, Iowa, Sept. 9, 07. B.S. Oregon State Col, 29; Ph.D. Wisconsin, 33. Asst. instr. chem, Wisconsin, 29-34; instr. physical chem, Rensselaer Polytech, 34- Chem. Soc. Photobromination.

Bauer, Dean W(illiam) Cha(rle)s, Northwestern University, Evanston, Ill. *Electrical engineering*. Cincinnati, Ohio, Dec. 26, 73. B.S. Cincinnati, 96, 96-97; Chicago, 05; Sc.D. Baker, 08. Instr. Cincinnati, 96-97; prof. physics and chem, Baker, 99-08; physics and elec. eng. Denver, 08-09; elec. eng. sch. eng. Northwestern, 09-, acting director, 12-13, 17-18, 24-26, dean, 26-, consulting engineer, business office, 26-Director, Baldwin Magnetic Observatory, U. S. Coast and Geod. Surv, 00-02; consulting engineer, 03-; consulting engineer, City of Baldwin, 05-, supt. city light plant, 06-08; consulting engineer, Baker Univ, 06-08. Elec. Eng; Eng. Educ. Physics; applied electrochemistry; primary batteries; rectifiers; chemical fire extinguishers; synchronous machinery characteristics.

Baugh, Prof. Ruth E(mily), 889 Victoria Drive, Pasadena, Calif. *Geography*. Bedford, Ind, Jan. 10, 89. A.B. California, 21; A.M. Clark, 26, Ph.D. 29. Assoc. geog. California at Los Angeles, 19-28, asst. prof, 28- Lecturer, Clark, 31. A.A; Meteorol. Soc; fel. Anthropol. Asn; Nat. Council Geog. Teachers; fel. Am. Geog. Soc; fel. Pacific Geog. Soc. Geographical interpretation of the location and distribution of population in California; geographical aspects of the Los Angeles water supply.

Baugher, Prof. A. C(harles), 348 S. Market St, Elizabethtown, Pa. *Chemistry*. Lineboro, Md, Sept. 8, 93. A.B. Elizabethtown Col, 22; B.S. Franklin and Marshall Col, 22; M.S. Pennsylvania, 28; Ph.D. N. Y. Univ, 37. Instr. Elizabethtown Acad, 16-22; prof. physics and chem, Elizabethtown Col, 22-28, prof. chem. and dean, 28- Trends in higher education in church-related arts college since 1900, especially organization, finance and enrolment.

Baughman, Dr. Imo P, 638 N. Kenmore Ave, Los Angeles, Calif. *Chemistry*. Hanson Co, S. Dak, Aug. 26, 96. A.B. Stanford, 18, A.M. 19, Ph.D. 22. Asst. chem, Stanford, 18, teaching fellow, 19-20; instr, Reed Col, 20-23; assoc. prof, Okla. Col. for Women, 23-24, 27-30; instr, Los Angeles Junior Col, 30- A.A; Chem. Soc. Flocculation of gelatin solutions by colloidal arsenious sulfide; tannin-gelatin reaction; elementary chemistry.

Baughman, Walter F(ree), 205 E. Washington Ave, Du Bois, Pa. *Chemistry*. Du Bois, Pa, April 16, 89. B.S. Pennsylvania, 12. Asst. chemist, bur. chem, U. S. Dept. Agr, 12-20, assoc. chemist, 20-27, bur. chem. and soils, 27-32. Chem. Soc; Agr. Chem. Vegetable oils; evolution of hydrogen peroxide by oils and fats exposed to air and light; oil and fat examination methods; iodide and bromide in mineral waters and brines; removal of barium from brines used in manufacturing salt.

Bauguess, Dr. Lyle C(lyle), 1504 Bass Ave, Columbia, Mo. *Biochemistry*. New Boston, Ill, Dec. 30, 10. A.B. Iowa, 31, M.S, 32, Ph.D. 34. Asst. zool, Iowa, 30-31, chem, 31-34, research assoc. bot, 34-36; instr. agr. chem, Missouri, 36- Chem.

Soc; Iowa Acad. Biochemistry of amino acids; bacterial metabolism; plant growth substances; sex hormones.

Baum, Prof. H(arry), 265 Riverside Drive, New York, N. Y. Electrical engineering. Cracow, Austria, July 11, 82. B.S. Col. City of N. Y., 02; E.E. Columbia, 08. Engineer, Gen. Elec. Co., 09-14; engineer, Rich Marine Fire Indicating System, 15-16; manager eng. dept., James Milaw, Inc., 17-18; supervisor rehabilitation work, disabled world war veterans, U. S. Veterans Admin, 18-24; instr. elec. eng., Col. City of N. Y., 18-24; asst. prof., 24-28; assoc. prof., 28-35; prof., 35- Consulting engineer, Polymet Mfg. Co., 26-27; Godward Gas Generator, Inc., 27-31; Phila. Rapid Transit Co., 27-31; lecturer, Col. City of N. Y., 17-20; engineer, City Board Higher Educ, New York. Elec. Eng; Eng. Educ; Nat. Soc. Professional Eng. Internal combustion engines.

Bauman, Prof. Louis, Presbyterian Hospital, New York, N. Y. Biochemistry. New York, N. Y., Sept. 10, 80. M.D. Columbia, 02; Berlin, 05, 07-08; Breslau, 07. Lecturer biochem, McGill, 09-11; asst. prof. med. and director research lab, Iowa State Col., 11-19; asst. prof. med., Columbia, 19- Asst. visiting physician, Presb. Hosp., 19- A.A.; Soc. Biol. Chem; Chem. Soc; Soc. Exp. Biol; Am. Med. Asn. Muscle extractives; scurvy; amino acids; hyperthyroidism; acidosis; gall-stones; obesity.

Baumann, Dr. Emil J(acob), Montefiore Hospital, New York, N. Y. Physiological chemistry. New York, N. Y., Feb. 5, 91. B.S. Col. City of N.Y., 12; Ph.D., Yale, 15. Asst. physiol. chem., Yale, 14-16; lecturer, Toronto, 16-17; physiol. chemist, Montefiore Hosp., 19- Lieut. Sanit. C. 17-19. A.A.; Soc. Biol. Chem; Chem. Soc; fel. Inst. Chem; Soc. Exp. Biol. Metabolism; suprarenal; thyroid; biochemical methods.

Baumberger, Prof. J(ames) Percy, Stanford University, Calif. Physiology. San Leandro, Calif., Sept. 17, 92. B.S. California, 14; M.S. Harvard, 16, Sc.D. 18. Asst. zool. Harvard, 14-19; Austin teaching fellow, 17-18; asst. bot., 18; instr. physiol., Stanford, 19-21; asst. prof., 21-28; assoc. prof., 28-35; Instr. Lowthorpe Hort. Sch., 16-18; asst. Radcliffe Col., 17-18; Cmn. Relief Belgium Educ. Foundation fellow, Brussels, 25-26; Am-Scandinavian fellow, Lund and Copenhagen, 26; research assoc., Harvard, 32-33. Srgt., M.C. 18-19. A.A.; Physiol. Soc; Soc. Exp. Biol; West. Soc. Nat. Insect physiology; relationship of insects to microorganisms; hibernation; longevity; industrial fatigue; tobacco smoke; molting of Crustacea; tissue metabolism; blood clotting; biological oxidation-reductions.

Baumelster, Prof. Theodore, Jr., Columbia University, New York, N. Y. Mechanical engineering. New York, N. Y., July 19, 97. B.S. Col. City of N. Y., 18; M.E. Columbia, 22. Consulting mech. engineer, Stevens and Wood, 25-31; asst. prof. mech. eng., Columbia, 31- Consulting mech. engineer, Am. Gas and Elec. Co., 35- A.A.; Eng. Educ; Mech. Eng. (chairman, metropolitan sect., 36). Steam power; thermodynamics; jet and vane machinery.

Baumgarten, Dr. Walter, 3720 Washington Blvd, St. Louis, Mo. Medicine. St. Louis, Mo., Oct. 31, 73. A.B. Hopkins, 94; M.D. Washington (St. Louis), 96. Asst. physiol. Harvard Med. Sch., 97-98; med. sch. med., Hopkins, 02-03; clin. chem. and micron. Washington (St. Louis), 03-08; instr. med., 11- Director med. service, St. Luke's Hosp, St. Louis, 20- Fel. Am. Med. Asn; fel. Col. Physicians; South. Med. Asn. (counselor, 31); St. Louis Acad. Internal medicine.

Baumgartner, Dr. E(dwin) A(be), Newark State School, Newark, N. Y. Pathology. Halstead, Kans., Feb. 14, 88. A.B. Kansas, 10, fellow, 11, A.M. 11; Ph.D., Minnesota, 15; M.D. Washington (St. Louis), 19. Instr. anat., Wisconsin, 11-12; Minnesota, 12-14; Washington (St. Louis), 14-19; assoc. path., Halstead Hosp., Kans., 19-20; assoc. pathologist, Clifton Springs Sanitarium, N. Y., 21-32; pathologist, Newark State Sch., 32- A.A.; Asn. Path. and Bact.; Am. Med. Asn.; Asn. Anat. Embryology; anatomy; medicine; splenic aneurism; cancer of the lungs; goiter; tropical sprue; development of glands and ducta.

Baumgartner, Dr. Leona, 125 Worth St, New York, N. Y. Pediatrics, Immunology. Chicago, Ill., Aug. 18, 03. A.B. Kansas, 23, A.M. 25; fellow, Kaiser Wilhelm Inst., 28-29; Sterling fellow, Yale, 31-32. Ph.D., 32; Pi Beta Phi fellow, 32-33, M.D., 34. Instr. bacter., Montana, 26-28; intern pediat., N. Y. Hosp., 34-35; asst. med. col., Cornell, 35-36; consultant, U. S. Pub. Health Service, 36-37; Dept. Health, New York, 37-

John Lovett Morse pediat. prize, 34. Soc. Bact; Hist. Sci. Soc; Am. Med. Asn; Am. Soc. Hist. Med. Age and immunological reactions; scarlet fever Streptococci; brucellosis; medical history.

Baumgartner, Prof. W(illiam) J(acob), University of Kansas, Lawrence, Kans. Zoology. Excelsior, Mo., May 14, 71. A.B. Kansas, 00, A.M. 01; fellow, Chicago, 02-04; Ph.D., Munich, 29. Instr. zool., Kansas, 04-05; asst. prof. histol. and zool., 05-13; assoc. prof., 13-30; prof., 30- Staff, Puget Sound Marine Sta., 09-16. Managing ed., Univ. Kans. Science Bul., 10-14, 19-21. Asst. Univ. Kans. paleont. exped., Oregon, 05, entom. exped., Ariz., 07, director zool. exped., Texas, 08, Wash., 09. A.A.; Soc. Zool. Chromosome individuality in Gryllus; spermatogenesis and centrioles in the Gryllidae; living tissues; pseudopodia on dividing cells.

Baur, Arnold J., Soil Conservation Service, Williamsport, Pa. Soils. Unionville, Mich., Nov. 15, 05. B.S. Mich. State Col., 29; Ph.D. Cornell, 33. Asst. soil surv., Exp. Sta., Cornell, 33; asst. soil conservation surveys, soil conservation service, U. S. Dept. Agr., 34; chief soil expert, 35-37; soil scientist, 37- Soc. Agron; Soil Sci. Soc. Soil conservation.

Baur, Dr. L(orenz) S(imon), General Foods Corp., Battle Creek, Mich. Chemistry. Unionville, Mich., July 6, 08. B.S. Mich. State Col., 30; Ph.D., Wisconsin, 35. Asst. chem., Mich. State Col., 30-32; research chemist, Gen. Foods Corp., 35- Chem. Soc. Structure of pectin; synthesis of galacturonic acid derivatives.

Baur, Prof. Paul Emil, 114 E. Grand St, Berea, Ohio. Mathematics. Goshen, Ind., March 29, 92. A.B., Baldwin-Wallace Col., 17; M.S., Michigan, 29. Assoc. prof. math. and drawing, Baldwin-Wallace Col., 20- Math. Asn.

Bausch, Carl L(ouis), 260 Dorchester Road, Rochester, N. Y. Mechanical engineering. Syracuse, N. Y., June 20, 87. M.E. Syracuse, 09. Bausch and Lomb Optical Co., 09-15, supt., 16-26, manager research and eng., 26-, v. pres., 37- A.A.; Mech. Eng. (manager, 37-); Optical Soc; Soc. Mil. Eng. Application of optics to industry; coordination of research with production and sales.

Bausch, Dr. Edward, Bausch and Lomb Optical Co., Rochester, N. Y. *Optics. Rochester, N. Y., Sept. 26, 54. Cornell, 75; hon. L.L.D., Rochester, 31. Chairman board, Bausch and Lomb Optical Co. Medal, Am. Soc. Mech. Eng., 36. A.A.; Optical Soc; hon. mem. Micros. Soc. Manipulation of the microscope.

Bauer, Prof. L(eonard) D(avid), 119 Westwood Ave, Columbia, Mo. Soils. Miamisburg, Ohio, Dec. 8, 01. B.S. Ohio State, 23, M.S. 26; fellow, Missouri, 28-29, Ph.D., 29. Asst. agron., Ohio Exp. Sta., 23-28; assoc. soils chemist, Exp. Sta., Ala. Polytech, 29-31; asst. prof. soils, Missouri, 31- Soc. Agron; Soil Sci. Soc; Int. Soc. Soil Sci. Soil physics, acidity, weathering, structure and erosion.

Bawden, Dr. A(rthur) T(albot), College of the Pacific, Stockton, Calif. Chemistry. Rochester, N. Y., Nov. 21, 97. B.S. Denison, 20; M.S. Ohio State, 21, Ph.D., 24. Asst. Ohio State, 20-23; head dept. chem., Ottawa (Kans.), 23-26; Baylor Col. for Women, 26-29; Univ. Shanghai, 29-31; Col. of Pacific, 31- Chem. Soc. Analytical and food chemistry; chemical education.

Baxter, Prof. C(harles) H(omer), 245 College Ave, Houghton, Mich. Mining. Detroit, Mich., Feb. 12, 79. B.S. E.M. Mich. Col. Mines, 02. Asst. mining engineer, Quincy Mining Co., 02-03; mining engineer, Republic Iron and Steel Co., 03-04; county road engineer, Dickinson County, Mich., 04-05; instr. mining, Mich. Col. Mines, 05-06; consulting engineer, 06-07; supt., Loretto Iron Co., 07-27; prof. mining eng, civil eng. and econ. and head depts., Mich. Col. Min. and Tech., 27-; consulting engineer. Min. and Metal. Eng; Lake Superior Min. Inst. (manager, 13, pres. 27). Economics.

Baxter, Prof. Dow V(awter), University of Michigan, Ann Arbor, Mich. Forest pathology. Hillsboro, Ill., Jan. 16, 98. B.S.F. Michigan, 21, M.S.F., 22, fellow, 23-24, Ph.D., 24. Asst. bot., Michigan, 19-21, forest path., 22-23; instr. bot., Wisconsin, 24-26; asst. prof. forest path. and silvics, sch. forestry and conservation, Michigan, 26-31, assoc. prof., 31- Nat. research fellow, Alaska, 33; Sweden, 34; Charles Darwin lecturer, Mich. State Col., 34. Summers, special asst., Michigan, 20; office blister rust control, U. S. Dept. Agr., 19, 21-23, field asst., office forest path., 18-19, asst. pathologist, 24-25.

Mem. exped, Alaska, 32, 33, 35, 36, 37. Phytopath. Soc; Mycol. Soc; Soc. Foresters; Ecol. Soc; Mich. Acad. (sec'y, 29, 30); N. Y. Explorers Club; Soc. Foresters Gt. Britain. Pine rusts; hardwood heart rots; preservative treatment of wood products; black ash and chestnut decay; resupinate polypores of North America; Alaskan forest fungi; success of fungi and diseases in forest plantations.

Baxter, Prof. Gregory P(aul), Harvard University, Cambridge, Mass. **Chemistry. Somerville, Mass, March 3, 76. A.B. Harvard, 96, A.M. 97, Ph.D. 99; hon. Sc.D. Michigan, 29. Asst. chem., Harvard, 95-97; instr. 97-99; Haverford Col, 99-00; asst. prof., Swarthmore Col, 00-02; instr. anal. chem., Harvard, 02-05; asst. prof. chem., 05-15; prof., 15-25, *Theodore William Richards prof.*, 25- Summers, instr., Harvard, 97, 02-21; Redcliffe Col, 02- Chairman, Int. Cmt. Atomic Weights. Richards medal, 34. Nat. Acad; A.A.; Chem. Soc; Am. Acad. Analytical and inorganic chemistry; atomic weights and other physico-chemical constants.

Baxter, Dr. Mildred Frances, 9732 Logan Court, Cleveland, Ohio. Psychology. Springfield, Mass, June 16, 94. A.B., Vassar Col, 16; Harvard, 16; Columbia, 20; A.M., Michigan, 22, fellow, 22-24; Ph.D. 25. Asst. psychol. lab, Training Sch. for Feeble-Minded, Vineland, N. J., 17-18; psychologist and director child study, Sleighton Farm, Darling, Pa., 18-19; psychol. examiner child study, dept. pub. instruction, Rochester, 19-21; psychologist, Board Educ., Cleveland, 24- Field worker, Associated Charities, Minneapolis, Minn, 19. A.A.; assoc. Psychol. Asn. Affective processes; temperament; intelligence and school placement.

Baxter, Prof. Robert A(ddison), Colorado School of Mines, Golden, Colo. Chemical engineering. Monticello, Kans, April 25, 94. B.S. Wisconsin, 20, Ch.E. 26; fellow, Colo. Sch. Mines, 22, M.S. 23. Chemist, Swift and Co, Kansas City, 11-13; du Pont Co, Hopewell, Va, 16; asst. engineer, Consol. Gas Co. of N. J., Long Branch, 19-21; instr. chem., Colo. Sch. Mines, 23-24; asst. prof., 24-26; assoc. prof., 26- Summer, chemist, The Texas Co, 26. U.S.N., 18-19, ensign; lieut, U.S.N.R., 28. Chem. Soc; Eng. Educ; Am. Petrol. Inst; Colo. Wyo. Acad; Colo. Sci. Soc. Gas analysis; oil shale technology.

Bay, Dr. Emmet B(lackburn), 5743 Harper Ave, Chicago, Ill. Medicine. Aurora, Ill, 01. B.S. Chicago, 20, M.D. Rush, 23. Asst. director health service, Chicago, 27-34, asst. clin. prof. med., 27-30, assoc. clin. prof., 30-34, assoc. prof., 34-36, prof. and assoc. dean div. biol. sciences, Rush Med. Col, 36- Heart disease.

Bay, Dr. H(arry) X, The Texas Co, Shreveport, La. Geology. Florence, Mo, March 18, 06. A.B. Drury Col, 27; M.S. Iowa, 29, Ph.D. 31. Instr. Iowa, 27-31; petroil. geologist, Eastman, Gardiner and Co, Laurel, Miss, 32-34; investigator bleaching clays in southeast U. S. Geol. Surv, 34-35; asst. geologist, subsurface div, Ill. Geol. Surv, 35-36; petroil. geologist, Texas Co, 36- Asn. Petrol. Geol; Iowa Acad. Sedimentary studies of Pennsylvania conglomerates of Texas; Cambro-Ordovician and Carboniferous stratigraphy and physiography of Benton County, Missouri; bleaching clays; Pennsylvanian sedimentation; Cretaceous and Eocene stratigraphy.

Bayfield, Dr. Edward G(eoffrey), Ohio Agricultural Experiment Station, Wooster, Ohio. Chemistry, Agronomy. Annapolis Royal, N. S. Can, Jan. 24, 00. B.S.A. Alberta, 23; Macdonald scholar, McGill, 23-24; M.S.A. 24; Ph.D. Ohio State, 31. Asst. irrig. investigator, Can. Pacific Ry, 20-22; assoc. agronomist and instr., Provincial Sch. Agr, Alta, 24-28; assoc. agron, Ohio Exp. Sta, 29-36, cereal technologist, in charge fed. soft wheat lab, U. S. Dept. Agr, 36- Nat. Milling Co. fellow, Ohio State, 29-34. A.A.; Soc. Agron; Asn. Cereal Chemists; Genetic Asn; Can. Soc. Tech. Agr. Cereal chemistry; field crops.

Bayles, B(urton) B(ernard), U. S. Department of Agriculture, Washington, D. C. Agronomy. Manhattan, Kans, Jan. 10, 00. B.S. (Agr), Kans. State Col, 22, M.S. 26; Ph.D. Wisconsin, 36. Junior agronomist, cereal investigations, bur. plant indust, U. S. Dept. Agr, Ft. Hays Branch Exp. Sta, Kans, 22, Sherman County Branch Sta, Mont, Oregon, 23-27, asst. agronomist, Judith Basin Branch Sta, 27-30, assoc. agronomist, wheat investigations, div. cereal crops and diseases, 30-36, agronomist, 36- Soc. Agron. Wheat agronomy and physiology; cereal production and improvement.

Bayley, Colin H(ahmemann), 400 Friel St, Ottawa, Ont, Can. Chemistry. Barbados, B. W. I, Aug. 18, 01. Harrison

Col, B. W. I; B.A.Sc, Toronto, 24, fellow, M.A.Sc, 25, M.A., 26, Nat. Research Council Can. bursar, 26-27, student, 27-28. Asst, Toronto, 27-28; Ont. Research Foundation, 28-29; chemist, W. E. Phillips Mfg. Co, Ont, 29-30; asst. research chemist, Nat. Research Council Can, Ottawa, 30- Fel. Can. Inst. Chem. Theories of catalysis; catalytic reduction of sulfur dioxide; thermal treatment of paraffin hydrocarbons; chemistry of laundering and dry cleaning processes; detergency; serviceability of textiles; hypochlorite bleaching.

Bayley, Dr. Nancy, 2739 Bancroft Way, Berkeley, Calif. Psychology. The Dalles, Oregon, Sept. 28, 99. B.S. Washington (Seattle), 22, M.S. 24; Ph.D. Iowa, 26. Teaching fellow, Washington (Seattle), 22-24; asst, Iowa, 24-26; instr. psychol, Wyoming, 26-28; research assoc, inst. child welfare, California, 28- Psychol. Asn; Soc. Research Child Develop. Mental tests; development of infants and preschool children; emotions; galvanometry of emotions; anthropometrics of children; motor tests.

Bayley, Prof. P(aul) L(everne), Lehigh University, Bethlehem, Pa. Physics. Wichita, Kans, 90. A.B. Arkansas, 13; A.M. Illinois, 14; Ph.D. Cornell, 23. Asst, Illinois, 14-17; instr. Cornell, 19-24; sci. staff, Bausch and Lomb Optical Co, 24-25; asst. prof, Rochester, 25-27; assoc. prof. physics, Lehigh, 27-37, prof., 37- A.A.; Physical Soc; Optical Soc. Coloration of chemicals and crystals by x-rays.

Bayley, Dr. W(illiam) S(hirley), University of Illinois, Urbana, Ill. **Mineralogy, Geology. Baltimore, Md, Nov. 10, 61. A.B. Hopkins, 83, Ph.D. 86. Prof. geol, Colby Col, 88-04; instr, Lehigh, 04-06; asst. prof, Illinois, 06-09, assoc. prof. miner. and econ. geol, 09-13, prof. geol, 13-31, head dept, 28-31; retired. Asst. geologist, U. S. Geol. Surv, 89-08; geologist, 09- Assoc. ed, 'Am. Naturalist,' 86-02; reviewer, 'Neues Jahrbuch,' 90-08; business ed, 'Econ. Geol,' 05- A.A.; Miner. Soc. (councilor, 31-34, pres, 36); Geol. Soc. (councilor, 19, 37, v. pres, 30); Soc. Econ. Geol. (councilor, 25-27, v. pres, 32); Ill. Acad. (pres, 23); Geol. Soc. Wash; Deuts. Chem. Gesell. Descriptive mineralogy; economic geology; crystallography; geography of iron districts of Lake Superior region; metamorphism; igneous rocks; iron ores of New Jersey, Tennessee and North Carolina; kaolins of North and South Carolina and Georgia; geology of New Jersey Highlands; geology of crystalline rocks in Llano district, Texas; Tate quadrangle, Georgia.

Baylis, John R(obert), 1643 E. 86th St, Chicago, Ill. Chemistry, Sanitary engineering. Eastabachie, Miss, May 11, 85. B.S. Miss. Agr. and Mech. Col, 05. Civil eng. R.R. Texas, 05-07; munic. and hydraul. eng, Miss. and Tenn, 08-09; asst. engineer, Internation and Great North. Ry. Co, 09-11; consulting eng, 11-14; manager, water works, Jackson, Miss, 15-16; bacteriologist, City Water Dept, Baltimore, Md, 17, prin. sanit. chemist, 18-26; physical chemist in charge exp. filtration plant, Chicago, Ill, 26- James Lauric prize, Civil Eng, 27; John M. Goodell award, Water Works Asn, 32. Civil Eng; Chem. Soc; Water Works Asn. (chairman, div. water purification); Municipal Eng; Soc. Test. Mat; Pub. Health Asn; West. Soc. Eng. Water purification; treatment of water for preventing corrosion; elimination of taste and odor in water; filtering materials; deterioration of concrete.

Bayliss, Dr. Milward, University of Nebraska College of Medicine, Omaha, Nebr. Bacteriology. Chicago, Ill, March 24, 08. A.B. Minnesota, 29, A.M. 31, Ph.D. 34. Asst. bacteriologist, State Dept. Health, Md, 34-35; instr. bacter. col. med, Nebraska, 35- Soc. Bact. Detoxification; germicides; detergents; public health bacteriology.

Bayne-Jones, Prof. S(tanhope), Yale University, New Haven, Conn. **Bacteriology, Pathology. New Orleans, La, Nov. 6, 88. A.B. Yale, 10; M.D. Hopkins, 14, A.M. 17. Intern med, Hopkins Hosp, 15-16, instr. path, Hopkins, 16, assoc. prof. path. and bact, 20; prof. bact., sch. med, Rochester, 23-32; Yale, and master, Trumbull Col, 32-, dean sch. med, 35- Med. advisory board, Leonard Wood Mem, 37- Lieut. col, M.C. O.R.C. A.A; Soc. Bact. (pres, 30); Asn. Path. and Bact; Soc. Exp. Biol; Asn. Immunol. (pres, 31); Am. Med. Asn. (councilor, pharm. and chem, 32). Pathology; immunology.

Bayroff, Dr. A(bram) G(ustavus), Box 423, Chapel Hill, N. C. Psychology. Newark, N. J, June 8, 06. B.S. N. Y. Univ, 27; A.M. North Carolina, 29, Ph.D. 31. Asst, N. Y. Univ, 26-27; teaching fellow, North Carolina, 27-30, asst, 30-31, nat. research fellow psychol, 31-32; California, 32-33, instr,

33-34; *North Carolina*, 35-37, asst. prof., 37- Summers, instr., California, 34; *North Carolina*, 35-38. Assoc. Psychol. Asn.; Elisha Mitchell Sci. Soc.; West. Psychol. Asn. Animal behavior, especially social and maze; experimental techniques; theory.

Bazett, Prof. H(enry) C(uthbert), University of Pennsylvania, Philadelphia, Pa. *¹*Physiology. Gravesend, Eng., June 25, 85. B.A., Oxford, 08; M.B., B.Ch., 11, Radcliffe traveling fellow, 12-14; M.A., 13; M.D., 19; L.R.C.P., 11. Demonstrator physiol. St. Thomas Hosp., 10-11; fellow, Magdalen, Oxford, 12-20, demonstrator path., 13-15; Christopher Welch lecturer clin. physiol., 19-21; prof. physiol., *Pennsylvania*, 21- Cheltenham medal, St. Thomas Hosp., 11; Mil. Cross, Gt. Britain, 15; Order of British Empire, 18. A.A.; Physiol. Soc.; Col. Physicians Phila.; fel. Royal Col. Surg.; British Physiol. Soc. The circulation of the blood; chronic aortic lesions in animals; chronic decerebrate animals; temperature gradients in the skin; control of body temperature in mammals.

Bazzoni, Prof. C(harles) B(lizard), Randal Morgan Laboratory, University of Pennsylvania, Philadelphia, Pa. Physics. Newburgh, N. Y., Jan. 28, 86. B.S., Pennsylvania, 11, A.M., 13; Ph.D., 14. Instr. physics, Pennsylvania, 11-17; asst. research, King's Col., London, 16-17; asst. prof., *Pennsylvania*, 19-21, prof. exp. phys., *Randal Morgan lab.*, 21- Harrison research fellow, London, 15-16. Capt., C.Eng., 17-19. A.A.; Physical Soc.; Optical Soc. Photoelectric and thermionic emissions; ionization potentials.

Beaber, Dr. N(athaniel) J(ohn), Mellon Institute, Pittsburgh, Pa. Organic chemistry. Fort Wayne, Ind., Sept. 13, 97. B.S., Kalamazoo Col., 20; M.S., Chicago, 21; Ph.D., Iowa State Col., 25. Asst., Iowa State Col., 21-26; *Mellon Inst.*, 26-Chem. Soc. Reaction of Grignard reagents with aryl thio esters; sulfonation of benzene; synthesis of phenol and of alkyl aryl sulfide; impregnating compounds for transformer coils; nicotine; refining lubricating oils; soy-bean products.

Beach, Prof. F(rank) H(almer), Ohio State University, Columbus, Ohio. Horticulture. Geneva, N. Y., July 6, 93. B.S., Iowa State Col., 15. Asst. hort., Purdue, 15-16, exten. horticulturist, 16-17; exten. specialist, Ohio State, 17-18, 19-, prof. hort., 25—Hort. ed., 'Ohio Farmer,' U.S.A., 18-19. Soc. Hort. Sci.; Ohio State Hort. Soc. (sec'y., 24-).

Beach, Prof. J(erry) R(aymond), 13 Kingston Road, Berkeley, Calif. Veterinary science. West Danby, N. Y., Dec. 21, 88. D.V.M., Cornell, 13. Asst. vet. diagnosis, Cornell, 13-14; vet. science, *California*, 14-16, instr., 16-21, asst. prof., 21-28, assoc. prof., 28-31, prof., 31-, assoc. veterinarian, *Exp. Sta.*, 24-29, veterinarian, 29—Guest worker, Rockefeller Inst., 30-31. Del., World's Poultry Cong., The Hague, 21. A.A.; Vet. Med. Asn.; Soc. Bact.; Poultry Sci. Asn. (v. pres., 21). Diseases and physiology of poultry; nutritional diseases; vitamin deficiencies.

Beach, Lansing H(oskins), 690 Bradford St., Pasadena, Calif. Engineering. Dubuque, Iowa, June 18, 60. U. S. Mil. Acad.; Eng. Sch. Application. Commissioner to determine boundary between Texas and Indian Territory, 85-87; engineer commissioner, D. C., 98-01; all grades, C.Eng. major gen. and chief engineers, 20-24; commissioner to determine distribution of waters of Rio Grande between U. S. and Mex., 25-30. Senior mem., board to determine conditions of navigation, U. S. and Europe, 10-14; board on flood prevention, 15. Civil Eng.; Soc. Mil. Eng. (pres., 23). River and harbor improvement; resistance of vessels; waterflow; methods of warfare in the sixteenth and seventeenth centuries; durability of materials for city streets and highways; heat-transmitting qualities of roof coverings; flushing waves.

Beach, Prof. Robin, 83 Harrison Ave., Baldwin, L. I., N. Y. Electrical engineering. Robin's Island, L. I., N. Y., Aug. 30, 89. B.S., New Hampshire, 13, E.E., 22; M.S., N.Y. Univ., 22. Asst. prof. elec. eng. Agr. and Mech. Col. Texas, 14-17; head dept., Norwich, 17-18; assoc. prof., *Polytech. Inst. Brooklyn*, 18-25, prof., 25-, head dept., 29—Professional engineer, N. Y.; consulting engineer, Fel. Elec. Eng.; Eng. Educ. Electricity and magnetism.

Beach, Dr. Ted De Vinne, 1430 Tulane Ave., New Orleans, La. Parasitology. Lakeport, Calif., Oct. 12, 02. B.S., Nevada, 30; M.S., Kans. State Col., 32; Ph.D., Tulane, 35. Asst., dept. zool., Kans. State Col., 30-32; parasitol. lab., dept. trop. med., Tulane, 32—Soc. Parasitol. Resistance to parasitism; free-living phase of life cycle of *Strongyloides*.

Beach, Prof. W(alter) S(purgeon), State College, Pa. Plant pathology. Brownton, Minn., Jan. 24, 90. B.S., Minnesota, 14; fellow, Mich. State Col., 14-15; M.S., 15; fellow, Illinois, 17-18; Ph.D., 18. Asst. bot., Illinois, 15-17; instr. plant path., Pa. State Col., 18-19, asst. prof., 19-23, assoc. prof., 23- Phytopath. Soc.; Pa. Acad. Fusarium wilt of China asters; biological specialization in *Septoria*; diseases of vegetables and mushrooms; wildfire and other leaf-spot diseases of tobacco.

Beadle, C(hauncey) D(e los), Biltmore, N. C. *¹*Botany. St. Catharines, Ont., Can., Aug. 5, 66. Ont. Agr. Col., 84; Cornell, 89. Director, Biltmore Herbarium, 90-16. Botany of the southern states; *Crataegus*; *Philadelphus*; *Rudbeckia*; *Marshallia*.

Beadle, Prof. G(eorge) W(ells), Stanford University, Calif. Biology. Wahoo, Nebr., Oct. 22, 03. B.S., Nebraska, 26, M.S., 27; Ph.D., Cornell, 30. Asst., N. Y. State Col. Agr., Cornell, 28-30; nat. research fellow biol., Calif. Inst. Tech., 30-35, instr., 35-36; asst. prof., genetics, Harvard, 36-37; prof. biol., Stanford, 37—Guest, Inst. de Biol. physico-chim., 35. A.A.; Genetics Soc.; Soc. Zool.; Soc. Nat. Genetics and cytology of Zea; genetics and development of *Drosophila*.

Beal, Dr. A(rthur) F(loyd), U. S. Bureau of Labor Statistics, Washington, D. C. Physics. Arlington, Colo., Sept. 25, 88. A.B., Kansas, 11, A.M., 12; fellow, Pittsburgh, 14-16; Ph.D., 17. Magnetic observer, U. S. Coast and Geod. Surv., 12-14; instr. physics, Albion Col., 16-17; asst. physicist, Bur. Standards, 17-20, assoc. physicist, 20-23; physicist, U. S. Pub. Health Service, 23-27; Chem. Warfare Service, 28-29; special agent manufacturers, Bur. Census, 29-32; research investigator, Bur. Labor Statist., 32—Physical Soc.; Astron. Soc.; Horol. Inst. (exec. cmt., 21-24); Statist. Asn.; Illum. Eng. Soc. (hon. mem., cmt. on nat. lighting); Wash. Acad.; Philos. Soc. Wash. Weights and measures; variation of latitude; natural illumination of interiors; technological unemployment.

Beal, Carl H(ugh), 650 S. Grand Ave., Los Angeles, Calif. Geology. A.B., Stanford, 13, A.M., 15, E.M., 20. Asst. geologist, K. T. and O. Co., 13; field geologist, 13-14; instr. geol. and mining, Stanford, 14-15; oil and gas inspector, U. S. Bur. Mines, 15-16; valuation engineer, bur. internal revenue, U. S. Treasury Dept., 18-19; consulting geologist and engineer, 19-24; v. pres., Marland Oil Co., Calif., 23-28; consulting geologist and engineer, 29- Asst. prof., Stanford, 19. Petroleum geology.

Beal, Dr. Fred(erick) W(ahn), University of Pennsylvania, Philadelphia, Pa. Mathematics. Hamilton, N. Y., July 18, 79. Ph.B., Colgate, 02, A.M., 05; fellow, Princeton, 09-10; Ph.D., 11. Instr. math., Pa. State Col., 05-08; Brown, 10-11; Pennsylvania, 11-18; acting prof., Tennessee, 18-19; asst. prof., *Pennsylvania*, 19-28, prof., 28—Math. Soc. Normal congruences determined by centers of geodesic curvature; a congruence of circles.

Beal, Dr. Geo(rge) D(enton), Mellon Institute, Pittsburgh, Pa. Chemistry. Scio, Ohio, Aug. 12, 87. Pharm.D., Scio Col., 07, Ph.B., 08; A.M., Columbia, 10, Ph.D., 11; hon. Pharm.M., Phila. Col. Pharmacy, 33; hon. Sc.D., Mt. Union Col., 33. Asst. chem., Scio Col., 06-08; instr., Illinois, 11-14, assoc., 14-18, asst. prof., 18-20, assoc. prof., 20-24, prof. anal. and food chem., 24-26; asst. director, *Mellon Inst.*, 26—Nat. Conf. Pharmacut. Research; revision cmt., U. S. Pharmacopoeia, 30—Director col. pharmacy, Pittsburgh. Trustee, Phila. Col. Pharmacy; Mt. Union Col. Ebert prize, Pharmacut. Asn., 20. A.A. (sec'y., C. 17); Chem. Soc. (sec'y., div. pharmaceut. chem., 15-19); Soc. Test. Mat.; Pharmacut. Asn. (research cmt., 18- 1st v. pres., 35, pres., 37); Pub. Health Asn.; Crop Protection Inst.; hon. mem. Ill. Pharmacut. Asn.; Pa. Acad. Quantitative organic analysis; alkaloids; fatty acids; anthraquinone drugs.

Beal, Dr. J(ames) A(len), U. S. Department of Agriculture, Ft. Collins, Colo. Entomology. Clifty, Ark., May 30, 98. B.S., Mass. Col., 23; M.S., Syracuse, 25. Ph.D., 35. Asst. entomologist, bur. entom. and plant quarantine, U. S. Dept. Agr., 26-33, entomologist in charge forest insect lab., 33—Soc. Foresters; Asn. Econ. Entom.; Forestry Asn. Forest entomology.

Beal, Dr. J(ames) H(artley), Ft. Walton, Fla. Pharmacy. New Philadelphia, Ohio, Sept. 23, 61. B.S., Scio Col., 84, A.B., 88; LL.B., Cincinnati Law Sch., 86; Ph.G., Ohio Med. Col., 94; Sc.D., Mt. Union Col., 95; hon. Pharm.D., Pittsburgh, 02; hon. Ph.M., Phila. Col. Pharmacy, 13. Prof. chem. and

dean, dept. pharmacy, Scio Col, 87-07; prof. applied pharmacy, Pittsburgh, 02-11; gen. sec'y and ed, 'Jour. Am. Pharmaceut. Asn,' 11-14; director pharmacy research, Illinois, 14-18. Chairman board trustees, U. S. Pharmacopoeia, 10-30. Nat. Drug medalist, 19. Mem. W.I.B, 18. A.A; Pharmaceut. Asn. (pres, 04); Am. Conf. Pharmaceut. Faculties (pres, 07); Chem. Soc; Ohio Pharmaceut. Asn. (pres, 98). Pharmacy food and drug laws; poison and habit-forming drug legislation.

Beal, Prof. John L(inden), Montana State College, Bozeman, Mont. *Chemical engineering*. Albert Lea, Minn, June 30, 05. B.S., Minnesota, 27, M.S., 29, Ph.D., 34. Chem. research div, B. F. Goodrich Rubber Co, 29-30; instr. chem. eng, Iowa, 34-36; asst. prof, Mont. State Col, 36-37, assoc. prof, 37-Chem. Soc; Chem. Eng; Electrochem. Soc. Electrochemistry; ventilation.

Beal, Prof. John M(ann), University of Chicago, Chicago, Ill. *Botany*. Red Oak, N. C, April 18, 88. B.S., N. C. State Col, 11; M.S., Miss. Agr. and Mech. Col, 13; Ph.D., Wisconsin, 27. Instr. bot, Miss. Agr. and Mech. Col, 11-13; asst. prof, 13-15; prof. and botanist, Exp. Sta, 15-29; assoc. prof. bot, Chicago, 29-31, prof, 31- A.A; Bot. Soc. Morphology; cytology; genetics.

Beal, Prof. Juna Lutz (Mrs. Arthur George Beal), 3262 Broadway, Indianapolis, Ind. *Mathematics*. Indianapolis, Ind, June 19, 95. A.B., Butler, 17; A.M., Chicago, 23. Instr. math, Butler, 18-22, asst. prof, 23-, acting head dept, 33-Math. Asn. (v. pres, Ind. sect, 32, pres, 33).

Beal, W(alter) H(enry), U. S. Department of Agriculture, Washington, D. C. *Agriculture*. Hanover Co, Va, Dec. 9, 67. A.B., M.E., Va. Polytech, 86. Asst. chemist, Exp. Sta, Mass. Coll, 87-91; U. S. Dept. Agr, 91-, assoc. exp. sta. admin, office exp. stations. U. S. Dept. Agr. del, Int. Cong. Agr, Liège, 05. A.A; Agr. Hist. Soc. Methods and results of agricultural research.

Beale, Dr. Frank S(wan), 316 W. Packer Ave, Bethlehem, Pa. *Mathematics*. Eastport, Maine, Nov. 28, 98. B.S., Maine, 21, M.S., 23; Ph.D., Michigan, 31. Instr. math, Maine, 21-26; asst. prof, Hamilton Col, 26-27; instr, Michigan, 27-30; Lehigh, 30- Math. Soc; Statist. Asn. Difference equations.

Beale, Dr. H(elen) P(urdy) (Mrs. J. H. Beale), Sunset Drive, Harmon-on-Hudson, N. Y. *Plant pathology*. Croton-on-Hudson, N. Y, Sept. 19, 93. A.B., Columbia, 18, Ph.D., 29; Am-Scandinavian Foundation fellow, Copenhagen, 20-21; Bishop Museum fellow of Yale, Honolulu, 23-24. Asst. plant path, Cornell, 18-19; instr. bot, Vassar Col, 19-20; asst. mycol, N. Y. Bot. Garden, 22-23; plant path, Boyce Thompson Inst, 24-27, 28-29; bacter, col. physicians and surg, Columbia, 27-28; nat. research fellow, col. physicians and surg, Columbia, 29-30, research assoc. bacter, 30-; asst. plant pathologist, Boyce Thompson Inst, 30- A.A. Tobacco mosaic disease.

Beall, Dr. Ruth (Mrs. Rogers McVaugh), University of Georgia, Athens, Ga. *Plant physiology*. West River, Md, Aug. 17, 03. A.B., Goucher Col, 24; univ. fellow, Hopkins, 25-26, A.M., 28; Morris fellow, Pennsylvania, 33-36, Ph.D., 36. Asst. biol, Goucher Col, 24-25, physiol, 26-29; dean women and instr. biol, Williamsport Dickinson Sem, 29-30; instr. biol. and chem, MacMurray Col, 30-31; asst. to Dr. B. E. Livingston, Hopkins, 31-33; instr. bot, Georgia, 36—Summer, ed. asst, 'Am. Men of Science,' 36. Soc. Plant Physiol. Stomatal movements; the soil as a possible source of carbon dioxide for plants; absorption and loss of electrolytes by plants.

Beals, Dr. Carlyle S(mith), Dominion Astrophysical Observatory, Victoria, B. C, Can. *Physics, Astrophysics*. Cano, N. S, June 29, 99. B.A., Acadia, 19; M.A., Toronto, 23; D.I.C., Imp. Col. Science and Tech, 25; Ph.D., London, 26, D.Sc., 34. Asst. prof. physics, Acadia, 26-27; astronomer, Dom. Astrophys. Observatory, 27- Fel. Royal Soc. Can; fel. Royal Astron. Soc. Analysis of laboratory spectra; spectro-photometry; stellar emission bands; stellar temperatures; interstellar absorption; P Cygni type spectra.

Beals, Dr. Ralph L(eon), 568 Dryad St, Los Angeles, Calif. *Anthropology*. Pasadena, Calif, July 19, 01. A.B., California, 26, Ph.D., 30. Teaching fellow, California, 28-30, hon. research assoc. and nat. research fellow biol, 30-32, research assoc, 32-33, lecturer, 35; museum technician, Nat. Park Service, 33-35; instr. anthrop, California at Los Angeles, 36-Anthrop. Asn. Comparative ethnology of northern Mexico

before 1750; ethnology of the Nisenan of California and of the Cahita of northern Mexico; Acaxee of the Mexican Sierra; Cora, Huichol, Zapotec and Mixe of central and southern Mexico.

Beam, Prof. A(dam) L(eland), 141 Ridge Ave, State College, Pa. *Dairy husbandry*. Kincaid, Kans, Feb. 26, 91. B.S., State Col. Wash, 15; M.S., Pa. State Col, 16. Prof. dairy production, Pa. State Col. Dairy Sci. Assn. Teaching methods.

Beamer, Prof. R(aymond) H(ill), 1000 Missouri St, Lawrence, Kans. *Entomology*. Hallsworth, Kans, Oct. 20, 89. A.B., Kansas, 13, A.M., 17, Ph.D., 27. Asst. curator Snow entom. collection, Kansas, 14-17, 22-, asst. entom. univ, 21-22, asst. prof, 22-35, assoc. prof, 35- Colo. Biol. Surv, 14; in charge annual entom. collecting parties, Kans. Entom. Soc; Kans. Entom. Soc. (pres, 31).

Beamish, Prof. F(red) E(arl), University of Toronto, Toronto, Ont, Can. *Chemistry*. Hanover, Ont, Oct. 31, 01. B.A., McMaster, 28, M.A., 29. Asst. chem, Toronto, 28-31, lecturer, 31-35, asst. prof, 35- Micro- and macro- analysis of organic compounds; the extraction from ores of the platinum group of metals.

Beams, Prof. H(arold) W(illiam), State University of Iowa, Iowa City, Iowa. *Zoology*. Belle Plaine, Kans, Aug. 3, 03. A.B., Fairmount Col, 25; A.M., Northwestern, 26; Ph.D., Wisconsin, 29. du Pont fellow histol. and embryol, dept. med, Virginia, 29-30; asst. prof. zool, Iowa, 30-34, assoc. prof, 34- Rockefeller traveling fellow, 34-35. A.A; Soc. Zool; Micros. Soc; Wis. Acad. Cytology; spinning glands of insects; milk secretion; Cabot rings; segregation; hepatectomy; hemopoiesis; Golgi apparatus; polarity; sex chromosomes and spermatogenesis of man; salivary gland chromosomes.

Beams, Prof. J(esse) W(akefield), University of Virginia, Charlottesville, Va. **Physics*. Belle Plaine, Kans, Dec. 25, 98. A.B., Fairmount Col, 21; A.M., Wisconsin, 22; Ph.D., Virginia, 25. Instr. physics and math, Ala. Polytech, 22-23; teaching fellow, Virginia, 23-25, nat. research fellow physics, 25-26; Yale, 26-27, instr, 27-28; assoc. prof, Virginia, 28-30, prof, 30-A.A; Physical Soc. (councilor, 36-); Optical Soc. The measurement of very short time intervals; the Kerr effect; electrical discharges; ultracentrifuges.

Beans, Prof. C(harles) Homer, 2015 Government St, Baton Rouge, La. *Psychology*. Petersburg, Ohio, Feb. 28, 70. A.B., Nebraska, 99; Chicago; Ph.D., Columbia, 12. Asst. prof. psychol, Ind. State Nor. Sch, 04-14; prof. psychol. and educ, Louisiana, 15- A.A; Psychol. Asn. Educational psychology; standard tests; forgetting; temporary blindness; job-analyzing athletics; radicalism and conservatism.

Bean, Dr. Elizabeth S(mith) (Mrs. R. J. Bean), 28 Chestnut St, Halifax, N. S, Can. *Zoology*. Nov. 6, 89. A.B., Cincinnati, 10; A.M., Wisconsin, 12, Ph.D., 15. Asst. zool, Wisconsin, 11-13, instr, 14-17, asst. prof, 17-23; instr. histol. and embryol, Dalhousie, 27- Instr. Marine Biol. Lab, Woods Hole, 19-23. A.A. Cytology; genetics.

Bean, E(rnest) F. University of Wisconsin, Madison, Wis. *Geology*. Zearing, Iowa, Jan. 30, 82. A.B., Wisconsin, 09, A.M., 11. Asst. geol, Wisconsin, 08-09; instr, 11-15, asst. prof, 15-17; geologist, Wis. Geol. Surv, 11, chief of parties, 13-15; asst. state geologist, Wis, 16-25, acting state geologist, 25-26, state geologist, 26- A.A; Nat. Geog. Soc. exped, Alaska, 09-10. A.A; fel. Geol. Soc; Soc. Econ. Geol; Wis. Eng. Soc; Wis. Acad. Economic geology of the Precambrian; areal and glacial geology; road materials.

Bean, Dr. Frederic R(oland), Eastman Kodak Co, Rochester, N. Y. *Chemistry*. Elkhorn, Ind, Dec. 1, 04. A.B., DePauw, 27; Ph.D., Cornell, 31. Asst. chem, DePauw, 26-27; Cornell, 27-31; research and develop. chemist, Eastman Kodak Co, 31-Chem. Soc. Antiseptics; photographic developers; antioxidants; dyes; catalytic hydrogenation; high pressure autoclave synthesis.

Bean, Howard S(tewart), 18 Prospect St, Kensington, Md. *Mechanical engineering*. Santa Clara Co, Calif, Oct. 23, 93. B.S., California, 17. Inspector weights and measures, gage sect, Bur. Standards, 17-19, chief, New York branch gage sect; 18-19, inspector, gage sect, 20, chief gas measuring instruments sect, 20- In charge test on orifice meters, gas flow measurement cmt, nat. gas dept, Am. Gas Asn, 27-31; in charge flow nozzle research, special research cmt. on fluid meters, Am. Soc. Mech. Eng. Mech. Eng. Measurement of fluids, especially gases, with orifice meters.

Bean, Prof. John W(illiam), 800 Oxford Road, Ann Arbor, Mich. *Physiology*. Attercliffe, Ont, Can., Sept. 8, 01. A.B., Michigan, 24; M.S., 25; Ph.D., 30. Asst. physiol. med. sch., Michigan, 26-29; instr., 29-31; asst. prof., 31- A.A.; Physiol. Soc; Soc. Exp. Biol. Oxygen poisoning; high pressures of oxygen and blood acidity; volume flow of blood; oxygen consumption; periodic respiration produced by exposure to high oxygen pressure.

Bean, Prof. R(aymond) J(ackson), 28 Chestnut St, Halifax, N. S., Can. *Histology, Embryology*. Laconia, N. H., May 24, 91. B.S., New Hampshire Col., 15; M.S., 16. Asst. zool., New Hampshire Col., 14-15; instr., 16-17; instr. histol. and physiol., Western Reserve, 19-23; assoc. prof. *histol. and embryol.* Dalhousie, 23-28; prof., 28-, acting asst. dean med. sch., 28-30; sec'y med. faculty, 30- Cmt. on Standardization Biol. Stains; Biol. Board Can., mem. Atlantic sub-exec. cmt. Med. service, U.S.N., 18-19. Ecol. Soc; N. S. Inst. (councilor and 2nd v. pres); Int. Assn. Dental Research (pres, Halifax sect., 32). Histological technique; experimental embryology; morphology.

Bean, Prof. R(obert) Bennett, University, Va. *Anatomy, Anthropology*. Gala Water, Va., March 24, 74. B.S., Va. Polytech, 00; M.D., Hopkins, 04. Asst. anat., Hopkins, 04-05; instr., Michigan, 05-07; asst. prof., Philippines, 07-08; assoc. prof., 08-10; Tulane, 10-14; prof., 14-16; Virginia, 16- Lecturer, Teachers' Assembly, Baguio, 08; govt. investigator Benguet Igorotos, 08. A.A. (exec. cmt. sect. II, 25, chairman, 26); Ass. Anat; Anthropol. Assn. (councilor, 19); Va. Acad; New Orleans Acad. (pres, 15); cor. mem. Soc. Romana Anthropol. Distribution, development and evolution of man; Filipinos; American Negroes; growth; weight of organs; sitting height; ear form; teeth; mongoloid dwarfs; pulse of growth; human types; races of man; the peopling of Virginia.

Bean, Prof. Ross S(moot), University of Hawaii, Honolulu, Hawaii. *Plant physiology*. Provo, Utah, March 17, 90. B.S., Brigham Young, 21. Instr. chem. and math., Gila Col., 21-23; business agent, 23-24; pres., 24-25; teaching fellow plant nutrition, California, 26-27; instr. bot., Hawaii, 27, 29; asst. prof., 29- Ordnance Dept., 17-19, lieut. A.A.; Bot. Soc; Hawaiian Bot. Soc; Hawaiian Acad. Biochemistry.

Beans, Prof. Hal T(rueeman), Columbia University, New York, N. Y. *Chemistry*. Pleasanton, Kans., Aug. 20, 76. B.S., Nebraska, 99; A.M., 00; Ph.D., Columbia, 04. Instr. chem., Idaho, 00-02; Columbia, 02-11, asst. prof. and assoc. prof., 11-21; prof., 21- Assn. Consulting Chem. and Chem. Eng. (pres, 27-30, director, 29-); Franklin Inst. Inorganic, physical and analytical chemistry; colloids; chemical spectroscopy.

Bear, Dr. Firman E(dward), 75 Carleton Ave, Larchmont, N. Y. *Agriculture*. Germantown, Ohio, May 21, 84. B.S., Ohio State, 08; M.S., 10; Ph.D., Wisconsin, 17. Instr. agr. chem. and soils, Ohio State, 08-10; asst. prof., 10-13; prof. soils in charge soil investigations, West Virginia, 14-16; prof. agr. chem. and soils, Ohio State, 16-28; director agr. research, Am. Cyanamid Co., New York, 28- A.A.; Soc. Agron; Chem. Soc. Fertilizers.

Bear, Dr. Richard S(eott), 7008 Forsythe Blvd, St. Louis, Mo. *Zoology*. Miamisburg, Ohio, June 8, 08. B.S., Princeton, 30; Ph.D., California, 33. Nat. research fellow chem., Princeton, 33-34; research asst. zool., Washington (St. Louis), 34- Chem. Soc. Absorption spectra of rare earth salts at low temperatures; applications of quantum mechanics to chemistry; nerve chemistry and physics.

Bearce, Henry W(alter), 6308 Ridgewood Ave, Chevy Chase, Md. *Physics, Mechanical engineering*. Hebron, Maine, Oct. 5, 81. B.S., Maine, 06. Instr. physics, Maine, 06-08; Bur. Standards, 08-, co-chief div. weights and measures, 21- Sec'y, Nat. Screw Thread Cmn. Philos. Soc. Wash; Wash. Acad. Density and thermal expansion of ethyl alcohol, American petroleum oils, linseed oils, turpentine and other liquids; standardization of nuts, bolts, screw-threads and gages; the application of tolerances; principles of limit gaging; precise length measurements.

Beard, Dr. E(arl) E(dsion), E. I. du Pont de Nemours and Co., Carrollville, Wis. *Chemistry*. Bowling Green, Ohio, April 30, 03. B.S. (Educ.), Ohio State, 25; A.M., 26, fellow, 28-29; Ph.D., 29. Asst. chem., Ohio State, 26-28; research chemist, Jackson lab, E. I. du Pont de Nemours and Co., 29-31, Carrollville, 31- Chemistry of the organic compounds of

titanium; use of titanium tetrachloride as a catalyst in the Friedel-Craft reaction; anthraquinone vat dyes; new syntheses.

Beard, Prof. Fred J, Iowa State College, Ames, Iowa. *Animal husbandry*. Cleburne, Texas, Sept. 10, 93. B.S., Okla. Agr. and Mech. Col., 20; M.S., Iowa State Col., 24. Instr. animal husbandry, Okla. Agr. and Mech. Col., 20-21, asst. prof., 22-28; assoc. prof., 28-32; asst. prof., Iowa State Col., 32- Okla. Acad. Meat investigations.

Beard, Dr. H(arold) C(hatfield), Kutztown, Pa. *Chemistry*. Shelton, Conn., June 27, 98. A.B., Oberlin, 21; A.M., Columbia, 25; M.S., Pa. State Col., 31; Ph.D., 32. Instr. chem., Carnegie Inst. Tech., 21-22; asst. chemist, Pittsburgh Water Plant, 22-23; instr. chem., N. C. State Col., 25-26; prof., Western Maryland Col., 26-29; asst., Pa. State Col., 29-32; instr., Louisiana, 32-33; State Teachers Col., Shippensburg, Pa., 33-34; Phila. Commercial Museum, 34-35; exten. div., Pa. State Col., Du Bois, 35-37; prof. physical sciences, State Teachers Col., Kutztown, 37- Chem. Soc. Hydrogen ion concentration measurement with antimony and other metal electrodes; absorption salt dyes.

Beard, Harry R(andall), New England Fish Co., Vancouver, B. C., Can. *Chemistry*. Denver, Colo., Aug. 31, 92. A.B., Colorado, 17; M.S., Wisconsin, 20. Instr. chem., Wisconsin, 19-20; asst. technologist, Bur. Fisheries, 20-24, chief technologist, 24-27; in charge sci. research, New Eng. Fish Co., 27-Chemist, State Oil Lab., Colo., 16; asst., Colorado, 16-17; chemist, Wilson and Co., 20. Asst. chemist, Puget Sound Navy Yard, 17; Ordnance Dept., U.S.A., 17-19, research chemist, 19. Chem. Soc; Can. Chem. Asn. Fisheries technology; the preparation of fish for canning; refrigeration of fish.

Beard, Prof. Howard H(orace), Louisiana State University School of Medicine, New Orleans, La. *Biochemistry*. York, S. C., May 5, 94. B.S., South Carolina, 14; A.M., Columbia, 21; Porter fellow, Yale, 25; Ph.D., 25. Asst. state chemist, State Dept. Agr., S. C., 18-22; prof. physical science, Chicora Col., 22-23; asst. physiol. chem., sch. med., Yale, 24; senior instr. biochem. and acting head dept., Western Reserve, 25-27; asst. prof., 27-31; prof., Louisiana, 31- A.A.; Chem. Soc; Soc. Biol. Chem; Am. Med. Asn; Soc. Exp. Biol; Inst. Chem; Inst. Nutrition; Asn. Cancer Research; Pacific Asn. Railway Surg; New Orleans Acad. (v. pres, 33). Nutrition; metabolism; diseases of blood; cancer.

Beard, Prof. J(ohn) G(rover), University of North Carolina, Chapel Hill, N. C. *Pharmacy*. Kernersville, N. C., April 5, 88. Ph.C., North Carolina, 09; Ph.M., Phila. Col. Pharmacy, 30. Instr. pharmacy, North Carolina, 09-13, asst. prof., 13-17; assoc. prof., 17-19, prof., 19-, sec'y sch. pharmacy, 16-31, dean, 31- Chairman, Pharmaceut. Syllabus Cmt., 28- Pharmaceut. Asn. (local sec'y, 23, chairman, sect. educ. and legis., 25, v. pres., 31, pres., nat. conf., 31); Asn. Cols. Pharm. (v. pres., 25, pres., 30); Elisha Mitchell Sci. Soc. (pres, 17-19, 30); N. C. Pharmaceut. Asn. (sec'y-treas., 12-). Percolation under reduced pressure; filtration rates.

Beard, Prof. J(oseph) Howard, 1005 S. Race St., Urbana, Ill. *Hygiene, Public health*. Linden Hill, Md., Jan. 12, 83. A.B., St. John's Col. (Md.), 02, A.M., 12; M.D., Hopkins, 12. Instr. physiol., Illinois, 12-18, prof. hygiene and univ. health officer, 18- A.A.; Pub. Health Asn; Am. Med. Asn. Physiology; internal medicine; health education; mental and school hygiene.

Beard, Dr. J(oseph) W(illis), Rockefeller Institute, Princeton, N. J. *Pathology*. Athens, La., Nov. 5, 01. B.S., Chicago, 26; M.D., Vanderbilt, 29. Intern, asst. res. and res., surg. service, hosp., Vanderbilt, 29-32; asst. path., Rockefeller Inst., 32-35, assoc., 35- Soc. Exp. Biol; Harvey Soc. Physiology of blood cells and of endothelium of blood vessels; surgical shock; tumors; filtrable viruses.

Beard, Dr. Leslie C(arrington), Jr., 10 Maple St., Brooklyn, N. Y. *Chemistry*. Hagerstown, Md., Jan. 28, 98. A.B., Hopkins, 19, Ph.D., 22. Instr. chem., Hopkins, 22-23; research chemist, Standard Oil Co. of N. Y., 23-30, supervisor research, 30-33; asst. to head gen. labs, Socony-Vacuum Oil Co., 33-A.A.; Chem. Soc; Soc. Test. Mat. Vapor tension of aqueous solutions; petroleum.

Beard, Prof. Paul J, Stanford University, Calif. *Bacteriology*. Creston, Iowa, July 29, 96. B.S., Iowa State Col., 26; M.S., 27; Ph.D., Stanford, 29. Teaching fellow, Iowa State Col., 26, asst., 27-28; asst. prof. sanit. sciences, Stanford, 29-36, assoc. prof.,

36-; asst. prof. nat. sciences, *San Jose State Col.*, 29-31, assoc. prof., 31- Consultant, San Jose Water Co, 36- Soc. Bact. (chairman, north. Calif. branch, 35-37, councilor, 37-); Pasteur Soc. (pres. 36); Soc. Exp. Biol.; Pub. Health Asn; Calif. Sewage Works Asn. General and sanitary bacteriology.

Beard, Dr. R(alph) F(inney), Canada Dry Ginger Ale, Inc, 635 W. 54th St, New York, N. Y. Chemistry. Seattle, Wash, May 12, 89. B.S. N. Dak. Col, 12; Ph.D. Minnesota, 29. Asst. chemist, Oregon State Col, 13-16; asst. agr. chemist, N. Dak. Col, 16-17, cereal chemist, 19-22; asst. physical chem, Minnesota, 22-28; indust. fellow, Mellon Inst, 28-33; research chemist, *Can. Dry Ginger Ale, Inc.*, 33-34, plant manager, 34- Physical chemistry; food chemistry; chemical kinetics.

Bearden, Prof. J(oyce) A(lvin), Johns Hopkins University, Baltimore, Md. *²Physics. Greenville, S. C. Oct. 19, 03. A.B. Furman, 23; fellow, Chicago, 25, Ph.D. 26. Asst. Chicago, 23-25; instr. 26-29; assoc. physicks, *Hopkins*, 29-32, assoc. prof., 32- Fel. Physical Soc. Absolute x-ray intensities and electron distributions; the Compton effect; x-ray wavelengths by ruled and crystal gratings; refraction of x-rays; determination of charge on electron and of other fundamental constants; nuclear physics and radioactivity.

Beardslee, H(enry) C(urtilis), Perry, Ohio. Botany. Painesville, Ohio, Sept. 28, 65. A.B. Western Reserve, 39, A.M. 92. Teacher science, Univ. Sch., Cleveland, 90-01; senior master, Asheville Sch, 01-20. A.A.; Bot. Soc; Torrey Bot. Club; Phytopath. Soc; Ohio Acad. (trustee, 97-00); N. C. Acad. Fleshy fungi; fungous flora of North Carolina.

Beardsley, J(ames) W(allace), 214 Comstock Ave, Syracuse, N. Y. Civil engineering. Coventry, N. Y. Sept. 11, 60. C.E. Cornell, 91. Asst. engineer, sanit. dist, Chicago, 92-98; Deep Waterways Cmn, 98-00; canal and harbor works, C.Eng, U.S.A., 00-02; consulting engineer, Philippine Cmn, and director pub. works, P. I. 02-08; investigator irrig, Java, Burma, India and Egypt, 08-09; chief engineer, Irrig. Service, P. R. 10-16; asst. chief eng. surveys, Grand Canal, China, 18-19; engineer, Highway Cmn, Panama, 20-21; consulting engineer, 21-24; designing engineer, Int. Sewer Board, Syracuse, 25-26; consulting engineer on ports, Santo Domingo, 26-29; consulting engineer, 29- Consulting engineer, Ordnance Dept, U.S.A. 18. Civil Eng; West. Soc. Eng.

Beardsley, Martha L(ydla) (Mrs. James Ingram), 110 E. State St, Sharon, Pa. Biology. Rock Rapids, Iowa. A.B. Washington (St. Louis), 26, M.S. 27, Ph.D. 31. Instr. bot, Washington (St. Louis), 29-31; prof. biol, Sioux Falls Col, 31-33. Cytology of Funaria flavicans; fertilization.

Beardsley, Dr. Nel F(reeborn), 6109 Kimbark Ave, Chicago, Ill. Physics. Wadsworth, Ohio, Feb. 23, 92. B.S. Hiram Col, 13; M.S. Northwestern, 20; Ph.D. Chicago, 32. Assoc. prof. physics, Ga. Tech, 20-29; instr. Chicago, 29- A.A.; Physical Soc. Wave mechanics; calculations in theoretical physics.

Beardwood, Prof. Matthew, Ursinus College, Collegeville, Pa. Chemistry. Cape May City, N. J. June 22, 71. M.D. Medico-Chirurg. Col. of Phila, 94; Pennsylvania, 06-08; Sc.D., Ursinus Col, 16. Instr. chem. Medico-Chirurg. Col. of Phila, 96-99, lecturer clin. chem, 99-00, adj. prof. chem, 00-14, prof. chem. and toxicol, 14-16; chem, Ursinus Col, 03- Chem. Soc; Am. Med. Asn; Franklin Inst. Toxicology.

Beasley, Dr. W(illis) C(arter), U. S. Public Health Service, 19th St. and Constitution Ave, Washington, D. C. Statistics. Gilliam, Mo, Nov. 12, 01. A.B. Missouri, 26, A.M. 28; Ph.D., Ohio State, 32. Instr. math, Stephens Col, 26-27; psychol, Ohio State, 28-31; Hopkins, 31-35; regional supervisor, U. S. Pub. Health Service, 35-36, senior admin. officer, 36- Pub. Health Asn; Psychol. Asn; Acoustical Soc; Ohio Acad. Development in newborn infants; physiological acoustics; physiological optics; audiometric standards.

Beath, Prof. O(rville) A(ndrew), 815 University, Laramie, Wyo. Organic chemistry. Wis. Nov. 9, 84. A.B. Wisconsin, 08, A.M. 12. Instr. high sch, Wis, 08-10; asst. chemist, Forest Products Lab, U. S. Forest Service, 10-11; instr. chem, Kansas, 12-14; research chemist, Wyoming, 14-, prof. research chem. Fritzsche fellow, Wisconsin, 22; special poisonous plant investigator, Midwest Ref. Co, 20. Chem. Soc; Soc. Prom. Agr. Research. Plant chemistry; poisonous constituents of western range plants; activation by selenium of poisonous plants occurring on Cretaceous and post-Cretaceous shales.

Beaton, Dr. N(ell) S(tewart), 85 Richmond St, W, Toronto, Ont, Can. Economic geology. Ouray, Colo. Dec. 10, 04. B.Sc, Queen's (Can), 27, M.Sc, 31; Ph.D. Mass. Inst. Tech, 35. Field geologist, Rhodesian Anglo-American Corp, Africa, 27-30; with N. Am. Mines, Inc, 34- Asst, Mass. Inst. Tech, 32, 33, 34-35. Summers, Geol. Surv. Can, 31, 32; J. H. C. Waite Co, 33. Min. and Metal. Eng; Can. Inst. Min. and Metal. Wall rock alteration; private geological mapping and examinations.

Beattie, Prof. Frederick S(teere), Lowell Textile Institute, Lowell, Mass. Biochemistry. Central Falls, R. I. March 7, 84. Mass. Inst. Tech, 02-03; Ph.B. Brown, 06. Asst. chem, Brown, 06-07; instr, Lehigh, 07-09; science master, Tilton Sem, 09-11; instr. org. chem, Lowell Textile Inst, 18-20, asst. prof, 20- Chemistry of plants; formation of abnormal organic compounds in plants through disease.

Beattie, H(arold) G(oldsmithe), New York State Agricultural Experiment Station, Geneva, N. Y. Chemistry. Hall, N. Y. March 27, 96. B.S. Colgate, 21. Chemist, Ansco Co, Binghamton, N. Y. 21-22; N. Y. Exp. Sta, Geneva, 22-24; Niagara Sprayer and Chem. Co, Middleport, N. Y. 24-28, plant supt, 28-31; research assoc, N. Y. Exp. Sta, Geneva, 31- Chem. Soc. Insecticides; orchard soils and fertilization.

Beattie, Prof. James A(lexander), Massachusetts Institute of Technology, Cambridge, Mass. Chemistry. Louisville, Ky, July 24, 95. B.S. Mass. Inst. Tech, 17. M.S. 18, fellow, 19-20, Ph.D. 20. Research chemist, Am. Writing Paper Co, 16; asst. chem, Mass. Inst. Tech, 17-18, research assoc, 20-23; nat. research fellow, 21-23; cryogenic lab, Leiden, Holland, 22-23; asst. prof. physico-chem. research, Mass. Inst. Tech, 23-29, assoc. prof, 29- Chem. Soc; Physical Soc; Am. Acad. Physical chemistry; ionic theory; thermodynamics; equations of state; specific heats; gas and resistance thermometry; cryogenic measurements.

Beattie, J(ames) H(erbert), U. S. Department of Agriculture, Washington, D. C. Horticulture. Zanesville, Ohio, June 4, 82. B.S. Ohio State, 04; M.S. American Univ, 30. Bur. entom, U. S. Dept. Agr, 04-06, bur. soils, 06-12, bur. plant indust, 12-, assoc. horticulturist and senior horticulturist. Soc. Hort. Sci; Bot. Soc. Wash. Ecology of crop plants; injurious organic soil compounds; biometry of vegetable crops; sweet potatoes; peanuts; cucumbers; tomatoes.

Beattie, Dr. P(robert) W(alter), 37 Lexington Ave, Bloomfield, N. J. Chemistry. Owen Sound, Ont, Can, March 12, 02. B.Sc, Queen's (Can), 24, Milton Hersey fellow, 24-25, M.Sc, 25, Nat. Research Council Can. bursar, 25-26; Pub. Health Inst. fellow, Northwestern, 26-27, Halowax fellow, 28-29; Halowax fellow, Pa. State Col, 29-31, Ph.D. 32. Demonstrator chem. eng. and applied chem, Toronto, 27-28; org. research, Halowax Corp, 31- Metallic thorium and thorium alloys; reactivity of methylene groups; halogenated naphthalenes; mercuriated naphthalene; chlorination studies.

Beattie, R(olla) Kent, U. S. Department of Agriculture, Washington, D. C. Botany. Ashland, Ohio, Jan. 14, 75. A.B. Cotner Col, 95; B.S. Nebraska, 96, A.M. 98. Instr. high sch, Colo, 96-97; Wyo, 98-99; bot, State Col. Wash, 99-03, prof. and head dept. and botanist, Exp. Sta, 03-12; forest pathologist, U. S. Dept. Agr, 12-14, path. inspector, fed. hort. board, 14-19, pathologist in charge for plant quarantines, 19-27, senior pathologist, div. forest path, bur. plant indust, 27-28, prin. pathologist, 28- Summers, instr, Cotner Col, 93, Nebr. State Nor. Sch, 98, A.A.; Bot. Soc; Phytopath. Soc; Soc. Foresters; Torrey Bot. Club; Bot. Soc. Wash, (pres, 25); Biol. Soc. Wash. Plant pathology; flora of Palouse region, Washington and Oregon; geography of plant disease; the chestnut in the Orient; introduced forest tree diseases.

Beattie, W(illiam) R(enwick), U. S. Department of Agriculture, Washington, D. C. Agriculture. Zanesville, Ohio, Dec. 17, 70. B.S. M.S. Ohio State. Asst. bot, Ohio State, 96-98; asst. horticulturist, U. S. Dept. Agr, 99-12; agr. and indust. commissioner, St. Louis and Southwest, Ry, 12-18; horticulturist, bur. plant indust, U. S. Dept. Agr, 18-29, senior horticulturist, 29- A.A.; Veg. Growers Asn; Biol. Soc. Wash; Wash. Biol. Field Club. Horticulture.

Beatty, Dr. A(lvin) V(on Erl), University of Alabama, University, Ala. Botany. Continental, Ohio, Jan. 7, 09. A.B. Oberlin Col, 32; Blandy Exp. Farm fellow, Virginia, 32-36, Ph.D. 36. Instr. bot, Alabama, 37- Va. Acad. Genetics; cytology.

- Beatty, Dr. Harold A(shton)**, Ethyl Gasoline Corp, Detroit, Mich. *Chemistry*. Lexington, Ky, Sept. 27, 94. B.S. Princeton, 26, A.M., 27, Ph.D., 31. Research chemist, Ethyl Gasoline Corp, 31—A.A.; Chem. Soc. Autoxidation.
- Beatty, Prof. H(arry) M(illard)**, 200 Tibet Road, Columbus, Ohio. *Mathematics*. Darbyville, Ohio, Feb. 9, 83. A.B., Ohio Wesleyan, 08; A.M., Ohio State, 17. Sch. supt, Ohio, 08-11; instr. high sch, Ohio, 11-17; prin, 17-18; instr. math, Ohio State, 18-19; asst. prof., 19—Math. Asn.
- Beatty, Prof. Hugh Gibson**, 150 E. Broad St, Columbus, Ohio. *Otolaryngology*. Washington C. H., Ohio, Sept. 12, 80. Ph.G., Ohio State, 04; M.D., Starling-Ohio Med. Col, 10; Vienna, 26. Asst. ear, nose and throat, Ohio State, 14-16; instr. otolaryngol, 16-20; asst. prof., 20-28; assoc. prof. and later prof. and chairman dept., col. med., 28—Acad. Ophthalm. and Otolaryngol; Laryngol, Rhinol. and Otol. Soc; Am. Med. Asn; fel. Col. Surg; Bronchoscopy Soc. Cleft palate and lip; plastic surgery.
- Beatty, Prof. Stanley Albert**, 48 Chestnut St, Halifax, N. S., Can. *Biochemistry*. Thomasburg, Ont, Sept. 4, 98. B.A., Queen's (Can), 25, M.A., 26; Ph.D., McGill, 31. Asst. McGill, 27-29; asst. prof. and assoc. prof. biochem, fisheries exp. sta, Dalhousie, 30—Chemistry of soluble proteins of fish muscle.
- Beatty, Prof. E(dward) B(enjamin)**, Oregon State College, Corvallis, Oregon. *Mathematics*. Walkerton, Ind, Dec. 5, 76. B.S., Oregon State Col, 03; A.M., California, 16, 29. Teacher, Bishop Scott Acad, Portland, 03-04; prin. high sch, Wash, 04-08; instr. math, Oregon State Col, 08-12; asst. prof., 12-15; assoc. prof., 15-27; prof., 27—Math. Asn. Pascal configurations.
- Beaudette, Prof. F(rederic) R(obert)**, 194 College Ave, New Brunswick, N. J. *Poultry pathology*. Wichita, Kans, April 15, 97. D.V.M., Kans. State Col, 19. Instr. bacter, Kans. State Col, 19-21; asst. prof., 21-23; poultry pathologist, N. J. Exp. Sta, 23—; assoc. prof. poultry path, Rutgers, 26-29; prof., 29—Reporter, Int. Vet. Cong, London, 30. Poultry Sci. Asn; Soc. Parasitol; Micros. Soc. Epidemiology of fowl cholera; pullorum disease; typhoid, plague and infectious bronchitis in fowls; avian paratyphoids.
- Beaumont, Prof. A(rthur) B(lishop)**, 51 Amity St, Amherst, Mass. *Agronomy*. Waco, Texas, Jan. 21, 87. B.S., Kentucky, 08; Ph.D., Cornell, 18. Teacher, high sch, Oregon, 09-10; Oregon Nor. Sch, Monmouth, 11-13; asst. soil technol, Cornell, 13-17; assoc. prof. agron. and acting head dept, Mass. Col, 17-19; prof. soils, 19-31. Mass. State Col, 31—head dept, 19-33. A.A.; Soc. Agron. (v. pres, 30). Soil colloids; fertilizers.
- Beaumont, Prof. J(ohn) H(erbert)**, University of Hawaii, Honolulu, Hawaii. *Horticulture*. Wheeling, W. Va, March 23, 94. B.S.A. West Virginia, 17; Ph.D., Minnesota, 25. Instr. Minnesota, 19-25; asst. prof., 26-28; prof. hort. and head dept, N. C. State Col, 28-32; Maryland, 32-36; prin. horticulturist, Exp. Sta, Hawaii, 36—A.A.; Soc. Hort. Sci; Soc. Plant Physiol. Plant breeding; nutrition; hardiness; plant anatomy and cytology.
- Beavens, E(lmer) Arthur**, 17 Genesee Park, Geneva, N. Y. *Bacteriology*. Washington, D. C. June 15, 03. B.S. Maryland, 27, M.S., 29. Asst. Maryland; Mich. State Col; asst. bacteriologist and assoc. bacteriologist, food research div, bur. chem. and soils, U. S. Dept. Agr, 31—Pasteurization; chemical sterilization; microbial thermogenesis; food spoilage and preservation.
- Beaver, Dr. D(avid) J(ohn)**, Nitro, W. Va. *Chemistry*. Schenectady, N. Y., Feb. 23, 93. B.S. Union (N. Y.), 15; A.M., Columbia, 17, Ph.D., 21. Asst. anal. chem, Columbia, 18-21; research chemist, Firestone Tire and Rubber Co, 22-23; assoc. director research, Combustion Utilities Corp, 23-32; research chemist, Monsanto Chem. Co, Nitro, 33-36; asst. director research, 36—Research chemist, Gas Warfare Service, 17-19. A.A. The properties of colloid gold sols; the temperature of thermostats; thermal changes during vulcanization; abrasion tests of rubber stocks; carbon blacks on physical properties of rubber; pigment mixtures on rubber compounds; air-bomb aging test for tread compounds.
- Beaver, Prof. J(acob) J**, 75 Myrtle Blvd, Larchmont, N. Y. *Chemistry*. Schenectady, N. Y., Feb. 23, 93. B.S. Union (N. Y.), 15; A.M., Columbia, 16, Ph.D., 21. Instr. chem, Columbia, 21-29; asst. prof., 29—A.A.; Chem. Soc. Compound formation in phenolcresol mixtures; control of thermostats; photochemistry.
- Beaver, Prof. J(acob) Lynford**, 402 High St, Bethlehem, Pa. *Electrical engineering*. Near Phoenixville, Pa, Aug. 25, 82. E.E., Lehigh, 04, M.S., 21; Sc.D., Harvard, 32. Elec. inspector, N. Y. Fire Ins. Exchange, 04-05; instr. elec. eng, Pennsylvania, 05-07; senior instr, Drexel Inst, 07-17; dist. dept, Phila. Elec. Co, 17-18; asst. prof. elec. eng, Lehigh, 18-26; assoc. prof., 26-32; prof., 32—A.A.; fel. Elec. Eng. (nat. v. pres, 27-29; mem. nat. cmts, chairman, Lehigh Valley sect, 26); Eng. Educ; Lehigh Valley Eng. Club (mem, cmts). Alternating current; alternating current machinery; European power plant practice.
- Beaver, Prof. Paul C(hester)**, Lawrence College, Appleton, Wis. *Parasitology*. Glenwood, Ind, March 10, 05. A.B. Wabash Col, 28; M.S., Illinois, 29, Ph.D., 35. Asst. zool, Illinois, 28-29, 31-34; instr. Wyoming, 29-31; chairman biol, Oak Park Junior Col, 34-37; asst. prof. Lawrence Col, 37—Summers, instr. Montana, 35-37. A.A.; Soc. Parasitol; Micros. Soc; Ill. Acad. Helminthology; pathology; bacteriology.
- Beaver, Dr. Ralph A(lexander)**, New York State College for Teachers, Albany, N. Y. *Mathematics*. Esopus, N. Y., Dec. 17, 20. B.S., N. Y. State Col for Teachers, 24; A.M., Columbia, 28; Ph.D., Cornell, 32. Teacher, high sch, N. Y., 24-25; instr. math, N. Y. State Col for Teachers, 25-32; asst. prof., 32-Math. Soc; Math. Asn. Determinants.
- Beaver, Prof. W(illiam) C(arl)**, Wittenberg College, Springfield, Ohio. *Biology*. Whipple, Ohio, Dec. 29, 96. A.B., Marietta Col, 19; M.S., Ohio State, 20, Ph.D., 28. Instr. biol, Marietta Col, 20-21; asst. prof, Lafayette Col, 21-23; prof, Wittenberg Col, 23—Summer, bacteriologist, State Div. Conservation, Ohio, 29. A.A.; Pub. Health Asn; fel. Ohio Acad. Bacteriology; zoology; ichthyology.
- Beber, Dr. Meyer**, 1425 Medical Arts Bldg, Omaha, Nebr. *Medicine, Biochemistry*. Minsk, Russia, Dec. 27, 99. B.S., Nebraska, 20, fellow, 21-23; Ph.D., 25, M.D., 33; Harvard, 25. Instr. biochem, Nebraska, 23-27; asst. prof., 27-33; instr. internal med, 35—Enzymes; catalase; hormones.
- Bechdel, Prof. S(amuel) I(rvin)**, State College, Pa. *Dairy husbandry*. Blanchard, Pa, July 9, 86. B.S., Pa. State Col, 11, M.S., 16; Shevlin fellow, Minnesota, 22-23; Ph.D., 25. Bur. animal indust, U. S. Dept. Agr, 11-13; instr. dairy husbandry, Pa. State Col, 13-17; asst. prof., 17-19; assoc. prof., 19-26; prof., 26—, acting head dept, 35, in charge dairy production research, 26, 31, 35. Dairy Sci. Asn; Soc. Animal Production. Dairy cattle feeding; silage; vitamin requirements; pasture fertilization.
- Bechtel, Prof. A(lbert) R(eiff)**, Wabash College, Crawfordsville, Ind. *Botany*. Royersford, Pa, March 21, 82. B.S., A.M., Pennsylvania, 12; Ph.D., Cornell, 20. Teacher and prin. schs, Pa, 03-08; asst. instr. bot, Pa. State Col, 13, instr., 14; N. Y. State Col. Agr, Cornell, 14-20; prof, Wabash Col, 20-Bot. Soc; Mycol. Soc. Taxonomy of seed plants.
- Bechtel, Dr. H(enry) Ernest**, Box 68, N. End Sta, Detroit, Mich. *Dairy husbandry*. Collegeville, Pa, May 17, 09. B.S., Pa. State Col, 31; M.S., Mich. State Col, 33, Ph.D., 35. Asst. dairying, Mich. State Col, 31-33, tech. asst, 33-35; research dept, Larrove Milling Co, 35—Dairy Sci. Asn. Vitamin D milk; histopathological changes in rickets; etiology of perosis.
- Bechtold, Frank, Jr.**, 8 Columbia Ave, Cranford, N. J. *Chemistry*. Brooklyn, N. Y., Aug. 5, 96. B.S., Polytech. Inst. Brooklyn, 18. Anal. chemist, Doeblin Die Casting Co, 18-19, supervising chemist, 19-20; asst. chief chemist, U. S. Aluminum Co, 20-28; chief chemist, 28-33; Garwood plant, Aluminum Co. of Amer, 33—Chem. Soc; Soc. Metals.
- Beck, Dr. Claude S(chaefer)**, Lakeside Hospital, Cleveland, Ohio. *Medicine*. Shamokin, Pa, Nov. 8, 94. A.B., Franklin and Marshall Col, 16, hon. Sc.D., 37; M.D., Hopkins, 21. Res. house officer, Hopkins Hosp, 21-22; asst. res. surgeon, New Haven Hosp, 22-23; Arthur Tracy Cabot fellow, Harvard Med. Sch, and assoc. surg, Peter Bent Brigham Hosp, 23-24; G. W. Crile fellow, sch. med, Western Reserve, 24-25, instr. surg, 25-28; asst. prof., 28-33; assoc. prof., 33—, res. surgeon, Lakeside Hosp, 25-26, attending surgeon, 26-27; assoc. surgeon, 27—Prof. pro tem, Emory, 30. Am. Med. Asn; Col. Surg; Surg. Asn; Soc. Clin. Surg; Asn. Thoracic Surg; Soc. Exp. Path; Soc. Exp. Biol; East. Surg. Soc. Surgery of the heart; mitral stenosis; suture of wounds; renal counterbalance; lymph

pressure; cardiovalvulotome; the pericardium; spindle cell sarcoma; operative treatment of circulatory failure; qualitative and quantitative measurements of the effect of atmospheric pressure upon the heart; the significance of pneumocardiatic tamponade in relation to the surgery of the thorax; new blood supply to the heart by operation.

Beck, Dr. D. E (Iden), Dixie Junior College, St. George, Utah. *Biology*. Spanish Fork, Utah, April 11, 06. A.B., Brigham Young, 29, fellow, 29-30, A.M., 30; fellow, Iowa State Col, 31, Ph.D., 33. Asst., Brigham Young, 30; head dept. biol., Dixie Junior Col, 33—Summer, prof., Brigham Young, 35. Leader, Brigham Young expeds, Chihuahua, Mex, 32, Mexico City, 34. Utah Acad. Insect morphology; copulatory organs of male Hymenoptera; distribution of larger fauna of southwestern Utah; flora and faunistic succession on islands in Lake Mead of the Boulder Dam Area, Boulder, Nevada.

Beck, Prof. E (dwin) C (eell), Ontario Agricultural College, Guelph, Ont., Can. *Agricultural bacteriology*. Gateshead-on-Tyne, Eng., May 19, 00. B.S.A., Ont. Agr. Col, 28; M.A., Toronto, 32. Asst. bot., Toronto, 28; asst. provincial bacteriologist, Dept. Pub. Health, Toronto, 28-30; lecturer bot., Toronto, 30-36; prof. bact. and head dept., Ont. Agr. Col, 36-38. Biological methods of differentiating closely related fungi; immunology.

Beck, Prof. F (rederick) J (ohn), Jr., 51 Day Spring Ave., Hamden, Conn. *Electrical engineering, Physics*. E.E., Polytech. Inst., Brooklyn, 25; Ph.D., Yale, 32. With Westinghouse Elec. and Mfg. Co, 25-26; Bell Tel. Labs, 26-28; asst. prof. elect. eng., Yale, 28—Elec. Eng.; Physical Soc. Magnetism.

Beck, Prof. Herbert H (nebener), Franklin and Marshall College, Lancaster, Pa. *Chemistry*. Lititz, Pa., Nov. 15, 75. B.S., Lehigh, 96; Königliche Technische Hochschule, Berlin, 04; hon. Sc.D., Franklin and Marshall Col, 35. Pa. Soap Co, 96-01; from instr. to prof. chem. and miner. and head dept., Franklin and Marshall Col, 09—Trustee, Linden Hall Sem., Lititz, Pa., 20—Chem. Soc; assoc. mem. Ornith. Union; assoc. mem. Delaware Valley Ornith. Club. Mineralogy, ornithology and history of Lancaster County; occult sense of birds.

Beck, Dr. Joseph C (lar), 185 N. Wabash Ave., Chicago, Ill. *Medicine*. Czechoslovakia, Sept. 26, 70. M.D., Illinois, 95. Prof. otolaryngol., col. med., Illinois, 04-32, emer. prof., 32—Attending surgeon, Cook County Hosp, 05—; head dept. ear, nose and throat, North Chicago Hosp, 04—; consultant otolaryngol., Himes Vet. Hosp, 28; senior otolaryngologist, Michael Reese Hosp, 30—; Mt. Sinai Hosp; senior otolaryngologist and head dept., Henrotin Hosp, Czechoslovak Army, 18-19; lieut.-col., M.R.C., 19. Am. Med. Asn. (pres. sect. otolaryngol, 19); Otol. Soc; Acad. Ophthal. and Otolaryngol. (pres, 14); Laryngol., Rhinol. and Otol. Soc. (pres, 32); Laryngol. Asn; Bronchosopic Soc. (pres, 36); Col. Surg; Chicago Otolaryngol. Soc. (pres, 09). Surgery of the head and neck.

Beck, Prof. L (ester) F (red), University of Oregon, Eugene, Oregon. *Psychology*. Hildebrand, Oregon, April 27, 09. A.B., Oregon, 30, A.M., 31; Sharpe fellow, Brown, 32-33, Ph.D., 33. Instr. psychol., Brown, 33-34; asst. prof., Oregon, 34—Oregon Psychol. Assn. (sec'y, 37). Genetic and abnormal psychology.

Beck, Dr. L (yle) V (bert), University of Pennsylvania School of Medicine, Philadelphia, Pa. *Biology*. Lebanon, Ind., April 19, 06. A.B., Wabash Col, 28; M.S., Washington (St. Louis), 30; Ph.D., Pittsburgh, 33. Asst. anat., Washington (St. Louis), 28-30; physiol., N. Y. Univ., 30-31; Pittsburgh, 31-33; Lilly fellow, N. Y. Univ., 33-34; asst., Pennsylvania, 34-35; Van Cott fellow, L. I. Col. Med., 35-36; research fellow, sch. med., Pennsylvania, 36—A.A. Intracellular oxidation reduction phenomena; cell permeability; physiology and anatomy of the kidney.

Beck, Dr. S (amuel) J (acob), 6026 Kenwood Ave., Chicago, Ill. *Psychology*. Tecuci, Rumania, July 19, 96. A.B., Harvard, 26; A.M., Columbia, 27, Ph.D., 32. Fellow psychol., Inst. Child Guidance, New York, 27-28; psychologist, Board Guardians, N. Y., 28-29; senior res. psychologist, Boston Psychopath. Hosp, 29-32; research assoc. psychol., dept. psychiat., Harvard Med. Sch., 32-33; research fellow psychiat., Rockefeller Foundation, 33-35; head psychol. lab., Michael Reese Hosp, 35—Ed. board, Jour. Orthopsychiat. A.A.; assoc. Psychol. Asn; fel. Orthopsychiat. Asn. Personality; interaction of affective with intellectual traits as measured by the Rorschach technique.

Beck, Dr. Thomas M (ilton), 6150 Greenwood Ave., Chicago, Ill. *Chemistry*. Holton, Kans., July 1, 07. A.B., Kansas, 28; Ph.D., Chicago, 32. Chemist, Girdler Corp., Louisville, Ky., 29-30; *Victor Chem. Works*, Chicago Heights, Ill., 35—Science ed., 'Chicago Tribune,' 34—Chem. Soc.

Beck, Prof. W (illiam) A (nthony), University of Dayton, Dayton, Ohio. *Plant physiology*. Pittsburgh, Pa., Dec. 17, 83. B.S., St. Mary's Col. (Ohio), 09; M.S., Freiburg, Switzerland, 12, Ph.D., 26. Prof. physics, St. Mary's Col. (Ohio), 12-24; bot., Dayton, 26—Exchange prof., St. Gregory Sem., Cincinnati, Ohio, 33-34; mem. staff, In-titutum Divi Thomae, 35-37. Diploma and gold medal, Int. Expos. Inventions, N. Y., 23. A.A.; Soc. Plant Physiol.; Microsc. Soc. Microscopy; physics; osmotic quantities; permeability of cells; plasmolyzing agents; effect of physical factors on Og in plant tissues and on pigment production; the quantitative determination of plant pigments.

Beckenbach, Dr. E (dwin) F (ord), Rice Institute, Houston, Texas. *Mathematics*. Dallas, Texas, July 18, 06. A.B., Rice Inst., 28, fellow, 28-31, A.M., 29, Ph.D., 31. Nat. research fellow math., Princeton, Ohio State and Chicago, 31-33; instr., Rice Inst., 33—Math. Soc. Hermitian determinants; minimal surfaces; surfaces of negative curvature; subharmonic functions.

Becker, Dr. A (lbert) J (ohn), Ohio Valley Hardware and Roofing Co., Evansville, Ind. *Applied mechanics*. Evansville, Ind., Oct. 6, 77. B.S., Michigan, 03, M.E., 07; Ph.D., Illinois, 15. Instr. mech. eng., North Dakota, 04-06, asst. prof., 06-07, prof. applied math., 07-19; sec'y-treas., Ohio Valley Hardware and Roofing Co., 20—Mech. Eng.; Eng. Educ. Strength of materials; bi-axial loading of mild steel; effect of temperature on the strength of concrete.

Becker, Dr. A (rman) E (ward), Standard Oil Development Co, 26 Broadway, New York, N. Y. *Physics*. Lowell, Ohio, Sept. 1, 86. A.B., Marietta Col., 09; A.M., Harvard, 10, Ph.D., 17. Instr. physics, eng. sch., Tufts Col., 11-12; physicist, Aluminum Castings Co, 19-20; fuel and lubrication, Standard Oil Develop. Co., 20—Physicist, Nat. Advisory Cmt. Aerodynamics, 17-18. A.A.; Physical Soc.; Soc. Automotive Eng. (v. pres., 33); Soc. Test. Mat.; Petrol. Inst. Engineering and development; Zeeman effect and series spectra; lubrication; automotive fuels and detonation.

Becker, Dr. C (harles) B (runner), 3028 Banksville Road, Pittsburgh, Pa. *Chemistry*. Peru, Ill., Aug. 25, 06. B.S., Chicago, 28, M.S., 29; fellow, Illinois, 30-31, Ph.D., 32. Teaching scholar, Chicago, 28-29; instr., Illinois, 29-30; research chemist, Shell Petrol. Corp., 32-36; indust. fellow, Mellon Inst., 36-Summer, asst., Inst. Paper Chem., Lawrence Col., 36. Chem. Soc. Organic chemistry.

Becker, Prof. Elery R (onald), Iowa State College, Ames, Iowa. *Zoology*. Sterling, Ill., Dec. 5, 96. A.B., Colorado, 20; Sc.D., Hopkins, 23. Instr. biol., Princeton, 23-25; assoc. prof., Iowa State Col., 25-34, prof., 34—Ed. board, Jour. Parasitol., 34—A.A. (councilor, 34); Soc. Zool.; Microsc. Soc. (exec. cmt., 33-); Soc. Parasitol.; Soc. Exp. Biol. Protozoology; parasitology; coccidia; host-parasite relationships.

Becker, George G (rover), U. S. Department of Agriculture, Washington, D. C. *Entomology*. Baltimore, Md., Feb. 2, 89. B.S.A., Cornell, 10. Asst. entomologist, Exp. Sta., Arkansas, 10-12, acting entomologist, 12-13, entomologist, 14-18; chief inspector, State Plant Board, Ark., 19-26; senior entomologist, div. for plant quarantines, bur. entom. and plant quarantine, U. S. Dept. Agr., 26—A.A.; Asn. Econ. Entom.; Entom. Soc. Wash. Round-headed apple-tree borer; peach-tree borer; woolly aphid.

Becker, Prof. H (enry) F (loyd), Florida State College for Women, Tallahassee, Fla. *Geography*. White Rock, S. Dak., April 30, 98. B.S., Chicago, 24, M.S., 25. Instr. geog., Marshall Col., 25-26; high sch., Univ. Chicago, 26-28; assoc. prof., Fla. State Col. for Women, 28—Summers, instr., Marshall Col., 25-28. Geography of Florida; geography techniques.

Becker, Dr. Joseph A (dam), 463 West St., New York, N. Y. *⁵Physics. Saar Dist., Germany, Jan. 24, 97. A.B., Cornell, 18, Ph.D., 22. Instr. physics, Cornell, 19-22; nat. research fellow and instr., Calif. Inst. Tech., 22-24; research physicist, Bell Tel. Labs., 24—Acting asst. prof., Stanford, 24. Assoc. ed., 'Rev. Sci. Instruments,' 32—A.A.; Physical Soc. (membership cmt., 32-). Thermionics; adsorption; magnetism; x-rays; semi-conductors and variators.

- Becker, Joseph A(lloysius)**, 220 Baltimore Ave, Takoma Park, Md. *Statistics*. Hurley, Wis., Feb. 18, 91. B.S.A., Wisconsin, 14, M.S. 16. Farm help specialist for Wis., U. S. Office Farm Management, 17; field agent, Ohio Bur. Crop Estimates, 18; U. S. Bur. Crop Estimates and statistician, State Dept. Agr., Wis., 19-22; from agr. statistician to *prin. agr. statistician, div. crop and livestock estimates, bur. agr. econ.*, U. S. Dept. Agr., 23- Del. gen. assembly, Int. Inst. Agr., 24. Sergt. major, U.S.A., 18. Statist. Asn.; Farm Econ. Asn. Statistical methods in crop estimating and forecasting.
- Becker, Dr. R(aymond) B(rown)**, University of Florida, Gainesville, Fla. *Animal husbandry*. Clermont, Iowa, Dec. 13, 92. B.S., Iowa State Col., 16, M.S. 20; Ph.D., Minnesota, 25. In charge official testing and state institutional herds and instr. dairy husbandry, Kans. State Col., 20-23; instr., Minnesota, 24-25; assoc. prof., Okla. Agr. and Mech. Col., and assoc. dairy husbandman, Exp. Sta., 25-28; assoc. dairy husbandry, Exp. Sta., Florida, 29-32, specialist, 32-34, dairy husbandman, 34-, prof. dairy husbandry and animal nutrition, univ., 35- Sergt., U.S.A., 17-18. Soc. Animal Production; Dairy Sci. Asn. (sec'y, production sect, 28, v. chairman, south. sect., 30, chairman, 31). Mineral nutrition in cattle; relative value of feeds; official testing; improvement of dairy cattle breeds.
- Becker, Prof. S(amuel) William**, University of Chicago, Chicago, Ill. *Dermatology*. Benton Harbor, Mich., July 11, 94. B.S., Michigan, 18, M.D., 21; M.S., Minnesota, 28. Asst. prof. *dermat*, Chicago, 27-30; assoc. prof., 30- Melanin pigmentation; neurogenic dermatoses.
- Becker, Prof. S(yrus) A.** Lehigh University, Bethlehem, Pa. *Civil engineering*. Northampton, Pa. C.E., Lehigh, 03, M.S. 09. Asst. engineer, maintenance way dept. Baltimore and Ohio R. R., 03-04; struct. drafting, Am. Bridge Co. Pa. 04-05; Mo. Pacific Ry., 05-06; instr. civil eng., Lehigh, 06-13, asst. prof., 13-20; assoc. prof., 20-; consulting engineer, 09- Civil Eng.; Road Builders Asn.; Lehigh Valley Eng. Club. Problem layouts in descriptive geometry; street paving; sewerage systems; earthen dam and storage reservoir; flood damages; failure of coke ovens; water supply purification; land improvements; soil stabilization.
- Becket, Dr. F(rederic) M(ark)**, 30 E. 42nd St, New York, N. Y. *Metallurgy*. Montreal, Que., Can., Jan. 11, 75. B.A.Sc., McGill, 95, LL.D., 34; A.M., Columbia, 99, 00-02, Sc.D., 29. Westinghouse Elec. and Mfg. Co., 95-96; Acker Process Co., 96-98, 99-00; Ampere Electrochem. Co., 02-03; Niagara Research Labs, 03-06; *Electro Metal. Co. and Union Carbide Co.*, 06-, pres., 37- Perkin medal, 24; Acheson medal and prize, 37. A.A. Min. and Metal Eng. (pres., 33); Min. and Metal. Soc.; Soc. Metals; Soc. Test. Mat.; hon. mem. Electrochem. Soc. (pres., 25); Chem. Soc.; British Iron and Steel Inst. Electrometallurgical inventions.
- Beckham, Dr. Leland J(ames)**, The Solvay Process Co., Solvay, N. Y. *Organic chemistry*. Pluma, S. Dak., June 20, 08. P.E., Colo. Sch. Mines, 30; Ph.D., Wisconsin, 34. Instr. chem., Wisconsin, 30-34; *research chemist*, Solvay Process Co., 34-Chem. Soc. Methods for hydrocarbon vapor analysis; alcoholysis of 1-3 diketones and beta keto esters.
- Becking, Prof. L(eurens Gerhard Marinus) B(aas-)**, University of Leiden, Leiden, Holland. *Physiology*. Deventer, Holland, Jan. 4, 95. A.B., Utrecht, 18, A.M., 19, D.Sc., 21; Ph.D., Stanford, 21. Instr. bot., Stanford, 21-22, asst. prof. econ. biol., 22-25; prof. biol., 25-30; *bot. and director bot. inst.*, Leiden, 30- Consultant, bur. chem., U. S. Dept. Agr., 24-25. Bot. Soc.; Soc. Plant Physiol.; Soc. Exp. Biol.; Chem. Soc.; Utrecht Acad.; Netherlands Bot. Soc.; Royal Acad. Science, Netherlands; Netherlands Zool. Soc. Physiology of the cell; microbiology.
- Beckman, Prof. Arnold O(rville)**, 1970 Crescent Drive, Altadena, Calif. *Chemistry*. Culver, Ill., April 10, 00. B.S., Illinois, 22, M.S., 23; Ph.D., Calif. Inst. Tech., 28. Bell Tel. Labs, 24-26; instr. chem., Calif. Inst. Tech., 28-29, asst. prof., 29- Chem. Soc. Physical chemistry; photochemistry.
- Beckman, Prof. Harry**, Marquette University School of Medicine, Milwaukee, Wis. *Pharmacology*. Louisville, Ky., Aug. 14, 92. M.D., Louisville, 21. Instr. physiol. and pharmacol., sch. med., Marquette, 23-24, asst. prof., 24-25, assoc. prof. pharmacol. and acting director dept., 25-26, prof. and director dept., 26- A.A.; fel. Am. Med. Asn.; Asn. Study Allergy; Therapeut. Soc.; Soc. Pharmacol.; Soc. Exp. Biol.; Milwaukee Acad. Med. Synergism; colonic anesthesia; fermentments; allergy; therapeutics.
- Beckman, H(enry) C(laus)**, P. O. Box 138, Rolla, Mo. *Engineering*. Muscatine, Iowa, Feb. 15, 88. B.S., Iowa State Col., 12, C.E., 17. Instrument man, Chicago and Northwest Ry., 12-13; eng. inspector, Railroad Cmn., Wis., 13-16; hydraulic engineer, water resources branch, U. S. Geol. Surv., 16-19; engineer, Cent. States Eng. Co., Iowa, 19-23; dist. engineer, water resources branch, U. S. Geol. Surv., 23- Civil Eng.; Mo. Acad. (cmt. conservation, 37-). Stream-flow.
- Beckman, John W(oode)**, 7157 Chabot Road, Oakland, Calif. *Chemistry*. Stockholm, Sweden, Dec. 26, 81. Chem. E., Tech. Högskolan, Stockholm. Formerly research chemist, Gen. Elec. Co., Aluminum Co. of Amer. and Am. Cyanamid Co.; consulting chemist, 10- Chem. Soc.; Electrochem. Soc. (v. pres., 17). Biochemistry; electrochemistry; inorganic chemistry; metallurgy; thermodynamics.
- Beckmann, Dr. Charles O(tto)**, 895 Sterling Place, Brooklyn, N. Y. *Chemistry*. New York, N. Y., Feb. 21, 04. B.S., Polytech. Inst. Brooklyn, 24, A.M., 25; Ph.D., Columbia, 29; Munich, 29-30. Instr. anal. chem., Polytech. Inst. Brooklyn, 27-29; chem., Columbia, 30- Chem. Soc. Chemistry of corn starch; derivatives of furfuryl alcohol and furoic acid; refractions of ions in dilute solution; dipole moments and molecular structure; solvent action on optical rotatory power; theory of liquids.
- Becknell, Prof. G(uy) G(aillard)**, 6900 Dixon Ave, Tampa, Fla. *Physics*. Milford, Ind., April 16, 78. B.S., Northwestern, 04, fellow, 05, M.S., 05; hon. fellow, Clark, 08-09, senior fellow, 09-11, Ph.D., 11. Instr. physics, Purdue, 05-08; asst., Clark, 08-09; prof., Mt. Allison, 11-12; instr., Syracuse, 12-14; Northwestern, 14-15; Pittsburgh, 16-17, asst. prof., 17-20, prof., 20-24; Tampa, 33- A.A.; Physical Soc. Residual electromotive force in carbon arcs; demagnetization of iron and steel; diffraction evolutes.
- Beckner, Col. Lucien**, 311 W. Chestnut St., Louisville, Ky. *Geology*. Winchester, Ky., Dec. 29, 72. Centre Col., 91-93, 96; Kentucky, 93. Consulting geologist, 95- Consulting geologist, Atlantic Oil Co., 18-; Superior Oil Co., 19-; Louisville Gas and Elec. Co., 26- A.A.; Appalachian Geol. Soc.; Ky. Ornith. Soc.; Ky. Archeol. Soc.; Ky. Acad. (pres., 24); Louisville Astron. Soc. Gas reserves and sedimentary strata in subsurface of eastern Kentucky; Utica shale and oil in the Ordovician in Kentucky; subsurface conditions in the Mississippi Valley.
- Becks, Prof. H(ermann)**, 154 Yerba Buena Ave, San Francisco, Calif. *Pathology*. Wesel am Rhein, Germany, Aug. 24, 97. Dr. med. dent., Rostock, 22 M.D., 24. Instr. dental col., Freiburg, 24-28; research assoc. med., Hooper Foundation, California, 28-30, asst. prof. path., 30- dental col., 32-34, assoc. prof. dental med., 34- Fel. Col. Dentists; hon. mem. Southwest. Dental Soc.; Pacific Soc. Prosthodontists; Calif. Acad. Periodontol. Dental pathology; histopathology of bone and oral tissue; determination of electrolytes in body fluid under normal and pathologic conditions; nutrition in animals.
- Beckstrand, Prof. E(ilas) H(yrum)**, University of Utah, Salt Lake City, Utah. *Engineering*. Meadow, Utah. B.S. (E.E.), Michigan, 00; M.M.E., Cornell, 01. Prof. mech. eng., Utah, 02- Engineer, Yampa tramway, Bingham, Utah. Mech. Eng.; Soc. Test. Mat. Testing of brick and macadam rock; testing and value of lubricating oils; effect of alkalies on concrete; low temperature carbonization of coal by means of superheated steam.
- Beckstrom, R(obert) C(arl)**, 3168 S. Woodward, Tulsa, Okla. *Petroleum engineering*. Axtell, Nebr., Sept. 22, 88. A.B., Oklahoma, 20, A.M., 21. Instr. in charge petrol. technol., Oklahoma, 22-23; prof. and head petrol. eng., Colo. Sch. Mines, 23-28; consulting petrol. engineer. Lecturer, Denver Inst. Tech., 25-26; consulting petrol. engineer, Russian Govt., 29-31. Petrol. Inst.; Min. and Metal. Eng.; Asn. Petrol. Geol. Recovery of oil from oil sands; migration, accumulation and origin of petroleum; action of clays in contact filtration; paraffin in oil production.
- Beckwith, Angle M(aria)**, U. S. Department of Agriculture, Washington, D. C. *Plant pathology*. Grand Rapids, Mich., Jan. 27, 81. A.B., Michigan, 04; Chicago, 04-05. Asst. biol. lab., Vassar Col., 06-08; expert xylotomist, U. S. Forest Service, 08-10; sci. asst., bur. plant indust. and later bur. entom. and

plant quarantine, U. S. Dept. Agr, 10- A.A; Phytopath. Soc. Grape root rot; Rubus diseases.

Beckwith, Charles Stewart, Pemberton, N. J. Entomology. Olean, N. Y., May 16, 91. B.S., Rutgers, 14, M.S., 24. Asst. entomologist, *N. J. Exp. Sta*, 14-27, assoc. entomologist, 27-31, cranberry specialist, 20-31, chief cranberry and blueberry investigations, 31- A.A; Asn. Econ. Entom.; Cranberry Growers' Asn. (sec'y-treas, 23-); Blueberry Asn. (sec'y, 30-35). Mosquito control; cranberries; blueberries.

Beckwith, Prof. Cora J(Ipson), Vassar College, Poughkeepsie, N. Y. Zoology. Grand Rapids, Mich., March 24, 75. B.S., Michigan, 00; A.M., Columbia, 08, Ph.D., 14. Asst. biol., *Vassar Col*, 00-02, instr. zool., 02-13, asst. prof., 14-15, assoc. prof., 15-28, prof., 28- A.A; Soc. Nat.; Soc. Zool. Lateral line organ in *Amia calva*; cytology of hydroid germ cells; lens removal in eye of Amblystoma.

Beckwith, Prof. Ethelwynn R(ice) (Mrs. William E. Beckwith), Milwaukee-Downer College, Milwaukee, Wis. Statistics. Hartford, Conn., Jan. 7, 78. Ph.B., Oberlin Col., 00; A.M., Western Reserve, 09; Ph.D., Radcliffe Col., 25. Instr. math., Western Reserve, 10-17, asst. prof., 17-20; acting asst. prof., Vassar Col., 21-22; acting head dept., col. for women, Western Reserve, 24-25; prof. and head dept., Milwaukee-Downer Col., 25- A.A; Statist. Asn.; Math. Soc.; Math. Asn.; Wis. Acad.

Beckwith, Prof. Radcliffe H(arold), University of Wyoming, Laramie, Wyo. Geology. Burlington, Iowa, May 20, 00. B.A., Oxford, 23; Ph.D., Columbia, 28. Geologist, Cent. Asiatic exped., Am. Museum Nat. Hist., 26-27; instr. geol., Ohio State, 27-28; Wyoming, 28-31, asst. prof., 31-34, assoc. prof., 34- Economic geology; petrology.

Beckwith, Prof. T(hodore) D(ay), University of California at Los Angeles, Los Angeles, Calif. Bacteriology. Utica, N. Y., Dec. 8, 79. B.S., Hamilton Col., 04, Root fellow, 04, M.S., 07; Ph.D., California, 20. Sci. asst., U. S. Dept. Agr., 04-07; asst. prof. bacter. and plant path., N. Dak. Col., 07-10, prof. bacter., 10-11, asst. botanist, Exp. Sta., 07-11; head dept. bacter., Oregon Col., and bacteriologist, Exp. Sta., 11-20; assoc. prof. bacter., California, 20-32, *California at Los Angeles*, 32-34, prof., 34-, chairman dept., 35-, research ussoc., Exp. Sta., California, 33- Capt. Sanit. C., 18. A.A.; Soc. Bact. (chairman, south, Calif. sect., 37); Soc. Exp. Biol. (sec'y, Pacific Coast sect., 25-32, pres. South. Calif. sect., 35); Pub. Health Asn.; Calif. Acad.; Pacific Coast Soc. Oceanog. Water supplies; germicides; experimental pathology; medical and dental bacteriology; pulp and paper disintegration.

Becraft, Prof. R(aymond) J(ohn), 534 N. Hayes, Moscow, Idaho. Forestry. Ogden, Utah, March 16, 90. B.S., Utah Col., 17; M.S., Iowa State Col., 23. Grazing examiner, U. S. Forest Service, 17-18; from asst. prof. to prof. range management, Utah State Col., 18-35; *Idaho*, 35- Ecol. Soc. Range ecology, reseeding and management; watershed protection.

Bedell, E(ual) H(udson), Western Electric Co., Hawthorne Station, Chicago, Ill. Acoustics. Jasper, Mo., April 10, 02. B.S., Drury Col., 24. Asst. physics, Missouri, 24-25; mem. tech. staff, Bell Tel. Labs., 25-37; mfg. engineer, West Elec. Co., 37- Acoustical Soc. Sound transmission and absorption; acoustic impedance; architectural acoustics.

Bedell, Prof. Frederick, Cornell University, Ithaca, N. Y. *Physics, Electrical engineering. Brooklyn, N. Y., April 12, 68. A.B., Yale, 90; M.S., Cornell, 91, fellow, 91-92, Ph.D., 92. Instr. physics, Cornell, 92-93, asst. prof., 93-04, prof., 04-37, emer. prof., 37- Assoc. ed., 'Physical Rev.' 93-12, managing ed., 13-22. A.A. (sec'y, B., 97, sec'y council, 98, gen. sec'y, 99); Physical Soc.; Elec. Eng. (manager, 14-16, v. pres., 17). Alternating currents; aerodynamics; electronics; audition; bio-physics.

Bedford, Prof. M(atthew) Hume, 217 University Ave., Lexington, Ky. Chemistry. Bourbon Co., Ky., Jan. 6, 83. A.B., Cent. Univ. of Ky., 03; Ph.D., Pennsylvania, 05. Instr. chem., Maine, 05-07; Illinois, 08; adj. prof., Virginia, 08-09; chemist, prospecting party, A. C. Burrage, Ariz., 09; E. I. du Pont de Nemours Powder Co., 10-13; consulting gas chemist, C. C. Tutwiller, 13; instr. physical chem., Kentucky, 13-17, asst. prof., 19-28, assoc. prof., 28-31, prof., 31- Inspector, bur. steam eng., U.S.N., 17-19. A.A.; Chem. Soc. Columbians; electrolytic determination of lead; determination of zinc in treated wood;

double fluorides of titanium and zirconium; electrometric titrations of arsenates, phosphates and arsenites; kinetics of reactions.

Bedwell, Dr. J(esse) L(eonard), 1908 N. E. Schuyler St., Portland, Oregon. Forest pathology. Grand Junction, Colo., Dec. 8, 92. B.S. (Forestry), Idaho, 20; M.S., Oregon State Col., 24; Ph.D., Yale, 32. Field asst. grazing studies, U. S. Forest Service, 14-17, dist. forest ranger, 17, 19-22; asst. bot. and path., Oregon State Col., 22-24; asst. pathologist, bur. plant indust., U. S. Dept. Agr., 24-30, assoc. pathologist, div. forest path., 30-35, pathologist, 35- 2nd lieut. Inf., 17-19. A.A.; Soc. Foresters; Phytopath. Soc. General forest pathology; grazing; white pine blister rust; chestnut blight.

Beebe, C(larence) W(alter), 3565 Tenth St., N. W., Washington, D. C. Chemistry. King City, Calif., Sept. 23, 93. B.S., California, 17. Chemist, Kullman, Salz and Co., 17-28; bur. chem. and soils, U. S. Dept. Agr., 29- Leather Chemists Asn. Leather chemistry; comparative resistance of different types of leather to acid deterioration; increased life of leather due to changes in tanning and finishing.

Beebe, Dr. Elinor Lee, University of California at Los Angeles, Los Angeles, Calif. Psychology. Udall, Kans., April 15, 92. A.B., Fairmount Col., 14; A.M., Columbia, 28; nat. research scholar, Hopkins, 28-30, Ph.D., 32. State advisory nurse, educ. program, State Dept. Health, Kans., 24; asst. director, home hygiene service, nat. headquarters, Am. Red Cross, 25; half-time instr. nursing educ., Columbia, 26-27; director child develop. and parent educ., Board Educ., Albany, N. Y., 30-35; asst. prof. pub. health nursing, sch. nursing, Yale, 36-37; California at Los Angeles, 37- Summers, director teacher training program, Am. Red Cross, Colo. State Col., 24-28; California at Los Angeles, 30, 33-37. Assoc. Psychol. Asn.; Nurses Asn.; Asn. Childhood Educ.; Soc. Research Child Develop.; Nat. League Nursing Educ.; Nat. Organization Pub. Health Nursing. Nursing education child development; motor learning of children in relation to nutrition; preschool children's interest in books; educational activities of the preschool period; development of clinical and public health aspects in nursing education.

Beebe, Murray C(harles), Scovill Manufacturing Co., Waterbury, Conn. Electrical engineering. Racine, Wis., Feb. 25, 76. B.S., Wisconsin, 97. Instr. elec. eng., Wisconsin, 97-00; research dept., Nernst Lamp Co., 00-04; assoc. prof. elec. eng., Wisconsin, 05-07, prof., 07-18; West. Elec. Co., 19; chief engineer, Wadsworth Watch Case Co., 20-25; director lab., Scovill Mfg. Co., 25- Elec. Eng.; Chem. Soc. Electric lighting; chemistry of rare earths; metallurgy; photographic and printing processes; metal finishes.

Beebe, Prof. Ralph A(lonzo), Amherst College, Amherst, Mass. Chemistry. Monson, Mass., March 8, 98. A.B., Amherst Col., 20; Ph.D., Princeton, 23. Instr. chem., Amherst Col., 23-25, assoc. prof., 25-37, prof., 37- Chem. Soc. Adsorption theory of catalysis; heat of adsorption; electrometric titration of copper salts.

Beebe, Dr. William, New York Zoological Park, New York, N. Y. **Ornithology, Oceanography, Evolution. Brooklyn, N. Y., July 29, 77. Columbia, 96-99; Sc.D., Colgate, 28; LL.D., Tufts Col., 28. Curator ornith., N. Y. Zool. Park, 99-; hon. curator and director dept. trop. research, N. Y. Zool. Soc., 19- N. Y. Zool. Soc. exped., Bermuda, 37. Elliot medal; Burroughs medal; medal, N. Y. Zool. Soc., 29; medal, Soc. d'Acclimat. de France. A.A.; fel. Ornith. Union; Soc. Mammal; Ecol. Soc.; Linnaean Soc. N. Y.; fel. N. Y. Zool. Soc.; fel. N. Y. Acad.; N. Y. Audubon Soc.; cor. mem. Zool. Soc. London. Ecology of land and marine vertebrates of neotropical regions; oceanography in Bermuda; tropical research.

Beebe-Center, Dr. J(ohn) G(ilbert), 152 Puritan Road, Swampscott, Mass. Psychology. Boston, Mass., March 19, 97. A.B., Harvard, 19, Ph.D., 26. Sheldon fellow, Harvard, 26-27, instr. psychol., 27- Psychol. Asn.; Am. Acad. Affinity.

Beede, Dr. J(oshua) W(illiam), 31 S. Urbana, Tulsa, Okla. Geology, Paleontology. Raymond, N. H., Sept. 14, 71. B.S., Washburn Col., 96, A.M., 97; Ph.D., Kansas, 99. Instr. paleont., Kansas, 97-99; teacher, high sch., Kans., 99-01; instr. geol., Indiana, 01-06, asst. prof., 06-09, assoc. prof., 09-17; geologist, bur. econ. geol., Texas, 17-22; Empire Gas and Fuel Co., 22-24; Dixie Oil Co., 24- Asst., Kans. Geol. Surv., 96, 98, 03-09; U. S. Geol. Surv., 01-03. Geol. Soc.; Paleont. Soc.; Asn. Petrol. Geol.; Ind. Acad.; Kans. Acad. Stratigraphic geology, paleon-

tology and faunal divisions of Kansas coal measures; invertebrate paleontology of the Permian Red Bed; subterranean drainage; Permian of Kansas, Oklahoma and Texas; terrestrial vertebrates of the Appalachian and Kansas-Texas sections; species of genus Schwagerina.

Beekhuis, Dr. H(ermon) A(lbert), Jr., 1719 Berkeley Ave., Petersburg, Va. *Chemistry*. San Jose, Calif., July 16, 01. B.S., California, 23; Ph.D., Yale, 26. Research metallurgist, Jones and Laughlin Steel Co., 25-26; research chemist, Atmospheric Nitrogen Corp., 26-35; nitrogen div., Solvay Process Co., 35- Chem. Soc. Low temperature coal tar; fixed nitrogen products.

Beekley, Dr. John S(herman), Lazote Inc., Box 1537, Charleston, W. Va. *Chemistry*. West Chester, Ohio, Dec. 7, 94. A.B., Miami (Ohio), 15; A.M., Illinois, 17; Ph.D., Princeton, 24. Asst. prof. math., Miami (Ohio), 19-21; research chemist, *E. I. du Pont de Nemours and Co.*, 24- 2nd lieut., A.S., F.A., 17-19. Chem. Soc. Adsorption of ions; catalysis.

Beeman, Prof. Norvill, 1213 N. Hayes Ave., Oak Park, Ill. *Chemistry*. Temple, Texas, June 1, 90. A.B., Oberlin Col., 15. A.M., 19, Charles M. Hall fellow, 31-32; Ph.D., Chicago, 32. Prof. chem., Fukien Christian Univ., Foochow, China, 19-31; business manager, 29-31, dean col. science, 30-31; research assoc. chem., Oberlin Col., 31-34; prof., Oak Park Junior Col., 34- Chem. Soc. Emulsions; sedimentation of clay; removal of sulfur from petroleum distillates; removal of thiophene from benzene.

Beenken, Dr. May M(argaret), Wisconsin State Teachers College, Oshkosh, Wis. *Mathematics*. Philadelphia, Pa., Oct. 22, 01. Ed.B., California, 23; A.M., Chicago, 26, fellow, 26-28; Ph.D., 28. Assoc. math., California at Los Angeles, 24-25; head dept., Wis. State Teachers Col., Oshkosh, 23- A.A.; Math. Soc.; Math. Asn. (sec'y, Wis. sect., 34). Projective differential geometry of surfaces in five-dimensional space.

Beer, Dr. Edwin, 45 E. 85th St., New York, N. Y. *Medicine*. New York, N. Y., March 28, 76. A.B., Columbia, 96, M.D., 99. Visiting surgeon, Mt. Sinai Hosp.; consulting surgeon, Bellevue Hosp. A.A.; Am. Med. Asn.; Surg. Asn.; Col. Surg.; Urol. Asn.; Clin. Genito-Urinary Soc.; N. Y. Path. Soc.; N. Y. Surg. Soc.; N. Y. Acad.; Urol. Gesell.; Soc. Ital. d'Urol.; Acad. Med. Rome; Spanish Urol. Soc.; Int. Urol. Soc.; Int. Soc. Surg. Physiology and pathology of the kidneys, urinary bladder, intestines and liver; therapeutics applied to diseases of viscera.

Beerman, Dr. H(ermon), 255 S. 17th St., Philadelphia, Pa. *Dermatology, Syphilology*. Johnstown, Pa., Oct. 13, 01. A.B., Pennsylvania, 23, M.D., 27, Abbott fellow, 32, Sc.D., 35. Asst. instr. dermat. and syphil., sch. med., Pennsylvania, 29-30, instr., 30-36; assoc., 36- Field asst. bur. entom., U. S. Dept. Agr., 25-26. Col. Physicians Phila. Physiological properties of hydrogen sulfide; effect of various ions on amebocyte tissue; chemotherapy of syphilis; new drugs; sensitization tests; treatment resistance; dermatology, especially leather dermatitis and rosacea.

Beers, Prof. Catherine V(irginia), University of Southern California, Los Angeles, Calif. *Zoology*. Chicago, Ill., June 3, 92. A.B., Northwestern, 14, A.M., 15; California, 18; Columbia, 24-25. Asst. zool., Northwestern, 12-15; instr., high sch., Ill., 15-16; asst. prof., zool., Southern California, 16- Inst., Wash. Sq. Col., N. Y. Univ., 24-25; exten. dept., Hunter Col., 24-25. Summers, Puget Sound Biol. Sta., 12; Marine Biol. Lab., Woods Hole, 13, 24; Cold Spring Harbor, 14. A.A.; Genetic Asn.; Genetics Soc.; West. Soc. Nat. Genetics.

Beers, Prof. Charles Dale, University of North Carolina, Chapel Hill, N. C. *Zoology*. Arcanum, Ohio, April 4, 01. A.B., North Carolina, 21, A.M., 22; Ph.D., Hopkins, 25. Instr. biol., Yale, 25-26; fellow, Hopkins, 26-27; asst. prof. zool., North Carolina, 27-29; assoc. prof., 29- Instr., Marine Biol. Lab., Woods Hole, 24-25. Soc. Zool. Life histories and physiology of conjugation and encystment in Protozoa.

Beery, Prof. Pauline G(racia) (Mrs. Warren B. Mack), State College, Pa. *Chemistry*. Norborne, Mo., Dec. 19, 91. A.B., Missouri, 13; A.M., Columbia, 19; Ph.D., Pa. State Col., 32. Teacher, high schs., Mo., 13-19; instr. chem., Pa. State Col., 19-20, asst. prof., 20-31, assoc. prof., 31-35, prof. and director home econ. research, 35- Ed., "Science Leaflet," A.A.; Chem. Soc.; Soc. Test. Mat.; Textile Inst.; Am. Inst. Textile chemistry; chemistry applied to home and community; materials in the service of man; the teaching of chemistry to students not majoring in chemistry.

Beese, Dr. N(orman) C(arl), Westinghouse Lamp Co., Bloomfield, N. J. *Physics*. Toledo, Ohio, Dec. 3, 01. B.S., Kentucky, 23, M.S., 24; Charles A. Coffin fellow, Michigan, 25-26, Ph.D., 26. Asst. eng. research, Michigan, 26-27; party chief, Geophys. Research Corp., 27-29; research physicist, Westinghouse Lamp Co., 29- Physical Soc. Thermionics; x-rays; vapor lamps.

Beeskow, Herbert C(harles), Michigan State College, East Lansing, Mich. *Plant physiology, Botany*. Chicago, Ill., June 6, 02. B.S., Chicago, 23, M.S., 24. Instr. bot., Cincinnati, 29; instr. bot. and research asst. plant physiol., Mich. State Col., 29- A.A.; Soc. Plant Physiol.; Bot. Soc.; Chem. Soc.; Bot. Cesell. Physiological effect of ultra-violet rays upon plants; plant nutrition.

Beeson, Dr. J(asper) L(uether), Columbia St., Milledgeville, Ga. *Chemistry*. Keener, Ala., Aug. 31, 67. A.B., Alabama, 88, A.M., 89, LL.D., 29; Ph.D., Hopkins, 93. Instr. physics, Alabama, and chemist, Ala. Geol. Surv., 88-89; research chemist, Exp. Sta., Louisiana, and prof. chem., La. Sch. of Sugar, 93-96; prof. nat. science, Bethel Col., 96-97; chem., Ga. State Col. for Women, 97-28, dean col. arts and sciences, 25-28, chairman faculty, 10-28, acting pres., 22-23, 27, pres., 28-35, emer. pres., 35- Summer, prof., Georgia, 09. A.A.; Chem. Soc. Action of alcohol on certain diazo compounds; sugar chemistry; nitric nitrogen gathered by the Leguminosae.

Beeson, Dr. M(alcolm) A(lfred), 309 Duck St., Stillwater, Okla. *Agronomy*. Gadsden, Ala., June 20, 79. B.S., Ala. Polytech., 00; Hopkins, 01-03; hon. Sc.D., Meridian Col., 10. Prof. science, E. Miss. Female Col., 00-01; pres. and proprietor, Meridian Col., 03-14; prof. agron. and agronomist, Okla. Agr. and Mech. Col., 15-21, dean agr. div. and sch. agr., 21-23, director, Exp. Sta., 23-24; pres., B. K. and T. Co., 23-31; Cent. State Teachers Col., Okla., 31-35; field rep., George Peabody Col., 35- A.A.

Beeson, Dr. W(illiam) M(alcolm), University of Idaho, Moscow, Idaho. *Animal nutrition*. Meridian, Miss., Feb. 3, 11. B.S., Okla. Agr. and Mech. Col., 31; M.S., Wisconsin, 32, Ph.D., 35. Asst. animal husbandry, Wisconsin, 31-35; instr. Agr. and Mech. Col., Texas, 35-36; asst. prof., Idaho, 36- Factors affecting carotene and vitamin A content of butter fat; alfalfa silage.

Beeuwkes, Dr. Henry, 49 W. 49th St., New York, N. Y. *Medicine*. Jamesburg, N. J., 81. A.B., Hopkins, 02, M.D., 06; grad. Army Med. Sch., 10. Intern, Hudson St. Hosp., 06-07; N. Y. Hosp., 08-09, 20-21; med. director, Am. Relief Admin., Russia, 21-23; director W. African yellow fever cmn., int. health div., Rockefeller Foundation, 24-; asst. prof. med. med. col., Cornell. Mem. med. board, Harbord Mission to Armenia, 19; asst. attending physician, N. Y. Hosp., 34- M.C., 09-24; asst. to chief surgeon, inspector gen. aide and physician to commander-in-chief, surgeon headquarters. Fel. Col. Surg. Radiography; epidemiology of tuberculosis.

Begeman, Prof. Louis, 2315 Iowa St., Cedar Falls, Iowa. *Physics*. Evansville, Ind., March 1, 65. B.S., Michigan, 89, M.S., 97; Ph.D., Chicago, 10. Sch. supt., Iowa, 89-95; prof. physics and chem., Parsons Col., 95-99; physics, Iowa State Teachers Col., Cedar Falls, 99- A.A.; Cent. Asn. Sci. and Math. Teachers; Iowa Acad. (pres., 12). Charge of the electron by the cloud method.

Begg, Dean A(lejandro) S(wanson), Boston University School of Medicine, Boston, Mass. *Embryology*. Council Bluffs, Iowa, May 23, 81. M.D., Drake, 07. Instr. path., Drake, 07-09; asst. prof. path. histol. and embryol., 09-10, prof. histol. and embryol., 10-13; teaching fellow, Harvard Med. Sch., 11-12, instr. comp. anat., 13-18, asst. dean, demonstrator anat. and instr. histol., 18-21; prof. anat., sch. med., Boston, 21-, dean, 23- Research assoc., Carnegie Institution, 14. Med. advisory council, Life Exten. Inst.; Nat. Board Med. Examiners (exec. cmt., 36-); Mass. Pub. Health Cmn., 36-37. M.C., 17-19, lieut. col., col. M.R.C., 19- A.A.; Asn. Anat.; Am. Med. Asn.; Asn. Mil. Surg.; Asn. Am. Med. Col. (exec. councilor, 29-32); Mass. Med. Soc. (sec'y, 35-). Development of veins; cytology of intestinal epithelium; anatomical anomalies; medical education and history.

Beiggs, Prof. George E(rie), 201 Prospect St., Princeton, N. J. *Civil engineering*. Ashland, Ill., April 23, 83. A.B., Northwestern, 05; C.E., Columbia, 10. Designing office, Am. Bridge Co., New York, 10-12; chief engineer, Phosphate Mining Co., Fla., 12-14; from asst. prof. to prof. civil eng., Prince-

- ton, 14-** Medals, Columbia Univ, Am. Concrete Inst. and Franklin Inst. Civil Eng; Inst. Consulting Eng; Soc. Test. Mat; Concrete Inst; Int. Asn. Bridge and Struct. Eng. The solution of statically indeterminate structures by use of models; stresses in arch dams; suspension bridge stresses.
- Beghtel, Prof. F(lloyd) E(ldon),** Evansville College, Evansville, Ind. *Botany.* Huntington, Ind, Dec. 22, 86. A.B. Ind. Cent. Col, 12; A.M. Indiana, 17; Ph.D. Cincinnati, 24. Instr. bot, Cincinnati, 18-24; asst. prof, 24-25; prof, Ind. Cent. Col, 25-31; *biol. Evansville Col,* 31- Bot. Soc. Plant morphology.
- Behle, Dr. William H(arroun),** University of Utah, Salt Lake City, Utah. *Vertebrate zoology.* Salt Lake City, Utah, May 13, 09. A.B. Utah, 32, A.M. 33; Ph.D. California, 37. Teaching fellow zool, Utah, 32-33; asst. museum vert. zool, California, 33-37; *instr. biol. Utah,* 37- Soc. Mammal; assoc. Ornith. Union; Cooper Ornith. Club; Wilson Ornith. Club. Geographic variation and distribution of birds; variation in Otocoris; birds of Utah.
- Behnke, Dr. A(lbert) R(ichard),** Navy Department, Washington, D. C. *Medicine.* Chicago, Ill, Aug. 8, 03. A.B. Whittier Col, 25; M.D. Stanford, 30; fellow, Harvard, 32-35. *Mem. U. S. Naval Med. Corps,* 29- Physiology of high pressures of oxygen and carbon dioxide; effects of air at high pressures; measurements of molecular nitrogen in man and animals.
- Behr, Dr. Letha A(lison Davies),** Esplanade Gardens, Mt. Vernon, N. Y. *Chemistry.* Shamokin, Pa, Sept. 12, 01. A.B. Mt. Holyoke Col, 21; M.S. Illinois, 26, Ph.D. 28. Teacher, sch, Ky, 21-23; instr. physiol. chem, Woman's Med. Col. of Pa, 23-25; asst. chem, Illinois, 26-28; asst. col. physicians and surg, Columbia, 28-33. Organic chemistry.
- Behr, O(thero) M(orling),** Vegetable Oil Products Co, Wilmington, Calif. *Chemical engineering.* Davenport, Iowa, 94. B.S. California, 20. Research lab, Standard Oil Co. of Calif, 21-24; supt. varnish dept, Mathews Paint Co, Los Angeles, 24-28; paint eng, Glidden Co. of Calif, 28-33; *research and develop. Veg. Oil Products Co,* 33- Chem. Soc; Federation Paint and Varnish Production Clubs. Paint oils; vegetable and marine oils for paint and varnish work.
- Behre, C(harles) Edward,** U. S. Forest Service, New Haven, Conn. *Forestry.* Brooklyn, N. Y, Sept. 24, 95. Ph.B, Yale, 15, M.F, 17. Assoc. prof. lumbering, Idaho, 19-23; assoc. silviculturist, Northeast. *Forest Exp. Sta, U. S. Forest Service,* 23-27; director, 29- 2nd lieut, C.Eng, 18-19. A.A; Soc. Forsters. Forest mensuration.
- Behre, Prof. Charles H(enry), Jr,** Northwestern University, Evanston, Ill. ^{*Geology.} Atlanta, Ga, March 16, 96. B.S. Chicago, 18, Ph.D. 25. Geologist, Wis. Geol. Surv, 17-18; asst. zool, Chicago, 18-20, geol, 20-21; instr. Lehigh, 21-23; asst. prof, Cincinnati, 24-30; assoc. prof. econ. geol, Northwestern, 30-35, prof. and chairman dept, 35- Guggenheim Mem. Foundation fellow, 37-38. Asst. geologist, U. S. Geol. Surv, 21-; cooperative geologist, Pa. Geol. Surv, 22-; exchange lecturer, Washington (St. Louis), 33; Cincinnati, 34. A.A; Geol. Soc; Soc. Econ. Geol; Asn. Petrol. Geol. Min. and Metal. Eng. (cmt. on non-metallic mining geol); Miner. Soc; Geophys. Union; Colo. Sci. Soc; Ill. Acad. (pres, 34); Ohio Acad. (v. pres, 29). Structural geology; geology of mineral deposits; regional geology of Idaho, Colorado, Pennsylvania, Illinois and Wisconsin; mineral economics.
- Behre, Prof. E(lmor) H(elene),** Louisiana State University, Baton Rouge, La. *Zoology.* Atlanta, Ga, Sept. 28, 86. A.B. Radcliffe Col, 08; Tulane, 13-15; Ph.D. Chicago, 18. Instr. in charge dept. biol, Newcomb Col. Tulane, 12-15; asst. zool, Chicago, 15-18; sta. for exp. evolution, Carnegie Institution, 18-19; instr. biol, Newcomb Col. Tulane, 19-20; asst. prof. zool, Louisiana, 20-23; assoc. prof, 23-32, prof, 32- Lecturer, Mt. Holyoke Col, 36. A.A; Soc. Zool; Soc. Ichthyol. and Herp; La. Acad. (pres, 35-37); New Orleans Acad. Physiological zoology; anatomy; pigmentation; color changes; structure and behavior of chromatophores.
- Behre, Dr. J(eanette) A(len),** Cornell University Medical College, York Ave, and 69th St, New York, N. Y. *Biochemistry.* Cincinnati, Ohio, 91. A.B. Vassar Col, 13; fellow, Chicago, 18-19; fellow, Cornell, 20-22, Ph.D. 22. Asst. zool, Cincinnati, 17-18; instr. chem, med. col, Cornell, 22-24, 25-; research chemist, lab, Union Cent. Life Ins. Co, 24-; research assoc. med. col, Northwestern, 36- A.A; Soc. Biol. Chem. Blood and urinary chemistry; creatine and creatinine; urea; acetone bodies; uric acid; thioneine; blood sugar.
- Behrens, Prof. Charles A(ugust),** 1020 Third St, West Lafayette, Ind. *Bacteriology.* Grand Rapids, Mich, Jan. 5, 85. B.S. Michigan, 09, M.S. 10, Ph.D. 13. Instr. bacter, Michigan, 10-14; asst. prof. in charge dept, Purdue, 14-16, assoc. prof, 16-18, prof, 18- A.A; Soc. Bact; fel. Ind. Acad. (pres, 23); Mich. Acad. Protozoology; immunology; serology.
- Behrens, Dr. Evelyn E(mma),** Barnard College, Columbia University, New York, N. Y. *Chemistry.* New York, N. Y, May 18, 05. A.B. Columbia, 27, A.M. 28; Ph.D. Radcliffe Col, 31. *Instr. chem, Barnard Col, Columbia,* 31- Analytical chemical chemistry.
- Behrens, Dr. Otto K(arl),** Rockefeller Institute, New York, N. Y. *Biochemistry.* Evansville, Ind, Aug. 22, 11. A.B. DePauw, 32, Rector fellow, 32-33; A.M. Illinois, 33, Ph.D. 35. Rockefeller fellow and asst, George Washington, 35-37; *Rockefeller Inst,* 37- Chem. Soc; Ind. Acad. Chemistry and metabolism of amino acids; chemistry and metabolism of muscle.
- Behrman, A(braham) Sidney,** International Filter Co, 59 E. Van Buren St, Chicago, Ill. *Chemistry.* Covington, Ky, Dec. 15, 92. B.S. Kentucky, 14. Educ. Dept, P. I, 15-16, Bur. Science, 16-17; chief chemist, Int. Filter Co, 19-27, chem. director, 27- Capt, Q.M.C, 17-18, Sanit. C. 18-19. Chem. Soc; Water Works Asn. Water purification; Philippine water supplies; field methods of water examination; zeolites; activated carbon; halide preparation; halogen recovery; gels.
- Belj, K(arl) Hilding,** 3428 Porter St, Washington, D. C. *Hydraulics.* Hartford, Conn, Nov. 10, 93. B.S. Trinity Col. (Conn), 14. Junior engineer, Hartford, 14-16; surveyor, Pub. Buildings Cmn, Washington, D. C. 17, 19-20; asst. engineer, Bur. Standards, 20-25; research assoc, Copper and Brass Research Asn, 25-29; assoc. engineer and *hydraul. engineer, Bur. Standards,* 29- Radio officer, U.S.A, 18-19. Geophys. Union (sec'y, hydro. sec'y, 33-); Philos. Soc. Wash. Aerial navigation and navigating instruments; corrosion and physical properties of copper roofings.
- Bellby, Prof. George Everett,** 149½ Washington Ave, Albany, N. Y. *Surgery.* Harpersfield, N. Y, April 10, 76. M.D. Albany Med. Col, Union (N. Y), 99. *Clin. prof. surg. Albany Med. Col, Union (N. Y),* 14- Asst. surgeon, Albany Hosp. Fel. Col. Surg; Asn. Path. and Bact; Asn. Study Coiter. Pathology and surgery of the thyroid gland.
- Beinhart, E(rnest) G(eorge),** Arlington, Va. *Agriculture.* Cincinnati, Ohio, Sept. 24, 87. B.S. Iowa State Col, 10. Asst. chem. sect, Exp. Sta, Iowa State Col, 06-08, tobacco experiments, 08-09; in charge plant improv. Sunnybrook Tobacco Co, 09-10; asst. in charge New Eng. tobacco investigations, bur. plant indust, U. S. Dept. Agr, 11-19; asst. manager, H. Zering Mfg. Co, 19-22; in charge farm dept. and advertising, Lippincott Co, 22-23; research, Fla-Ga. Tobacco Growers Asn, and research work, Am. Sumatra and Wedeler Tobacco Companies, 23-27; nicotine production studies, Tobacco By-products and Chem. Corp, 27-32; develop. fertilizer usages for tobacco by-products, 32-33; *tobacco sect, agr. adjust. admin, U. S. Dept. Agr,* 33- A.A; Chem. Soc. Plant nutrition; disease resistance and improvement of tobacco; nicotine uses.
- Beitsler, Prof. Walter H(erman),** University of Florida, Gainesville, Fla. *Chemistry, Chemical engineering.* Newark, N. J, April 21, 96. B.S. Rutgers, 18, Van der Poel fellow, 18-19, M.S. 19; M.S. Princeton, 21, Sc.D. 22. Chemist, du Pont Eng. Co, Tenn, 18; asst. chem, Princeton, 19-22; asst. prof, Florida, 22-23, prof. chem. eng, 23-34; research chemist, Crown Cork and Seal Co, 34-36; *prof. chem. eng. Florida,* 36- Summers, chemist, Noil Color and Chem. Co, 20-22. Assoc. ed, 'Jour. Chem. Educ,' 24-25. Lieut. col, C.W.S. Chem. Soc. (sec'y, Fla. sect, 26, 27, councilor, 30, chairman, 34); Chem. Eng; Eng. Educ; Fla. Eng. Soc. Organic chemistry; derivatives of anthraquinone; Chinese wood oil; tin decorating products.
- Beitel, Dr. Robert J(ames), Jr,** American Optical Co, Southbridge, Mass. *Optics.* Cataqua, Pa, Dec. 4, 08. O.D. Pa. State Col. Optometry, 28; A.B. Temple, 32; A.M. Clark, 33, Ph.D. 35. *Research physiol. optician, Am. Optical Co,* 35- A.A; Optical Soc; assoc. Psychol. Asn. Physiologic optics; psychology; visual physiology; retinal synaptic functions; ocular measurements and methods of refraction.

- Beltler, Prof. Samuel R(eid)**, Ohio State University, Columbus, Ohio. *Mechanical engineering*. Carey, Ohio, March 19, 99. B.M.E., Ohio State, 20, M.E., 30. Eng. apprentice, Whiting Corp, 20-21; asst. mech. eng., Ohio State, 22, instr, 22-30, asst. prof, 30-. Consulting engineer, Bailey Meter Co, 29-; Am. Gas Asn, 31-. Mech. Eng.; Eng. Educ. Hydraulics; thermodynamics; fluid flow in pipes and past measuring devices; measurement of natural gas.
- Bekkedahl, Dr. Norman**, National Bureau of Standards, Washington, D.C. *Physical chemistry*. Shelly, Minn, March 16, 03. B.S., Minnesota, 25; M.S., George Washington, 29; Ph.D., American Univ, 31. Anal. chemist, bur. chem., U.S. Dept. Agr, 26-27; research chemist, Bur. Standards, 28- A.A.; Chem. Soc.; Philos. Soc. Wash; Wash. Acad. Electrochemistry; electrotyping; thermodynamics of the rubber hydrocarbon and similar compounds.
- Belden, Dr. Burton C(handler)**, Standard Oil Development Co, Elizabeth, N.J. *Chemistry*. Fredonia, N.Y., May 21, 06. A.B., Hamilton Col, 27; Ph.D., Cornell, 31. Asst. chem., Cornell, 27-31; chemist, United Color and Pigment Co, Newark, N.J., 31-36; Standard Oil Develop. Co, 36-. Chem. Soc. Physical chemistry of proteins; chemistry of inorganic pigments; petroleum chemistry.
- Belding, Prof. David L(awrence)**, Main St, Hingham, Mass. *Pathology, Bacteriology*. Dover Plains, N.Y., July 24, 84. A.B., Williams Col, 05; M.D., Boston, 13; M.D., Harvard, 14, A.M., 15. Biologist, div. fisheries and game, State Dept. Conservation, Mass., 05-23; mem. research staff, Evans Mem. Hosp., Boston, 19-; director routine labs, Mass. Mem. Hosps, 26-; asst. prof. bacter., sch. med., Boston, 20-22, assoc. prof, 22-26, prof. path. and bacter, 26-. Pathologist, Haynes Mem. and Robinson Mem. Hosps, Boston, 16-17. Capt. M.C., 18-19. Asn. Path. and Bact.; Soc. Exp. Path; Soc. Bact.; Soc. Exp. Biol; Am. Med. Assn; Fisheries Soc. (pres, 30). Syphilis; serology; mollusk fisheries; anadromous fishes; fish diseases.
- Belkin, Dr. Morris**, 7 Wilmore St, Mattapan, Mass. *Biology*. Simferopol, Crimea, Russia, June 17, 01. A.B., Harvard, 23, A.M., 28, Ph.D., 35. Asst. biol., Wash. Sq. Col, N.Y., Univ, 28-29, instr, 29-32; research biologist, cancer research project, U.S. Pub. Health Service, Harvard Med. Sch, 34-. Experimental cytology; cellular physiology by means of micro-dissection and micro-injection; staining of cells with vital dyes.
- Belknap, Prof. R(alph) L(eroy)**, University of Michigan, Ann Arbor, Mich. *Geology*. St. Clair, Mich., Nov. 22, 99. B.S. (C.E.), Michigan, 23, A.M., 24, Sc.D., 29. Instr. geol., Michigan, 23-30, asst. prof, 30-. Summers, engineer, State Highway Dept, Mich, 23, geologist, 24. Director, Mich-Pan-Am. Airways. Geologist and geodesist, Univ. Mich. Greenland exped, 26, asst. director, geologist and geodesist, 27-29, director, 32-33. Assn. Petrol. Geol; Geog. Soc; Mich. Acad. Creelboro Natural Bridge; Greenland sand dunes; physiography of the Holstensborg district, Greenland; occurrence of hematite at Cape York, Greenland.
- Bell, Dr. Alfred H(annam)**, Illinois Geological Survey, Urbana, Ill. *Geology*. Simcoe, Ont, Can, June 28, 95. B.A., Toronto, 17, Nat. Research Council Can. scholar, 20-21; Ph.D., Chicago, 26. Asst. Geol. Surv. Can, 14, 20-23; geologist, Texas Co, 24-26; petrol. geologist, Ill. Geol. Surv, 26-30, geologist and head oil and gas div, 30-. A.A.; Assn. Petrol. Geol; Geophys. Union; Min. and Metal. Eng; Ill. Acad. Petroleum geology; Winchester and Griggsville quadrangles, Illinois; geology of the Whitehorse district, Yukon; improved recovery methods for petroleum.
- Bell, Dr. Archibald W(eir)**, 365 S. Hoover St, Los Angeles, Calif. *Zoology*. Los Angeles, Calif, Oct. 6, 99. A.B., California, 22, A.M., 27, Ph.D., 36. Teaching fellow, California, 22-24; instr, Sacramento Junior Col, 24-29; instr. biol. and chairman dept, Los Angeles Junior Col, 29-. A.A.; Genetic Assn; Nature Assn; Eugenics Assn; Eugenics Research Assn; Calif. Acad. Cytology; enchytraeid worms.
- Bell, Dr. Charles E(dward)**, 234 University Terrace, Gainesville, Fla. *Chemistry*. Kinston, N.C., April 20, 83. B.S., N.C. State Col, 11, M.S., 24; Ph.D., Iowa State Col, 32. Asst. chemist, State Dept. Agr, N.C., 12-19; Exp. Sta, Florida, 21-32, assoc. chemist, 32-. Chem. Soc; Soc. Agron; South. Agr. Workers. Food analysis; soil fertility; decomposition of organic matter.
- Bell, Prof. Clifford**, 10514 Rochester Ave, Los Angeles, Calif. *Mathematics*. Windsor, Calif, Sept. 19, 98. B.S., California, 22, Ph.D., 25. Teaching fellow math, California, 23-25, instr, California at Los Angeles, 25-30, asst. prof, 30-. A.A.; Math. Soc; Math. Assn. Geometry; differential equations.
- Bell, Prof. Earl H(oyley)**, University of Nebraska, Lincoln, Nebr. *Archeology*. Shellrock, Iowa, March 27, 03. A.B., Iowa State Teachers Col, 25; Ph.D., Wisconsin, 32. Asst, Wisconsin, 28-30; instr. anthrop., Nebraska, 31-32, asst. prof, 32-, director archeol. surv, 32-. Research, Carnegie Institution, 34-35. Milwaukee Pub. Museum archeol. expeds, 29-30; Univ. Nebraska expeds, 32-34; U.S. Nat. Museum expedit, Alaska, 35. Anthrop. Assn. (exec. cmt, cent. sect, 34-36). American archeology; archeology in the Mississippi-Missouri drainage; Pleistocene antiquity of man in America.
- Bell, Prof. E(lexious) T(hompson)**, University of Minnesota, Minneapolis, Minn. **Pathology*. Hatch, Mo, Aug. 30, 80. B.S., Missouri, 01, fellow, 01-02, M.D., 03; Bonn, 05-06. Asst. anat, Missouri, 02-03, instr, 03-07, asst. prof, 07-11; path, Minnesota, 11-16, assoc. prof, 16-20, prof, 20-, director dept, 21-. Asn. Path. and Bact. (pres, 33); Am. Med. Assn; Soc. Exp. Biol; Asn. Cancer Research (pres, 34, councilor, 36). Experimental morphology; histogenesis of the thymus; adipose tissue; fatty metamorphosis; endocarditis; hypertension; nephrosis; nephritis.
- Bell, Prof. E(ric) T(emple)**, California Institute of Technology, Pasadena, Calif. **Mathematics*. Aberdeen, Scotland, Feb. 7, 83. A.B., Stanford, 04; A.M., Washington (Seattle), 08; Ph.D., Columbia, 12. Asst. math., Washington (Seattle), 07-08, instr. and asst. prof, 12-20, assoc. prof, 20-21, prof, 21-27; Calif. Inst. Tech, 27-. Colloquium lecturer, 27; visiting lecturer, Harvard, 26. Summers, visiting prof, Chicago, 24-28. Assoc. ed, 'Jour. Philos. Science,' Böcher prize, 21. Nat. Acad. A.A. (v. pres, A, 30); Math. Soc. (councilor, 23-, v. pres, 26, assoc. ed, 'Trans.' and 'Am. Jour. Math'); Math. Assn. (pres, 31-33); Philos. Soc; Circolo Mat. di Palermo; Calcutta Math. Soc. Theory of numbers; numerical functions; analytical theorems in arithmetic; multiply periodic functions.
- Bell, F(redrick) Heward**, 2725 Montlake Blvd, Seattle, Wash. *Zoology*. Swansea, S. Wales, July 3, 02. B.A., British Columbia. Biol. asst, British Columbia, 24-25; scientist, Int. Fisheries Cmn, 25-. Fisheries Soc. Taxonomy of hydroids; life history of Pacific halibut.
- Bell, Dr. Frederick K(eller)**, University of Maryland School of Medicine, Baltimore, Md. *Chemistry*. Cincinnati, Ohio, March 27, 95. A.B., Hopkins, 16, Ph.D., 20. Asst. chem., Hopkins, 20-21, pharmacol, 21-22, instr, 22-27, chem, 27-36; research, cmt. revision, U.S. Pharmacopoeia, sch. med., Maryland, 37-. Copper and the rate of solution of iron in acids; ultra-violet and infra-red absorption spectra of imidazol derivatives; infra-red absorption spectra of organic derivatives of ammonia, organic sulfur compounds and the alkaloids; penetration of animal tissues by ultra-violet light.
- Bell, Prof. Hugh P(hillip)**, Dalhousie University, Halifax, N.S. Can. *Botany*. Halifax, N.S. Feb. 22, 89. B.Sc., Dalhousie, 12, M.Sc., 14; Nat. Research Council Can. student, Toronto, 19-20, Ph.D., 22. Asst. prof. biol, Dalhousie, 20-21; demonstrator bot, Toronto, 21-22; assoc. prof. and prof, Dalhousie, 22-. Capt, Royal Can. Regiment, 14-19. Bot. Soc; British Ecol. Soc. The rusts of balsam; marine algae.
- Bell, Prof. James Carleton**, 1032A Sterling Place, Brooklyn, N.Y. *Psychology, Education*. Mt. Vernon, Ohio, Dec. 11, 72. A.B., Denison, 96; A.M., Harvard, 03, Ph.D., 04. Instr, Boston Latin Sch, 04-05; asst. philos, Harvard, 05-06; instr. exp. psychol, Wellesley Col, 05-07; prof. educ. psychol, Brooklyn Training Sch. for Teachers, 07-12; art of teaching, Texas, 12-16; psychol. and educ, Brooklyn Training Sch. for Teachers, 16-24; Col. City of N.Y., 24-. Founder, 'Jour. Educ. Psychol.' A.A.; Psychol. Assn; N.Y. Soc. Exp. Study Educ. Animal psychology; movement; visual perception; mental tests; educational measurements.
- Bell, Prof. James E(dgar)**, California Institute of Technology, Pasadena, Calif. *Chemistry*. B.S., Chicago, 05; Ph.D., Illinois, 13. Instr. chem., Washington (Seattle), 10-11, 13-16; assoc. prof, Calif. Inst. Tech, 16-18, prof, 18-. A.A.; Chem. Soc.

- Bell, John Hume**, 411 Tillou Road, South Orange, N. J. *Electrical engineering*. Aberdeenshire, Scotland, Sept. 6, 79. *Telegraph engineer*, British Post Office, 04-11; West. Elec. Co., 11-25; *Bell Tel. Labs.*, 25- Elec. Eng. Land and submarine telegraphs; printing telegraphs; telegraph transmission.
- Bell, Dr. L(eslie) V(ictor)**, Quebec Bureau of Mines, Quebec, Que., Can. *Geology*. Man, Aug. 11, 01. B.Sc., Alberta, 25; Nat. Research Council Can. bursar, Toronto, 26-27, student, 27-28, M.A., 28, Ph.D., 30. *Geologist*, Que. Bur. Min. 29- Geologist, Nat. Research Council Can. Soc. Econ. Geol.; Can. Inst. Min. and Metal. Gold areas in Quebec and Ontario.
- Bell, Dr. Marlon (Mrs. Thomas F. Wisen)**, 515 Millbank Road, Upper Darby, Pa. *Physiological chemistry*. New York, N. Y., Aug. 30, 98. A.B., Wellesley Col., 19; Ph.D., Yale, 22. Chemist, Children's Hosp., Iowa City, 22-23; research chemist, Cottage Hosp., Santa Barbara, 23-25; instr. physiol. chem., N. Y. Homeop. Med. Col., 26-30; nutrition, Temple, 30-36. A.A. Vitamin B in wheat; carbohydrate metabolism; chemistry of human milk.
- Bell, Dr. R(aymond) W(illiam)**, 4409 Greenwich Parkway, N. W., Washington, D. C. *Dairying*. Brasher Falls, N. Y., Jan. 25, 98. B.S., Cornell, 20, M.S., 21, Ph.D., 24. Instr. dairying, Cornell, 21-24; assoc. dairy mfg. specialist, bur. dairy indust., U. S. Dept. Agr., 24-31, chief div. dairy mfg. investigations and introduction, 31-36, senior dairy mfg. specialist, 36- Dairy Sci. Asn; Chem. Soc. Milk; milk products; milk sugar; casein; lactalbumin.
- Bell, Dr. Richard T(homas)**, The Pure Oil Co., 35 E. Wacker Drive, Chicago, Ill. *Chemistry*. Milwaukee, Wis., Oct. 9, 05. B.S., Wisconsin, 27; Ph.D., Virginia, 30. Teaching fellow chem., Virginia, 27-30; instr., 30-36; *research chemist*, Pure Oil Co., 36- Physical and inorganic chemistry; chemical education; reaction kinetics of gaseous reactions; adsorption; catalysis.
- Bell, Dr. Walter A(ndrew)**, Victoria Museum, Ottawa, Ont., Can. *Paleobotany*, *Geology*. St. Thomas, Ont., Jan. 4, 89. B.Sc., Queen's (Can.), 11, 1851 Exhib. scholar, 11-13; Dana fellow, Yale, 14, Ph.D., 20. Student asst., Geol. Surv. Can., 10-15, asst. paleobotanist, 20-22, assoc. paleobotanist, 22-24, paleobotanist, 24- Royal Soc. Can. Carboniferous stratigraphy of the Maritime Provinces of Canada.
- Bell, Dr. W(illiam) B(onar)**, 803 Rittenhouse St., Washington, D. C. *Biology*. Milton, Iowa, June 2, 77. M.D., Iowa State Nor. Sch., 99; Marine Biol. Lab., Woods Hole, 01; A.B., Iowa, 02, fellow, 03-05, M.S., 03, Ph.D., 05; Smithsonian table, Naples Zool. Sta., 05. Asst. prof. zool. and physiol., N. Dak. Col., 05-08, prof., 08-16; biologist, bur. biol. surv., U. S. Dept. Agr., 16-27, prin. biologist, in charge div. biol. investigations, 27-34, chief div. wildlife research, 34- A.A.; Soc. Mammal; Soc. Foresters; Ornith. Union; N. Dak. Acad. (pres., 15); Biol. Soc. Wash.; Wash. Acad. Biological survey of North Dakota; birds and mammals and their relationship to agriculture and forestry.
- Bell, William Howard**, R. F. D., Milford, Ohio. *Chemistry, Bacteriology*. Newport, Ind., Sept. 2, 97. A.B., Ind. State Teachers Col., 17; fellow, Indiana, 17-18, A.M., 18; Baldwin fellow, Cincinnati, 19-21, 22-23; LL.B., Xavier, 32. Chemist, Ault and Viborg Co., Cincinnati, Ohio, 18-19; sec'y-treas., Coleman and Bell Co., Norwood, 20- Soc. Bact. Electro-deposition of tin from alkaline solutions; syntheses of biological stains; chemical indicators; fine chemicals.
- Bellamy, Prof. A(lbert) W(illiam)**, University of California at Los Angeles, Los Angeles, Calif. *Zoology*. Yukon, Okla., June 20, 92. B.S., Kans. State Col., 14; Ph.D., Chicago, 19. Asst. zool., Kans. State Col., 12-14, zool. and genetics, 14-16; zool., Chicago, 17-18; assoc., 18-19; instr. zool. and genetics, 19-23; asst. prof. zool., 23-24; *California at Los Angeles*, 24-27, assoc. prof., 27-37, prof., 37- Genetics; experimental evolution.
- Bellis, Dr. Carroll J(oseph)**, 1185 Laurel Ave., St. Paul, Minn. *Physiology*. Shreveport, La., May 11, 08. M.S., Minnesota, 32, Ph.D., 34, M.B. and M.D., 36. Teaching fellow physiol. med. sch., Minnesota, 30-33, research, univ. hosp., 33-37, fellow surg., 37- Lieut, M.R.C. Relation of erythrocyte to plasma proteins; blood coagulation; respiratory metabolism; reaction time; kidney filtration; venous circulation time.
- Beloete, Prof. G(eorge) H(arold)**, University Hospital, Ann Arbor, Mich. *Dermatology, Syphilology*. Centreville, Mich., Aug. 9, 94. B.S., Michigan, 21, M.D., 23, M.S., 27. Instr. dermat. and syphilol., med. sch., Michigan, 25-27, asst., 27-28, asst. prof., 28-30, assoc. prof., 30- Dermat. Asn; Am. Med. Asn; Mich. State Med. Soc. (sec'y, dermat. and syphilol. sect., 30); Detroit Dermat. Soc. Syphilitic alopecia; pregnancy and neurosyphilis; tattoo and syphilis; the association of cancer and syphilis; tularemia; angiokeratoma; bromides; iodides; acne conglobata; metaphen dermatitis; Libman-Sachs syndrome.
- Belt, Prof. A(arthur) Elmer**, 1893 Wilshire Blvd., Los Angeles, Calif. *Urology*. Chicago, Ill., April 10, 93. A.B., California, 16, A.M., 17, M.D., 20; LL.D., Pacific Col. Law, 30. Fellow, Hooper Foundation, California, 17-18, 20-22, asst. urol., California, 20-21, res. urol., hosp., 21-22; a-s.t. res. surg., Peter Bent Brigham Hosp., Boston, 22-23; assoc. prof. surg. and urol., Col. Med. Evangelists, 22- Clin. instr., California, 20-22. Consultant, U. S. Mil. Hosp., Sawtelle, Calif., 22- Gold medal for sci. exhibit, Am. Med. Asn., 22. A.A.; Urol. Asn; Am. Med. Asn; Pan-Am. Med. Asn. (pres., Los Angeles div., 35); Pan-Pacific Med. Asn; Los Angeles Symposium Soc.; Int. Med. Club, Los Angeles (pres., 31); Int. Mus. Asn. Circuit design to produce a standardized current for electro-surgical prostatic resection; hydronephrosis; uretero-intestinal anastomosis; surgical shock; red blood cell increase at high altitudes; clinical study of suprarenal sympathetic syndrome.
- Beltrán, Prof. Enrique**, P. O. Box 1079, Mexico, D.F., Mex. *Zoology*. Mexico, D.F., Mex., April 26, 03. B.Sc., Mexico, 21, D.Sc., 26. Instr. bot., Univ. Mexico, 21-23, asst. prof. zool., 24-28, prof., 30-; microbiologist, Dept. Agr., Mex., 23-25, director, Marine Biol. Lab., Veracruz, 26-27, Inst. Biotecnico, 34- Guggenheim Mem. Foundation fellow, 32-33; extraordinary prof., Univ. Nuevo León, 34. A.A.; Micros. Soc.; Acad. Nacional de Ciencias (sec'y, 29); Soc. zool. de France; Acad. Nacional de Med.; Soc. Mexicana de Hist. Nat. (permanent sec'y). General zoology; bacteriology; protozoology; marine biology; limnology; fisheries.
- Belyea, A(rthur) R(ussell)**, 45 France St., Norwalk, Conn. *Chemical engineering*. Taunton, Mass., Dec. 24, 01. B.S., Mass. Inst. Tech., 23, M.S., 24. Combustion engineer, Bethlehem Steel Co., 24-25; chemist, Consol. Gas Co. of N. Y., 25-26, control chemist, Hunt's Point plant, 26-29, supt. gen. labs., 29-36; research chemist in charge, Consol. Edison Co. of N. Y., 36-37, test engineer in charge, 37- Chem. Soc.; Soc. Test. Mat.; Gas Asn. (chairman, chem. cmt., tech. sec., 32); Chem. Eng.; Soc. Chem. Indust. Gas manufacturing processes; coal carbonization; by-products recovery; gas distribution, measurement and purification; tar processing and blending.
- Belyea, Prof. Harold C(ahill)**, New York State College of Forestry, Syracuse, N. Y. *Forestry*. St. John, N. B., Can., Sept. 28, 87. B.A., Mt. Allison, 08, M.A., 11; B.S.F., New Brunswick, 11; M.F., Yale, 16. Instr. forest eng., N. Y. State Col. Forestry, Syracuse, 17-19, asst. prof., 19-32, assoc. prof. forest management, 32- Soc. Foresters. Silviculture; mensuration; forest growth and management; forest measurement.
- Benade, Prof. J(ames) M(artin)**, Forman Christian College, Lahore, India. *Physics*. Punxsutawney, Pa., March 12, 89. B.S., Grove City Col., 11; A.M., Princeton, 16. Teacher, high sch., Pa., 11-12; prof. physics, Forman Christian Col., 12-Cosmic ray measurements expds. for Univ. Punjab to high lakes of Kashmir. A.A.; Physical Soc. Electrons and radiation; motion of electrons through gases; thermoelectric effects in single metals; construction of an automatic self-recording electrometer and cosmic ray observations; electrical conditions in the atmosphere during dust storms.
- Benbrook, Charles H(arpster)**, 316 E. Seventh St., Plainfield, N. J. *Physical and organic chemistry*. Cooper, Texas, Jan. 13, 05. B.S., Nebraska, 29; M.S., Colorado, 33. Instr. indust. chem., Colorado, 29-33; *research chemist*, Calco Chem. Co., 33- Raman effect; azo dyes; kinetics of reactions of diazo compounds.
- Benbrook, Prof. E(dward) A(ntony)**, Iowa State College, Ames, Iowa. *Pathology*. South Orange, N. J., May 15, 92. D.V.M., Pennsylvania, 14. Instr. vet. path., Pennsylvania, 15; Okla. Agr. and Mech. Col., 15-18; assoc. prof. vet. investigation, Iowa State Col., 18-19, prof. vet. path. and head dept., 19- A.A.; Vet. Med. Asn; Soc. Parasitol.; U. S. Live Stock Sanit. Asn. (chairman, cmt. parasitic diseases, 32, 33); Iowa Vet. Med. Asn. Veterinary parasitology and pathology.

- Bender, Prof. Andrew**, 532 Maple St., Annville, Pa. *Chemistry*. Dillsburg, Pa., March 20, 80. A.B., Lebanon Valley Col., 06; Ph.D., Columbia, 14. Chief chemist, Actna Explosives Co., 15-17; chem. director, British Am. Chem. Co., 17-18; director control lab, Barrett Co., 21; prof. chem., Lebanon Valley Col., 21—Chem. Soc.
- Bender, Dr. Harold B(ohn)**, 129 Maple Ave., Windsor, Conn. *Mycology, Plant pathology*. Annville, Pa., Nov. 6, 02. A.B., Lebanon Valley Col., 22; Carroll Cutler fellow, Yale, 27-28, Daniel E. Eaton scholar, 28-29, Ph.D., 31. Instr., high sch., Pa., 22-23; asst. instr. biol., Yale, 23-25; acting head dept., Trinity Col. (Conn.), 25; head dept. and premied. adviser, Yale-in-China, Changsha, 25-27; prof. bot. and physiol., Conn. Col. Pharmacy, 28-29; head dept. mat. med., 29-31; head dept. science, John Fitch High Sch., Windsor, Conn., 32—State inspector plant nurseries, Conn., 27-30; asst. Conn. Exp. Sta., 28-30. Summer, collector, Carnegie Institution, Dry Tortugas, Fla., 24; Cornell, 34. A.A.; Mycol. Soc.; Bot. Soc.; Micro. Soc.; Pharmaceut. Asn.; Conn. Pharmaceut. Asn. North American species and hosts of genera of Fungi imperfecti, with particular reference to Connecticut; mycological and taxonomic aspects of Fungi imperfecti.
- Bender, Dr. H(arry) A(lbert)**, University of Akron, Akron, Ohio. *Mathematics*. Uhrichsville, Ohio, Oct. 6, 95. A.B., Ohio, 18; A.M., Illinois, 21, Ph.D., 23. Prof. math., Muskingum Col., 19-20; asst., Illinois, 20-23; instr., 23-25; assoc., 25-28; asst. prof., Akron, 28-37; assoc. prof., 37—Math. Soc.; Math. Asn. Group theory.
- Bender, Dr. Howard L(eonard)**, 7 Carteret St., Bloomfield, N. J. *Chemistry*. Williamstown, W. Va., Sept. 14, 93. A.B., Marietta Col., 17, A.M.; Drury fellow, Case, 18-19; B.S., 19; Bakelite fellow, Columbia, 22, Ph.D., 23. Research chemist, Dow Chem. Co., 19-21; instr. chem., Marietta Col., 21; research chemist, Bakelite Corp., 22—Chem. Soc.; fel. Inst. Chem. Aldehydes; synthetic resins.
- Bender, Prof. Irving E(dison)**, Dartmouth College, Hanover, N. H. *Psychology*. Buffalo, N. Y., Aug. 27, 93. A.B., Michigan, 15; A.M., Dartmouth Col., 27; Ph.D., Syracuse, 35. Instr. psychol., Dartmouth Col., 26-28; instr. and teaching fellow, Syracuse, 28-30; asst. prof., Dartmouth Col., 30—Assoc. Psychol. Asn. Personality; social psychology.
- Bender, Prof. Jacob Roy**, University of Idaho, Moscow, Idaho. *Mathematics*. Uhrichsville, Ohio, Nov. 13, 90. A.B., Ohio (Athens), 16; M.S., Washington (Seattle), 18. Instr. math., Iowa Wesleyan, 19-20; Bradley Polytech., 20-21; asst. prof., Idaho, 21—Math. Soc.; Northwest Sci. Asn.
- Bender, Prof. Paul**, Goshen College, Goshen, Ind. *Physics*. Springs, Pa., June 26, 99. A.B., Hesston Col., 21; M.S., Iowa, 25, fellow, 28-29, Ph.D., 31. Instr., Hesston Col., 21-24; asst. chem., Iowa, 24-25; prof. physical sciences, Hesston Col., 25-28, 30-32; physics, Goshen Col., 32—Physical Soc.; Asn. 28. Physics Teachers. Effect of gases on the optically excited cadmium I spectrum; optical excitation of cadmium hydride and zinc hydride bands; formation of sulfur trioxide during the burning of sulfur.
- Bender, Dr. R(aymond) C(layton)**, Box 212, Bainbridge, N. Y. *Biochemistry*. Waynesboro, Pa., May 24, 99. B.S., Pa. State Col., 24; Ph.D., Cornell, 31. Asst. research, N. Y. Exp. Sta., Geneva, 24-26; Cornell, 26-30; research chemist, research div., Borden Co., Bainbridge, 30—A.A.; Chem. Soc.; Dairy Sci. Asn.; Publ. Health Asn. Nutrition; chemistry and biology of food products; vitamins.
- Bendixen, Prof. H(ans) A(dolf)**, 208 Columbia St., Pullman, Wash. *Dairy husbandry*. Hamburg, Germany, March 6, 94. B.S., Iowa State Col., 19. M.S., 20, Ph.D., 37. Asst. prof., dairy husbandry, Idaho, 20-23; assoc. prof., dairy mfg., 23-27; dairy husbandry and assoc. dairy husbandman, State Col. Wash., 27—Oberlaender Trust fellow from Carl Schurz Mem. Foundation, Phila., Kiel, 32-33. Dairy Sci. Asn. (sec'y-treas., west. div., 24, pres., 25). Dairy manufacturing; value of hydrogen ion determination of butter serum in scoring of butter; early biological and chemical changes in butter as possible indices of keeping quality; physical changes involved in rennet coagulation of milk and subsequent firming of curd.
- Bendrat, Dr. T(homas) A(lbert)**, 36 Beaver Ave., Beckley, W. Va. *Geology, Biology*. Danzig Free State, Dec. 12, 78. B.A., Real Gymnasium, Danzig, 93; B.D., Theol. Sem., Kropf, Germany, 96; M.S., New Mexico, 00; Chicago, 04-06, 28; Hamburg, 16-17; Ph.D., Berlin, 30. Instr. econ. geol., miner. and petrog., North Carolina, 12; head dept. geol. and oil geol., Phillips, 20-21; geol. and biol., J. B. Stetson, 21-24; consulting and petrol. geologist, 24-28; head dept. science, Potomac State Junior College, W. Va., 27-28; Europe, 29-30; Venezuela, 30-31; head dept. science, Armstrong Col. (W. Va.), 32-34; biol., Beckley Col., 34—N. Mex. Geol. Surv., 99-00; S. Dak. Geol. Surv., 00-02; N. Y. Geol. Surv., 07-08; expds. S. Amer. and the W. Indies, 08-09, 12-13, 15-17, 24-25; Geol. and Biol. Surv., Mex., 26, biol. research, 27. A.A.; Assn. Petrol. Geol.; fel. Am. Geog. Soc.; Assn. Med. Progress; Psychol. Asn.; Okla. Acad. Physiography; botany; zoology; neur-electro-magnetic theory of nerve reactions, including thinking.
- Benedek, Dr. T(ibor)**, 25 E. Washington St., Chicago, Ill. *Dermatology*. Nagykörös, Hungary, May 8, 92. M.D., Budapest, 19, Leipzig, 22. Asst. clin. dermat. and syphilis, Leipzig, 20-22; instr. dermat. med. sch., Northwestern, 36—Fellow director, "Annals Med. Mycol." Bronze medal, Int. Cong. Dermat., Budapest, 35. Mycology; bacteriology.
- Benedetti-Pichler, Prof. A(nton) A(lexander)**, Washington Square College, New York University, New York, N. Y. *Chemistry*. Vienna, Austria, April 1, 94. Ch.E., Technische Hochschule, Graz, Austria, 20, Dr. Tech. Sc., 22. Asst. chem., Technische Hochschule, Graz, Austria, 22-27, privat-docent anal. chem., 27-29; instr. chem., Wash. Sq. Col., N. Y. Univ., 29-31, asst. prof., 31—Summer, California at Los Angeles, 37. Co-editor, "Mikrochemie," Vienna, 28, English ed., 36—Fritz Pregl prize, Akad. des Wissenschaften in Wien, 32. Chem. Soc. (chairman, microchem. sect., 36). Analytical chemistry; microchemistry; microanalysis.
- Benedict, Dr. A. L.**, 377 Elmwood Ave., Buffalo, N. Y. *Physiology, Archeology*. Buffalo, N. Y., Aug. 25, 65. Rochester, 83-85; A.B., Michigan, 87; M.D., Buffalo, 88; M.D., Pennsylvania, 89; hon. A.M., Ohio Wesleyan, 91. Instr. therapeutic, dept. med., Buffalo, 90-96; prof. physiol. and digestive diseases, dental dept., 95-01. Ed., "Buffalo Med. Jour.", 11-18. Supt. ethnol. and archeol., Pan-Am. Expos., 01. Prize, N. Y. State Med. Soc., 95, 96; gold medal, Am. Med. Asn., 00. Capt. M.C., 17-18; capt. M.C., N. Y. G., 19-20, major, 20-24; O.R.C., 24-25. Am. Acad. Med. (v. pres., 00); Gastro-Enterol. Asn.; assoc. fel. Buffalo Soc. Nat. Sciences. Physical diagnosis; physiologic chemistry and physics of the digestive organs; the Seneca Indians; archeology of the Niagara frontier; dietetics; factors determining sex.
- Benedict, Dr. C. H(arry)**, Lake Linden, Mich. *Metallurgy*. Pittsburgh, Pa., Sept. 24, 76. B.S., Cornell, 97; D.Eng., Mich. Col. Mines, 32. Instr., Cornell, 97-98; metallurgist, Calumet and Hecla Consol. Copper Co., 98—Lecturer, Mich. Col. Mines, 23—A.A.; Min. and Metal. Eng.; Chem. Soc. Ammonia leaching of copper.
- Benedict, Don M(arion)**, Temple University, Philadelphia, Pa. *Biology*. Portland, Mich., Oct. 29, 86. B.S., Michigan, 17, A.M., 31. Asst. prof. forest bot., N. Y. State Col. Forestry, Syracuse, 21-30; instr. biol., Temple, 31—Bot. Soc.; Torrey Bot. Club. Forestry; pathology; wood decay; mycology.
- Benedict, Dr. Francis G(an)**, Nutrition Laboratory, Vila St., Boston, Mass. **Chemistry*. Milwaukee, Wis., Oct. 3, 70. A.B., Harvard, 93, A.M., 94; Ph.D., Heidelberg, 95; hon. Sc.D., Wesleyan, 11, Maine, 24; hon. M.D., Würzburg, 32. Instr. chem., Mass. Col. Pharmacy, 92-94; Wesleyan, 96-01, assoc. prof., 01-05, prof., 05-07; director nutrition lab., Carnegie Institution, 07—Physiol. chemist, nutrition investigations, U. S. Dept. Agr., 95-07; chemist, Storrs Exp. Sta., Conn. Agr. Col., 96-01. Nat. Acad.; A.A.; Chem. Soc.; Soc. Biol. Chem.; Physiol. Soc.; Philos. Soc.; Am. Acad.; Halle Akad. der Naturforscher; cor. mem. Vienna Soc. Med.; Soc. royale des Sci. med. et nat. de Bruxelles; cor. mem. Budapest Royal Med. Soc. Analytical methods; metabolism in man and animals; respiration calorimeters.
- Benedict, Dr. Harris M(iller)**, P. O. Box 1250, Cheyenne, Wyo. *Plant physiology*. Cincinnati, Ohio, Aug. 14, 07. A.B., Cincinnati, 29, A.M., 30; Ph.D., Chicago, 32. Asst. hort., Purdue, 33-34; plant physiologist in charge erosion control nursery, bur. plant indust., U. S. Dept. Agr., 34—Plant responses to ultra-violet and x-irradiation; photoperiodism; light filters; seed germination.
- Benedict, Dr. H(oward) C(ourtney)**, Placer Junior College, Auburn, Calif. *Chemistry*. New York, N. Y., June 20, 03. A.B., Stanford, 23, A.M., 24; Ph.D., Northwestern, 31. Asst. chem., Stanford, 23-25; instr., dental sch., Northwestern,

25-27; asst. prof., 27-32; research chemist, Standard Oil Co. of Calif., 32-36; instr., *Placer Junior Col.*, 36- A.A.; Chem. Soc. Local anesthetics; dental caries; synthesis of amino acids; chemical microscopy; photography; petroleum.

Benedict, Dr. James E., 1013 Highland Drive, Silver Spring, Md. *Biology*. Norwalk, Conn., Jan. 5, 54. A.M., Ph.D., Union (N.Y.). Res. naturalist, 'Albatross' Atlantic cruise, 82-86; asst. curator, U.S. Nat. Museum, 89-30; *retired*. Crustacea; annelids.

Benedict, Dr. Manson, 150 Anderson Place, Buffalo, N.Y. *Physical chemistry*. Lake Linden, Mich., Oct. 9, 07. B.S., Cornell, 28; M.S., Mass. Inst. Tech., 32, Ph.D., 35. Research chemist, Nat. Aniline and Chem. Co., 29-30; national research fellow, 35-36; research assoc. geophys., Harvard, 36-37. Chem. Soc. Thermodynamics of gases.

Benedict, Dr. Marjorie A(llen), 150 Anderson Place, Buffalo, N.Y. *Physical chemistry*. Cincinnati, Ohio, July 24, 09. A.B., Mt. Holyoke Col., 31, 1905 fellow, 33-34; Henry Saltontall fellow, Mass. Inst. Tech., 34-35, Ph.D., 35. Asst. chem., Mt. Holyoke Col., 31-32; research fellow physical chem., Harvard Med. Sch., 35-36. The freezing points of aqueous solutions; solubility of glycine in mixtures of alcohol, salt and water.

Benedict, Prof. R(alph) C(urtiss), Brooklyn College, Brooklyn, N.Y. *Botany*. Syracuse, N.Y., June 14, 83. Ph.B., Syracuse, 06; Columbia, 08-09, fellow, 09-10, Ph.D., 11. Aid, N.Y. Bot. Garden, 06-08; instr. bot., Fordham, 10-11; high schs., N.Y., 12-31; assoc. prof., Brooklyn Col., City of N.Y., 31- Res. investigator, Brooklyn Bot. Garden, 14- Summers, instr., N.Y. Univ., 10, 11. A.A.; Hist. Sci. Soc.; Eugenics Soc.; Eugenics Research Asn.; Torrey Bot. Club (pres., 25, 26); Fern Soc. (ed., 'Jour.', 10-); N.Y. Asn. Biol. Teachers (pres., 24, 25). Genetics; science education; history of biology; phylogeny and classification of ferns.

Benedict, Prof. Ruth (Fulton), Columbia University, New York, N.Y. **Anthropology*. New York, N.Y., June 5, 87. A.B., Vassar Col., 09; Ph.D., Columbia, 23. Lecturer anthrop., Columbia, 23-31, asst. prof., 31- Ed., 'Jour. Am. Folk-Lore,' 23- Exps. to Indians of Southwest, 24, 26, 27, 31. Anthrop. Asn.; Ethnol. Soc. (pres., 27-29); Folk-Lore Soc. Cultural ethnology; primitive religion; mythology; Indians of the Southwest.

Benedict, Prof. Susan R(ose), 12 Barrett Place, Northampton, Mass. *Mathematics*. Norwalk, Ohio, Nov. 29, 73. B.S., Smith Col., 95; A.M., Columbia, 06; Ph.D., Michigan, 14. Instr. math., Smith Col., 06-14, assoc. prof., 14-22, prof., 22- Math. Soc.; Math. Asn. History of mathematics; algebraic symbols; early treatises on algorism; the algebra of Francisco Chaligai.

Benedict, Wayne L(eClair), 272 Shenstone Road, Riverside, Ill. *Petroleum*. Geneva, Nebr., June 2, 06. B.S., Nebraska, 27. Research chemist, Universal Oil Products Co., Chicago, 28- Chem. Soc. Color stability of gasolines; treating of petroleum distillates.

Benedict, Prof. W(illiam) L(emuel), Mayo Clinic, Rochester, Minn. *Ophthalmology*. Springfield, Ind., Feb. 13, 85. M.D., Michigan, 12. Prof. ophthal., Minnesota, and chief sect., Mayo Clinic, 17- A.A.; Ophthal. Soc.; Acad. Ophthal. and Otolaryngol.; Asn. Research Ophthal. (trustee, 30-); Am. Med. Asn.; Optical Soc.; Minn. Acad. Ophthal. and Otolaryngol.

Benedict, Dr. William S(idney), 455 W. 34th St., New York, N.Y. *Physical chemistry*. Lake Linden, Mich., July 4, 09. A.B., Cornell, 28, A.M., 29; Ph.D., Mass. Inst. Tech., 33. Nat. research fellow chem., Princeton, 33-35; production research chemist, Gen. Chem. Co., 36- Physical Soc. Structure of polyatomic molecules; infra-red spectroscopy; quantitative spectroscopic analysis.

Benford, Frank (A.), 1643 Rugby Road, Schenectady, N.Y. *Physics*. Johnstown, Pa., July 10, 83. B.E.E., Michigan, 10. Physicist, illum. eng. lab., Gen. Elec. Co., 10-28, research lab., 28- Lecturer, Case; Union (N.Y.). Optical Soc. rep., U.S. div., Int. Cmn. on Illum. A.A.; Optical Soc.; Illum. Eng. Soc.; Motion Picture Eng. Photometry; spectroradiometry; mathematics of light; reflectors and refractors; reflectometers; optical filters; the theory of Ulbricht sphere; the law of anomalous numbers; lighting of highways and buildings; antirachitic potency of monochromatic ultra-violet; monochromatic design; optical devices.

Benger, Dr. Ernest B(aden), du Pont Bldg., Wilmington, Del. *Chemistry*. Belvidere, Ill., Dec. 20, 85. B.S., Grinnell Col., 07; M.S., Wisconsin, 13, fellow, 14-15, 16-17, Ph.D., 17. Teacher, high schs., Minn. and Ky., 07-14; instr. chem., Wisconsin, 15-16; research chemist and lab. director, E. I. du Pont de Nemours and Co., 17-24; chem. director, du Pont Rayon Co. and du Pont Cellophane Co., 24-27, asst. gen. manager, tech. dept., 27-30; gen. asst. chem. director, E. I. du Pont de Nemours and Co., 30- Chem. Soc. (chairman, west, N.Y. sect., 28); Inst. Physics (advisory councilor, applied physics sect., 35-). Physical and inorganic chemistry; photochemistry; pyroxylon composition; artificial leather; rayon; cellulose films; viscose.

Bengis, Dr. R(obert) O(liver), 160 McKinley Ave., New Haven, Conn. *Chemistry*. New Haven, Conn., May 2, 90. Ph.B., Yale, Ph.D., 13. Biochemist, pharmacol. lab., bur. chem., U.S. Dept. Agr., 14-16; asst. chief chemist, Calco Chem. Co., 16-19; chief chemist, Heyden Chem. Co., 19-22; chem. director, T. H. Quinn and Co., 22-25; tech. director, The Cott-a-lap Co., 25-28; chem. director, T. H. Quinn and Co., 28-30; Standard Brands fellow, Yale, 30- Chem. Soc. Organic, pharmaceutical and biological chemistry; dyes and intermediates; wood distillation.

Bengtson, Dr. Ida A(lbertina), National Institute of Health, 25th and E Sts., N.W., Washington, D.C. *Bacteriology*. Harvard, Nebr., Jan. 17, 81. A.B., Nebraska, 03; M.S., Chicago, 13, Ph.D., 19. Bacteriologist, Dept. Health, Chicago, 15-16; from assoc. bacteriologist to senior bacteriologist, U.S. Pub. Health Service, 16- A.A.; Soc. Bact.; Pub. Health Asn. Potency testing and standardization of antitoxins and vaccines; etiology of trachoma; endemic typhus fever; Rocky Mountain spotted fever.

Bengtson, Prof. N(els) A(ugust), 1919 E. St., Lincoln, Nebr. *Geography*. Winslof, Sweden, May 22, 79. A.B., Nebraska, 07, A.M., 08; Ph.D., Clark, 27. Prof. geog., Nebr. State Nor. Sch., Peru, 03-04, 05-06; instr., Nebraska, 08-09, asst. prof., 09-12, assoc. prof. and prof. geol. and geog., 13-29, prof. geog. and chairman dept., 29- U.S. Soil Surv., 14; Nebr. Geol. Surv., 15; collaborator, bur. soils, U.S. Dept. Agr., 14-18; geologist, Honduras, Ecuador, Venezuela and England. Summers, instr., Cornell, 12; prof., Virginia, 13; Wisconsin, 25; Columbia, 29-37. Bur. research, W.T.B., 18; trade commissioner, U.S. Dept. Commerce, 19. A.A.; Asn. Geog. (pres., 23); Meteorol. Soc.; Nat. Council Geog. Teachers (pres., 29-30); Nebr. Acad. (pres., 35); Int. Geog. Union (U.S. nat. cmty.). Economic geography; geology; soils; Pennsylvanian and Permian stratigraphy of Nebraska; economic geography of Norway; geology of Honduras, Santa Elena Peninsula, Ecuador, district of Colón, Venezuela.

Benham, Dr. Rhoda W(illiams), College of Physicians and Surgeons, 630 W. 168th St., New York, N.Y. *Mycology*. Cedarhurst, L.I., N.Y., Dec. 5, 94. A.B., Columbia, 17, A.M., 19, Ph.D., 31. Asst. bot., Barnard Col., Columbia, 18-25; mycologist, Vanderbilt Clinic, 26-; asst. dermat. col. physicians and surg., Columbia, 27-30, assoc., 30-36, asst. prof., 36- A.A.; Mycol. Soc.; Bot. Soc.; Torrey Bot. Club; Pub. Health Asn. Medical mycology; fungi parasites of man.

Benioff, (Victor) Hugo, Seismological Laboratory, 220 N. San Rafael Ave., Pasadena, Calif. *Physics*. Los Angeles, Calif., Sept. 14, 99. A.B., Pomona Col., 21; Calif. Inst. Tech., 21-22, 24, Ph.D., 35. Asst. Lick Observatory, California, 23-24; asst. physicist, Carnegie Institution, 24-37; asst. prof. seismol., Calif. Inst. Tech., 37- Physical Soc.; Acoustical Soc.; Seismol. Soc.; Radi. Eng. Instrumental seismometry.

Benitz, Prof. William Logan, Notre Dame University, Notre Dame, Ind. *Mechanical engineering*. Pittsburgh, Pa., Oct. 26, 72. M.E., Cornell, 96; M.M.E., Notre Dame, 11. Prof. mech. eng., Notre Dame, 96- City electrician, South Bend, Ind., 01-02. Ind. Acad.

Benjamin, Dr. Earl W(hitney), Pacific Egg Producers Cooperative, Inc., 178 Duane St., New York, N.Y. *Poultry husbandry*. Almond, N.Y., Oct. 16, 89. B.S.A., Cornell, 11, M.S.A., 12, Ph.D., 14. Instr. poultry husbandry, Cornell, 11-14, asst. prof., 15-19, prof., 20-22; sales manager, Pacific Egg Producers, N.Y., 22-25, gen. manager and treas., 25- Marketing of poultry products.

Benjamin, Dr. Helen R(ivkin), 263 E. Parkway, Brooklyn, N.Y. *Biochemistry*. New York, N.Y., May 5, 00. A.B., Barnard Col., Columbia, 21, A.M., Columbia, 22, Ph.D., 33.

Asst. to Dr. Alfred F. Hess, Columbia, 27-34; chemist, Lebanon Hosp., 34-36; research asst., N. Y. Univ., 34- Rickets and the mechanism of calcification of bone.

Bennjamin, Dr. Julian E(mil), 3635 Washington Ave., Cincinnati, Ohio. *Internal medicine*. Cincinnati, Ohio, July 29, 89. B.S., Michigan, 10; M.D., Cincinnati, 12. Asst. prof. med., Cincinnati, 16— Attending physician, Jewish Hosp., Cincinnati; director outpatient dept. and attending physician, Cincinnati Gen. Hosp.; past pres., Pub. Health Federation and Cent. Clinic; director heart clinics. A.A.; Am. Med. Asn.; fel. Col. Physicians; Asn. Charities (director). Cardiology; diseases of circulation; public health.

Benner, Prof. J(acob) Alfred, 522 Parsons St., Easton, Pa. *Mathematics*. Hopewell, Pa., Oct. 8, 00. A.B., Pa. State Coll., 22; A.M., Lafayette Col., 25; Columbia, 29. Instr. math., Lafayette Col., 22-27; asst. prof., 27-32; assoc. prof., 32- Math. Soc.; Math. Asn.; Eng. Educ. Functions of a real variable; modern synthetic geometry.

Benner, Dr. James W(illiam), New Mexico College of Agriculture and Mechanic Arts, State College, N. Mex. *Veterinary medicine*. Hamlin, Kans., June 24, 87. D.V.M., Kans. State Col., 11; M.S., Cornell, 20. Instr., Kans. State Col., 14-17; asst. prof., Mich. State Col., 17-19; investigation animal diseases. N. Y. State Vet. Col., Cornell, 21-32. swine diseases, Fontana Farms Co., 32-34; live-stock growing, 34-37; veterinary, N. Mex. Col., 37- Vet. Med. Asn.; N. Y. Vet. Asn. Diseases of swine.

Benner, Dr. R(aymond) C(alvin), The Carborundum Co., Niagara Falls, N. Y. *Chemistry*. Minneapolis, Minn., May 13, 82. B.S., A.B., Minnesota, 02; A.M., Wisconsin, 06, Ph.D., 09. Instr. chem., Mich. State Col., 02-03; Wisconsin, 03-06; asst. prof., Arizona, 06-11; prof. electrometall., Pittsburgh, 11-13; director Fremont lab., Nat. Carbon Co., 13-25; research engineer, Gen. Chem. Co., 25-27; director research and patent dept., Carborundum Co., 27- Chemist, Wis. Geol. Surv., 03-06; in charge smoke investigation, Pittsburgh, 11-13; U. S. Assay Cmn., 12, 13. A.A.; Chem. Soc.; Electrochem. Soc.; Ceramic Soc.; Min. and Metal. Eng.; Chemists' Club; Can. Ceramic Soc.; British Ceramic Soc.; British Soc. Glass Technol. Electrochemistry; metallurgy; primary and secondary cells; corrosion; catalysis; chromium; active lead; lead peroxide; ceramics; abrasives; refractories; sulfur recovery.

Benner, Dr. W(alter) M., 5636 Loretta Ave., Philadelphia, Pa. *Botany*. Souderston, Pa., Dec. 16, 88. B.S., Muhlenberg Col., 20; A.M., Pennsylvania, 26, Ph.D., 31. Teacher biol., Cent. High Sch., Phila., 22- research assoc. bot., Acad. Nat. Sciences Phila., 28- A.A.; Phila. Bot. Club (pres., 28-32). Annotated flora of Bucks County, Pennsylvania; *Lycopodium*; taxonomy and phytogeography of flowering plants and ferns.

Bennett, Prof. Albert A(rnold), Brown University, Providence, R. I. **Mathematics*. Yokohama, Japan, June 2, 88. A.B., A.M., Brown, 10, M.S., 11; Ph.D., Princeton, 15; Göttingen; Paris; Bologna; Chicago. Instr. math., Princeton, 14-16; adj. prof., Texas, 16-18, assoc. prof., 18-25; prof. and head dept., Lehigh, 25-27; prof., Brown, 27- Asst. ed., *Annals of Math.*, 16-29; ed. in chief, Am. Math. Monthly, 22. Math. and dynamics expert, Ordnance Dept., U.S.A., 19-22. Math. Soc. (councilor, 27-29); Math. Asn. (trustee, 21, v. pres., 25); fel. Am. Acad. Algebra.

Bennett, A(lva) H(erschel), 116 Warren Ave., Kenmore, N. Y. *Physics*. Troy, Ohio, Oct. 2, 95. A.B., Ohio State, 18; A.M., George Washington, 26. Asst. physics, Ohio State, 17-18; lab. asst., Bur. Standards, 18-20; asst. physicist, 20-22; assoc. physicist, 22-29; chief physician and asst. sci. director, Spencer Lens Co., Buffalo, 29-37, director research sect., 37- Physical Soc.; Optical Soc. Optical glass and instruments; aberrations of optical systems; optical instrument and lens design.

Bennett, Prof. A(rthur) L(awrence), University of Nebraska College of Medicine, Omaha, Nebr. *Physiology*. Oconto, Wis., June 25, 05. A.B., Lawrence Col., 27; Ph.D., Chicago, 33, M.D., Rush, 36. Adj. prof., sch. med., Texas, 30-31; asst. prof. physiol. and pharmacol., col. med., Nebraska, 34- Blood flow.

Bennett, Dr. Arthur L(owell), Yale University, New Haven, Conn. *Astronomy*. Williamson, N. Y., May 28, 04. B.S., Union (N. Y.), 26; Ph.D., Princeton, 32. Asst., Lowell Observatory, 26-28; McCormick Observatory, Virginia, 30-31;

observatory, Yale, 31-32, instr. astron., 32- Photographic and photoelectric photometry; parallax.

Bennett, Dr. C(arl) W(illson), U. S. Department of Agriculture, Riverside, Calif. *Plant pathology*. Narrows, Ky., June 8, 95. B.S., Kentucky, 17; M.S., Mich. State Col., 19; Ph.D., Wisconsin, 26. Asst. bot., Mich. State Col., 17-19; instr., 19-21; asst. prof., 21-22; asst., 22-28; research assoc., Ohio Exp. Sta., 28-29; pathologist, div. sugar plants investigation, bur. plant indust., U. S. Dept. Agr., 29- A.A.; Bot. Soc.; Phytopath. Soc. Celery and fruit diseases; virus diseases.

Bennett, C(harles) A(bel), Box 428, Leland, Miss. *Agricultural engineering*. Tecumseh, Nebr., Nov. 14, 89. B.S., Nebraska, 11. Consulting mech. engineer, 14-17; chargeman draftsman, U. S. Navy Yard, Puget Sound, 18-22; asst. to chief engineer, Am. Liquid Meter Co., 24-26; assoc. mech. engineer, U. S. Dept. Agr., 26-30, senior mech. engineer in charge cotton ginning investigations, bur. agr. eng., 30- Agr. Eng. Drying seed cotton; ginning cotton.

Bennett, Dr. C(harles) W(illiam), 143 Andrews St., Rochester, N. Y. *Physical chemistry*. Hartford, Ky., March 29, 86. B.S., A.M., Vanderbilt, 09; Ph.D., Cornell, 11. Asst. chem., Vanderbilt, 07-09; Cornell, 09-11, instr., 11-13, asst. prof., 13-15; chem. technologist and pres., Douglas Corp., Inc., later Bennett-Mack Corp., Douglas, L. I.; sec'y, Photocast, Inc. Electrochemistry; colloids; emulsions; photochemical effects; storage batteries; nitrogen fixation; phosphoric acid; alumina.

Bennett, Prof. C(hester) W(allace), 409 W. Pierce St., Macomb, Ill. *Organic chemistry*. Vernon, Iowa, Feb. 17, 04. B.S., Illinois, 26, Ph.D., 30; M.S., Northwestern, 27. Asst. prof. chem., West. Ill. State Teachers Col., Macomb, 30- Chem. Soc. Pyrolysis of organic compounds; optically active diazo compounds.

Bennett, Prof. Clarence E(dwin), 22 Myrtle St., Orono, Maine. *Physics*. Providence, R. I., May 23, 02. Ph.B. Brown, 23, M.S., 24, Ph.D., 30. Asst. physics, Brown, 23-24, instr., 24-31; Mass. Inst. Tech., 31-34; asst. prof., Maine, 34- A.A.; Physical Soc.; Asn. Physics Teachers; Providence Eng. Soc. Capillary electrometer; displacement interferometry; refractive index and dispersion measurements for gases over ranges of densities.

Bennett, Prof. D(onald) M(enzes), University of Louisville, Louisville, Ky. *Physics*. Milwaukee, Wis., Nov. 24, 97. A.B., Wisconsin, 21, A.M., 23, Ph.D., 26. Asst. physics, Wisconsin, 20-22, 24-26; instr., Colorado, 22-24; asst. prof., Louisville, 26-29; assoc. prof., 29- A.A.; Physical Soc.; Eng. Educ. (cmt. on physics); Ky. Asn. Physics Teachers. Emission of positive electricity from metal plates by ultra-violet light; x-ray absorption spectrum of calcium halides.

Bennett, D(wight) G(ranville), 422 Sulgrave Road, Pittsburgh, Pa. *Ceramics*. Mt. Carroll, Ill., Oct. 1, 94. B.S., Illinois, 30. Research engineer, Metal and Thermit Corp., 30-31; indust. fellow, Mellon Inst., 31- Development and control of porcelain enamels; standardization of tests in the porcelain enamel industry.

Bennett, E(dmund) R, State House, Boise, Idaho. *Horticulture*. Geneva, Mich., June 3, 74. B.S., Mich. State Col., 02, M.Hort., 08. Asst. hort., Conn. Col., 03-06; asst. horticulturist, Exp. Sta., Colo. Agr. Col., 06-09, prof. hort., 09-13; horticulturist, C. R. I. and P. Ry., 13-14; field horticulturist, exten. div., Idaho, 16-

Bennett, Prof. Edward, University of Wisconsin, Madison, Wis. *Electrical engineering*. Pittsburgh, Pa., Oct. 26, 76. E.E., Pittsburgh, 97. Engineer, Nernst Lamp Co., 99-02, chief engineer, 03-04; consulting engineer, 04-05; head engineer, Nat. Elec. Signaling Co., 05-06; engineer, Telluride Power Co., 06-09; assoc. prof. elec. eng., Wisconsin, 09-13, prof., 13- chairman dept., 18- A.A.; Elec. Eng. (v. pres., 24-26); Eng. Educ. (v. pres., 29); Physical Soc.; Radio Eng.; Illum. Eng. Soc.; Hist. Sci. Soc.; Philos. Sci. Asn.; Acad. Polit. Sci. Nernst lamp development; lightning arresters; wireless telegraphy; power transmission.

Bennett, Prof. George E(l), 4 E. Madison St., Baltimore, Md. *Surgery*. Clareville, N. Y., April 15, 85. M.D., Maryland Intern., Univ. Md. Hosp., 08-09; house surgeon, Ruptured and Crippled Hosp., New York, 09-10; instr. and assoc. clin. orthop. surg., sch. med., Hopkins, 14-28, assoc. prof., 28- Col. Surg; Orthop. Asn.; Am. Med. Asn.; Acad. Orthop. Surg.; South. Surg. Asn.; South. Med. Asn.; Med. and Chirurg.