

# MEMBERSHIP ROLL<sup>1</sup>

## OF THE TENNESSEE ACADEMY OF SCIENCE

The letter H after the name designates honorary membership in the Academy; A and AF, membership and fellowship, respectively, in the American Association for the Advancement of Science. The number after the name indicates the date of becoming life members or of admission to the Academy.

### LIFE MEMBERS

Any one who contributes the sum of fifty dollars (\$50.00) or more to the Academy at one time or *who contributes a sum which with dues already paid aggregates fifty dollars (\$50.00) or more* may be elected by the Executive Committee a Life Member. Life Members enjoy all the privileges of the Academy without further payment of dues. Sustaining members may be elected Life Sustaining Members when their contributions aggregate at least one hundred dollars (\$100.00).

Chapin, Edward Y., 1935 (Sustaining) .....	Chattanooga, Tenn.
†Cole, Whitefoord R., 1931	
Diehl, Charles E., A 1935 .....	Memphis, Tenn.
Glenn, Leonidas C., A F 1931 .....	Nashville, Tenn.
Guild, Joe Conn, 1935 (Sustaining) .....	Chattanooga, Tenn.
King, Jeanette M., 1933 .....	Murfreesboro, Tenn.
Litterer, William A., 1930 .....	Nashville, Tenn.
McGill, John T., A F 1931 .....	Nashville, Tenn.
Morgan, Harcourt A., A F 1931 .....	Knoxville, Tenn.
Tirrell, Willard O., 1934 (Sustaining) .....	Nashville, Tenn.

### SUSTAINING MEMBERS

Any person or educational institution contributing ten dollars (\$10.00) to the Academy may be enrolled as a sustaining member. The list published here includes, with the sustaining members of 1935, those of recent years who, not having asked for discontinuance, may yet renew their membership.

John W. Barton, A., Nashville  
A. B. Benedict, Nashville  
Cornelius A. Craig, Nashville  
H. G. Hill, Nashville  
Paul J. Kruesi, Chattanooga

Charles Nelson, Nashville  
Elbridge W. Palmer, Kingsport  
George Peabody College for  
Teachers, Nashville  
Charles C. Trabue, Nashville

<sup>1</sup>Corrections and changes of address should be sent to Dr. J. T. McGill, Vanderbilt University.

†Deceased.

## MEMBERS\*

Age, G. Worthem	60 North Third St., Memphis	Chemistry
Akin, H. A.	Dental Clinic, Paris	Dentistry
Allen, Chester Dye, '29	Consultant, U. S. V. Hosp., Dermon Bldg., Memphis	Medicine
Amick, Harold C., '26 A. F.	Instr. Univ. of Tennessee, Knoxville	Geology
Anderson, L. C., '26	Asst. Mgr., Nashville Bridge Co.	Engineering
Andes, James O., '30	Asst. Plant Pathologist, Agr. Exp. Station, Knoxville	Agriculture
Ashley, George H., '12, A. F.	State Geologist, Harrisburg, Pa.	Geology
Atkinson, W. R., '28 A	Prof., Southwestern Univ., Memphis	Psychology, Education
Austin, Russell H., '28 A. F.	Prof., William Jennings Bryan Univ., Dayton	Chemistry
Avery, Paul C., '28 A	Box 295, Mission, Tex.	Zoology
Avery, Roy C., '26	Asst. Prof., Vanderbilt Univ., Nashville	Bacteriology
Ayres, J. C., '32	Phys., 528-535 Medical Arts Bldg., Memphis	Medicine
Bachtel, Dorothy H., '31	Instr., Mid. Tenn. State Teach. Col., Murfreesboro	Biology
Bailey, H. Harding, '26	Supt. Production, Tenn. Electric Co., Chattanooga	Engineering
Baird, J. J. Jr.	Carson-Newman Col., Jefferson City	Medicine
Baker, Clinton L., '32	Prof., Southwestern, Memphis	Biology
Barr, Richard A., '26	Barr Infirmary, 19th and Division St., Nashville	Surgery
Bartoo, D. R., '30 A	Prof., Tenn. Polytech. Inst., Cookeville	Biology
Baughan, G. C.	Purveyor	Chemistry
Beauchamp, R. O., '28	Teacher, Peabody Dem. School, Nashville	Science
Belcher, Vera, '32	Teacher, 1000 Eaton St., Murfreesboro	Science
Bentley, Gordon M.	Prof., Univ. Tenn., Knoxville	Entomology
Bigger, James Frank	V. P. Tenn., Dental Assn., Med. Arts Bldg., Memphis	Dentistry
Bircher, Louis J., '21 AF	Prof., Vanderbilt Univ., Nashville	Chemistry
Bishop, Eugene L., '25	State Comr., Tenn. Dept. of Health, Nashville	Public Health
Bitter, John, '29	Care N. Amer. Rayon Corp, Elizabethton	Chemistry
Blackmer, Richmond P.	2407 Linden Place, Nashville	
Bliss, A. R., Jr., '26 AF	Crosstown Sta., P. O. Box 6308, Mem.,	Pharmacology, Physiology
Bliss, Loretta Ann, '32	Hotel Peabody, Memphis	
Bold, Harold C., '33	Instr., Biology, Vanderbilt University, Nashville	Biology
Born, Kendall E.	Asst. Geologist, Tenn. Division Geology, 401 7th Ave., N., Nashville	Geology
Boltum, Frances Ranney, '27 AF	Instructor, Peabody College, Nashville	Biology
Bovay, Harry E., '34	725 Dermon Bldg., Memphis	Public Health
Bralliar, Floyd, '33 A.	Chairman Ed. Div., Nashville, Agri. Normal Inst., Madison	Education
Bransford, Howell	Union City	
Brett, Axel, '29 A	Prof., Univ. of Tennessee, Knoxville	Philosophy, Psychology
Brooks, Barney, '27	Prof., Vanderbilt Univ., Nashville	Surgery
Brown, C. B., '28	Prin., Vonore High School, Vonore	Science
Brown, D. M., '28 AF	Prof., State Teachers' College, Johnson City	Biology
Brown, Robert Ratz, '26	Instr., Vanderbilt Univ., Nashville	Surgery
Bryan, Worcester A., '25	Prof., Vanderbilt Univ., Nashville	Surgery
Bryan, W. Ray, '32	1107 16th Ave., S., Nashville	Physiology
Buehler, Calvin A., '27 AF	Assoc. Prof., Univ. of Tenn., Knoxville	Chemistry
Burdick, John Clement	Union City	
Burwell, C. Sidney, '27 AF	Prof., Vanderbilt Univ., Nashville	Medicine
Butts, W. K., '32	Prof., Univ. of Chat., Chattanooga	Biology
Caldwell, John C.	Director Education Fish and Game Dept., West End Apts., Nashville	
Caldwell, Willie V., '30 A	Univ. of Tenn. Jr. College, Martin	Zoology
Cameron, George M., '31	516 Fairmont Blvd., Knoxville	Bacteriology
Campbell, Edward Guy, '28	Phys., First Nat'l Bk. Bldg., Memphis	Medicine
Campbell, Robert A., '33	Prof., Vanderbilt Univ., Nashville	Economics
Campbell, Willis C., '28	Prof., Univ. of Tenn., Memphis	Orthopedic Surgery
Canning, Graeme A.	Asst. Prof. Univ. Tenn., Knoxville	Zoology
Carlin, Jos. C., '33	Chem. Engineer, Tenn. Prod. Corp., Nashville	Chemistry
Casparis, Horton Ryan, '27 A.	Prof., Vanderbilt Univ., Nashville	Pediatrics
Caton, Alice, '30	2119 White Ave., Knoxville	Botany
Chaffee, Leonora, '33	Lab. Technician, 981 Jefferson Ave., Memphis	
Chapman, D. C., '24	Chr. Smoky Mts. Nat'l Park Com., Knoxville	
Chrisman, R. B. Jr.	Grove High School, Paris	Science
Clark, Sam Lillard, '30 AF	Asst. Prof., Vanderbilt Univ., Nashville	Anatomy
Claxton, Philander Priestly, '31	Pres., Austin Peay Normal School, Clarksville	Education
Cochrane, Frazier, '31	Instr. Milligan College	Zoology
Coffey, Benj. B., Jr., '27	Tenn. Inspectors Bureau, Memphis	Ornithology
Cohn, Robt., '33	Heart's Delight Farm, Forest Hill	Scientific Farming

\*The names of those who are in arrears for the annual dues of 1931 or have died or have resigned or have removed from the State without payment of the dues for 1932 are not included in this list.

\*Died October 20, 1933.

Conover, Frederic L., '23	Assoc. Prof., Vanderbilt Univ., Nashville	Chemistry
Conroy, Edward H., '30	Research Chemist, Copper Hill	Chemistry
Conry, Joe E., '33 A	Dir. Dept. Agr., T. P. I., Cookeville	Agriculture
Corbitt, Jas. S., '32	McNairy Camp, PE-57, Selmer	Mathematics
Cornelius, David W., '26 AF	Prof., Univ. of Chattanooga, Chattanooga	Physics
Crook, Compton, '33	Western Reserve Univ., Cleveland, O.	Science
Cuff, Roger P., '28 A	Donelson, Route 1	Education
Dale, John A., '28	Member Barnard Club, 127 3rd Ave., S., Nashville	Astronomy
Davis, George, '26	Prof., Tenn. State Teachers College, Murfreesboro	Biology
Davis, K. C., '21 AF	Prof., Geo. Peabody Col. for Teachers, Nashville	Agrie. Edu.
Davis, Roy B., '17 AF	Prof., Univ. of the South, Sewanee	Education
Day, C. D., '32	Head Dept. Biol., Westminster Col., Fulton, Mo.	Biology
Deacon, Warren McA., '25 AF	Asst. Prof., Vanderbilt Univ., Nashville	Biology
Deen, William George, '28	Prof., Tenn. Teachers' College, Memphis	Education
Dennis, Clyde A., '31	Prof., Tusculum Col., Greeneville	Biology
DeWitt, John H., '19	Judge, Tenn. Court of Appeals, Nashville	
DeWitt, John H., Jr., '33	Chief Engineer, WSM, Nashville	Engineering
DeWitt, Ward, '33	Observatory Drive, Nashville	
Dickerson, Laurence M., '31 A	Wildlife Technician, S.P.C.—3, Jamestown	Biology
Dicus, Aaron W., '30	Prof., Tenn. Polyt. Inst., Cookeville	Physics
Dishman, Clara A.	110 Church St., McKenzie	Science
Dittes, Frances Linda, '32	Teacher, Nashville Agt. and Normal Inst., Madison	Dietician
Dixon, William C., '26	Assoc. Prof., Vanderbilt Univ., Nashville	Clinical Gynecology
Dougherty, Nathan W.	Prof., Univ. of Tenn., Knoxville	Engineering
Dyer, Gustavus W., '25	Prof., Vanderbilt Univ., Nashville	Economics, Sociology
Dynes, O. W., '28	Prof., Univ. of Tenn., Knoxville	Agronomy
Eggleston, Eleanor, '31	Asst. Librarian, Vanderbilt Univ., Nashville	
Eliot, Theodora S., '29 AF	Assoc. Prof., Univ. of Tenn., Memphis	Histology, Embryology
Elliot, Paul R., '31 A	Prof., Dobyns-Bennett High School, Kingsport	Biology
Elsner, Richard, '29	Chem. Amer. Glanzstoff Corp., Elizabethton	Chemistry
Endsley, John Roy, '30	Prof., Freed-Hardeman-Col., Henderson	Physics
Erwin, William G., '33	Lake Consolidated High School, Lake, Miss.	Biology
Estes, James A., '26	Cashier, Sou. Bell Tel. & Tel. Co., Nashville	
Fensterwald, Ralph, '26	3701 Harding Road, Nashville	Economics
Finney, B. F., '24	Vice Chancellor, Univ. of the South, Sewanee	Education
Fisk, H. W.	Chemist, 406 Blanton St., Paris	Chemistry
Fitch, Jerry C.	Grove High School, Paris	
Fort, Rufus E., '29	Phys. Nat. L. & A. Ins. Co., 303 7th Ave., N., Nashville	Surgery
Foster, Ferris U., '30	Prof., Tenn. Polytechnic Inst., Cookeville	Chemistry
Fountain, Claude R., '28 AF	Prof., Geo. Peabody College for Teachers, Nashville	Physics
Fowler, C. F.	Supt. of Schools, Union City	
Fox, Jesse W.		Obion
Frazier, John M., '26	Prof., State Teachers' College, Hattiesburg, Miss.	Biology
Freedman, H. E., '32 A	Pharmacist, 888 N. Second St., Memphis	Pharmacology
Freeman, Chester P., '33 AF	State Teachers College, Memphis	Biology
Frick, T. A., '26	Prof., Hiwassee College, Madisonville	Chemistry
Funcke, J., '29	Chem. Engr., Amer. Glanzstoff Corp., Elizabethton	Engineering
Gage, George R., '28 AF	Assoc. Prof., Vanderbilt Univ., Nashville	Biology
*Gailor, Thomas F., '29	Eishop, Prot. Episcopal Church, Memphis	
Ganier, Albert F., '23 AF	Designing Engr., N., C. & St. L. Ry., Nashville	Engineering
Garrey, Walter E., '27 AF	Prof., Vanderbilt Univ., Nashville	Physiology
Gates, Mildred L.	Teacher, 1429 Tutwiler Ave., Memphis	General Science
Gilbert, Charles C., '23	Sec., Tenn. Manufacturers' Assn., Nashville	
Gill, Jessie May, '32	Starkville, Miss.	Pharmacology
Gladfelter, Herbert J., '32	Sr. Engr., U. S. Engr. Office, 1571 Foster Ave., Memphis	Engrg.
Goodpasture, Ernest W., '25 AF	Prof., Vanderbilt Univ., Nashville	Pathology
Gotten, Henry B., '32	Physician, 20 S. Dunlap, Memphis	Medicine
Graves, Lloyd Myers, '28	Supt. Dept. of Health, Memphis	Public Health
Green, Ollie Elmer, '30	Teacher, State Teachers' College, Murfreesboro	Chem. Geog.
Green, Susan Allen, '26 AF	Prof., Maryville College, Maryville	Biology
Green, Susie C.	337 Sayre St., Montgomery, Ala.	Biology
Grote, Irvine W., '33 AF	2211 Union Ave., Chattanooga	Chemistry
Gurney, Charles H., '26 A	5020 Rossville Road, Chattanooga	Chemistry
Haber	U. S. Weather Bureau, Murfreesboro	Meteorology
Haggard, W. D., '25	Prof., Vanderbilt Univ., Nashville	Surgery
Hale, Chas. S., '32	Rector, 19 S. Auburndale, Memphis	Theology
Hall, George Martin, '26 AF	Assoc. Prof., Univ. of Tenn., Knoxville	Geology
Hall, Walter F., '31	Instr., Central High School, Nashville	Science
*Died October 3, 1935.		

Hampton, C. O.	Chem. Engr., Box 449, Paris	Chemistry
Hansard, O. H.	Eng., Care Herbert & Son, Nashville	Engineer
Harris, A. W., '25	Assoc., Prof., Vanderbilt Univ., Nashville	Neurology
Harris, Cara L., '30 A	P. O. Box 4142 University Station, Knoxville	Health, Education
Harris, Paul N., '30 A	Lab. Pathology, 195 Pilgrim Road, Boston, Mass.	Pathology
Harwood, Paul D., '33 AF	Zoolog. Div., Bureau of Animal Industry, Bettsville, Md.	Pharmacy
Hadden, Damon	26 Memorial Bldg., Nashville	Game Warden
Henson, Ramon	Staff Artist, "Tenn. Sportsman," Henderson	Comm. Art.
Hertel, Kenneth LaDoyt, '30 AF	Prof., Univ. of Tenn., Knoxville	Physics
Hesler, L. R., '26 AF	Prof., Univ. of Tennessee, Knoxville	Botany
Hill, Henry G., '32	Physician, 847 Madison Ave., Memphis	Medicine
Hoffman, Hugo, '29	Chief Chemist, Amer. Bemberg Corp., Elizabethton	Chemistry
Hollinger, Alma, '25	Teacher, Ward-Belmont College, Nashville	Biology
Hooke, Robert, '26 A	City Engr., 731 McCallie Ave., Chattanooga	Engineering
Howell, George D., '30 AF	Prof., Maryville College, Maryville	Chemistry
Huddle, Horace B., '31	Prof., E. Tenn. S. T. College, Johnson City	Chemistry
Hudson, Bonnie Lucile, '30 AF	Maryville Col., Maryville	Biology
Hughes, O. R., '32	Dean of St. Teachers' Col., Memphis	Education
Hume, Alfred, AF	Chancellor, Univ. of Miss., University, Miss.	Education
Hunt, John Steger, '27	Prof., Central High School, Chattanooga	Biology
Hunt, W. J., '32 A	Dentist, Fidelity Bk., Bldg., Memphis	Dentistry
Hutchinson, Robert O., '31 AF	Prof., Tenn. Poly. Inst., Cookeville	Mathematics
Ingersoll, A. W., '22 AF	Assoc. Prof., Vanderbilt Univ., Nashville	Chemistry
Ingram, W. D.	Health Officer, Dresden	Med.
Ives, Eulalie	Carson-Newman Col., Jefferson City	Biology
Ives, Judson Duntar, 28 AF	Prof., Carson and Newman College, Jefferson City	Biology
Jacobi, Charles Graham, '32	Dyersburg, Tenn	Pharmacist
Jacobi, Mrs. Charles C., '32	Dyersburg, Tenn.	Pharmacist
Jacobs, Arthur G., '28	Prof., Univ. of Tennessee, Memphis	Pediatrics
Jelks, John Lemuel, '28	Chrm. Med. Bd., Josephs Hospital, Memphis	Medicine
Jennison, Harry M., '26 AF	Prof., Univ. of Tenn., Knoxville	Botany
Sewell, Willard B., '26	Asst. Prof. Vand. Univ., Nashville	Geology
Jones, Burton	608 Market St., Chattanooga	
Jones, Foster V.	U. S. Weather Bureau, Murfreesboro	Meteorology
Keith, Wilma, '32	Teacher, 1229 Carr Ave., Memphis	Biology
King, Fain W., '33	Wickliffe, Ky.	Archaeology
King, Warren R., '21	Dist. Engr., U. S. Geol. Survey, Chattanooga	Hydraulic Engrg.
Knudsen, Charles W., '30 A	George Peabody College, Nashville	Education
Koen, John, '29	Frances Avenue, Nashville	Biology
Lackey, Jas. B., A	T. V. A., Wilson Dam, Ala.	Aquatic Biology
Lamoureux, W. F., '30	Mgr., Ducktown Chem. & Iron Co., Isebella	Chemistry
Lamson, P. D., '25 AF	Prof., Vanderbilt Univ., Nashville	Pharmacology
Lanier, Lyle Hicks, '28 AF	Asst. Prof., Vanderbilt Univ., Nashville	Psychology
Laskey, Amelia R., '33	Graybar Lane, Nashville	
Leathers, Waller S., '25 AF	Dean and Prof., Med. Sch., Vand. Univ., Nashville	Public Health
LePrince, J. A.	327 Fed. Bldg., Memphis	Public Health
Leroy, Louis, '32	Prof., Univ. of Tenn., 1304 Union Ave., Memphis	Medicine
Levy, Louis, '32	Physician, 1549 Bank of Com. Bldg., Memphis	Otolaryngology
Link, E. C., '26	Pathological Institute, Memphis	Pathology
Little, Charles E., '26	Dean and Prof., Geo. Peabody College, Nashville	Latin
Livermore, Geo. R.	Med. Arts Bldg., Memphis	Urol.
Loeb, W. L., '32	282 Madison Ave., Memphis	
Lyne, Mrs. Roberta D., '28	Member Barnard Club, Ridgtop	Astronomy
Lyon, Benj. I.	Chem., Vanderbilt Univ., Nashville	Chemistry
McCallie, J. P., '26 AF	Headmaster, McCallie School, Chattanooga	Education
McClure, James, '12 AF	Asst. Prof., Vand. Univ., Nashville	Mathematics and Physics
McCorkle, Eloise, '33	Portage, Mich.	Science
McGilliard, Eleanor, '28 A	Instr., Univ. of Chattanooga, Chattanooga	Biology
McSwain, G. R.	Surgeon, Paris	Surgery
Madlinger, George J.		Forestry
Magill, Arthur C.	Cape Girardeau, Mo.	Chemistry
Malone, Battle, '29	706-10 Goodwyn Institute, Memphis	Surgery
Malone, Thomas H., '26	1912 Nashville Trust Bldg., Nashville	Lawyer
Mangrum, Jas. F., '33	Elbridge, Tenn.	
Marcovitch, Simon, '30 AF	Prof., Univ. of Tenn., Knoxville	Entomology
Marshall, Winston N., '34	1215 Forrest Ave., Nashville	Artist
Martin, Alan, '33	108 33rd Ave., N., Nashville	Astronomy
Mason, K. E., '28 AF	Care Vanderbilt School of Med., Nashville	Anatomy
Maury, John M., '29	Prof., Univ. of Tenn., Memphis	Gynecology

Mayer, Lilian C. B., M.A.	1501 Highland Ave., Knoxville.	
Mayer, Ludwig S., '28 AF	Asst. Agronomist, Agr., Exp. Sta., Knoxville.	Agronomy
Mayfield, George R., '19 AF	Prof., Vanderbilt Univ., Nashville	Ornithology
Mehane, Wm. M.	State Teachers Col., Murfreesboro	Chemistry
Meloney, Henry E., '28 AF	Assoc. Prof., Vanderbilt Univ., Nashville	Public Health
Meyer, Sam L.	Instr., Vanderbilt Univ., Biology Dept., Nashville	Biology
Michelson, Israel David, '28 AF	Asst. Prof., Univ. of Tenn., Memphis	Bacteriology
Miser, Hugh D., '25 AF	Geol., U. S. Geology Survey, Washington, D. C.	Geology
Miser, Wilson L., '25 AF	Prof., Vanderbilt Univ., Nashville	Mathematics
Mitchell, Edward Clay, '28	Prof., Univ. of Tenn., Memphis	Pediatrics
Mitchell, Frank T., '29	Instr., Univ. of Tenn., Memphis	Pediatrics
Money-maker, Berlen C.	Oliver Springs	Geology
Mouk, Harry C., '26	3108 Long Blvd., Nashville	Ornithology
Moers, C. A., '23 AF	Dir., Agric. Exp. Sta., Univ. of Tenn., Knoxville	Agronomy
Moore, Clarence E., '31 A	Prof., W. Tenn. State Teachers College, Memphis	Biology
Morgan, Hugh J., '26 AF	Prof., Vanderbilt Univ., Nashville	Medicine
Morrel, John S., '30	Asst. Prof. Vanderbilt Univ., Nashville	Mathematics
Morris, Joe H.	Dentist, 1st Nat'l. Bk. Bldg., Paris	Dentistry
Morton, Roy J., '30	Memorial Bldg., Nashville	Sanitary Engineering
Murphy, D. J., '32	Dean, 1695 Central Ave., Memphis	Theology
Nailling, Wm. A.	Surgeon, Union City	Surgery
Nash, C. Hurley, '32	Dentist, U. & P. Bank Bldg., Memphis	Dentistry
Nealon, Dan F.	Chemist, Nat'l Toilet Co., Paris	Chemistry
Nelson, Henry Gibson, '27	Lookout Mountain	Chemistry
Nelson, Wilbur A., '26 H, '26 AF	Prof., Univ. of Va., Charlottesville, Va.	Geology
Nunn, Roscoe, '12 H, '26 A	Dir., U. S. Weather Bureau, St. Louis, Mo.	Meteorology
Oakes, H. N., '32	4605 Southern Parkway, Louisville, Ky.	Biology
Ore, Miss Joe A., '30	Teacher, Jefferson City	Biology
Pancratz, David S., AF		Anatomy
Parham, C. L.	Professor, Henderson	Science
Paris, John T., '31	1400 17th Ave., S., Nashville	Education
Parkins, A. E., '17 AF	Prof., Geo. Peabody College for Teachers, Nashville	Geography
Patterson, Geo. C.	Teacher, Grove High School, Paris	Physics
Peterson, Carl I.	Asst. State Forester, 701 Seventh Ave., N., Nashville	Forestry
*Peterson, Joseph, '18 AF	Prof., Geo. Peabody College for Teachers, Nashville	Psychology
Petry, Robert L., '30 AF	Prof., University of the South, Sevanee	Physics
Phillips, John H., '28	Dentist, Medical Arts Bldg., Nashville	Dentistry
Pond, Robert Spencer, '33	Prof. of Math., Southwestern Col., Memphis	Mathematics
Pond, Walter Franklin, '27 AF	State Geologist, Nashville	Geology
Porter, O. J., '26	817 S. Garden St., Columbia	Medicine
Powell, Louise Beecher	P. O. Box 1571, Memphis	
Powers, Edwin B., '26 AF	Prof., Univ. of Tenn., Knoxville	Zoology
Prather, Earl M., '31	Memorial Bldg., Room 9, Nashville	Horticulture
Pride, Williams Thomas	1460 Madison Ave., Memphis	Medicine
Pulliam, Henry N.		Radiology
Ransom, Charles G., '29	Doctors Building, Nashville	Bacteriology
Reagan, James A., '26	Engr., Tenn. Dept. of Highways, Sweetwater	Engineering
Reding, Jos. D.	Teacher, Tiptonville	
Rees, Jas. R.	R. 8, Shelbyville	Physics
Rhodes, Peyton N., '29 AF	Prof., Southwestern Univ., Memphis	Physics
Rice, Ruby R., '32	Dept. of Botany, Univ. of N. C. Chapel Hill	Botany
Rich, Celia, '28 A	Dentist, Doctors Bldg., Nashville	Dentistry
Richter, Kurt, '29 A	Chem. Amer. Bemberg Corp., Elizabethton	Chemistry
Robertson, Judson H., '27 AF	Prof., Univ. of Tenn., Knoxville	Chemistry
Robinson, C. S., '32 AF	Prof., Vand. Med. Sch., Nashville	Bio-chemistry
Rowland, Whitman, '29 A	Phys., Crosstown Sta., Box 6303, Memphis	Medicine
Rudnick, Gretchen S., '33 A	Research Assoc. in Biol. Vanderbilt Univ., Nashville	Biology
Rudnick, Philip, '31	Asst. Prof., Physics, Van. Univ., Vanderbilt Campus	Physics
Rudolph, Altheus S., '27 A	Head Dept. Science, Bethel College, McKenzie	Science
Schmidt, Edward, '29	Assoc. Prof., Univ. of Tenn., Jr. College, Martin	Chem., Physics
Schreiber, Edwin D., '33	Teacher, Tenn. Industrial School, Nashville	Science
Schwarz, A. John, '28	Asst. Prof., Univ. of Tenn., Memphis	Botany, Pharmacognosy
Scott, J. Mark, '24 AF	Prof. of Chemistry, Sevanee	Chemistry
Seeman, George Frank, '28	Doctors' Bldg., Nashville	Exodontia
Seffens, Virginia, '32	Teacher, 2400 Autumn Ave., Memphis	Chemistry
Seligstern, Milton B., '29	Phys., 801 U. and P. Bank Bldg., Memphis	Medicine
Sharp, Aaron John, '30	Instr., Univ. of Tenn., Knoxville	Botany

\*Died September 20, 1935.

Shaver, Jesse M., '17 AF	Prof., Geo. Peabody College for Teachers, Nashville	Biology
Shaw, A. F., '19 A	Prof., 1509 25th Ave., S., Nashville	Physics
Shea, Dr. J. J.	1018 Madison Ave., Memphis	Physician
Shearer, David D., '26 AF	Vi e Pres., East Tenn. Elec. Co., Johnson City	Electrical Engng.
Sherbakoff, C. D., '28 AF	Plant Path., Agric. Exp. Sta., Knoxville	Plant Pathology
Shoup, Charles S., '29	Asst. Prof., Vanderbilt Univ., Nashville	Biology
Simkins, Cleveland S., '27 AF	Assoc. Prof., Univ. of Tenn., Memphis	Anatomy
Slack, Francis G., '28 AF	Assoc. Prof. Vanderbilt Univ., Nashville	Physics
Smith, William Thomas, Jr.	Asst. Prof. Chemistry, Univ. of Tenn., Knoxville	Chemistry
Spellings, Wm. W.	207 28th Ave., N., Nashville	Science
Spreen, Edward H.	1032 Gretz St., Knoxville	
Stadtmiiller, L. R.	Cotton States Bldg., Nashville	For.
Stanford, James B., '28	Assoc. Prof., University of Tenn., Memphis	Ophthalmology
Steagall, Mary, '33 A	8085 Illinois Ave., Carbondale, Ill.	Biology
Stern, Neuton S., '27	Asst. Prof. Univ. of Tenn., Memphis	Medicine
Stewart, H. C., '25	Div. Dir., Tenn. Board of Health, Nashville	Epidemiology
Stinson, Bess L., '33	Western State Teach. Col., Kalamazoo, Mich.	Education
Stoltenhoff, W., '29	Chemist, Amer. Bemberg Corp., Elizabethton	Chemistry
Strack, Herbert P., '25 A	Chem. Div., Foods, Fertilizers, Dairies, Nashville	Chemistry
Strand, Alfred B., '30	Instr., Univ. of Tenn., 2205 W. Clinch Ave., Knoxville	Horticulture
Stubbs, Morris Frank, '27	Dean, Tenn. Wesleyan Col., Athens	Chemistry
Towner, Justin D., '29	Prof. Univ. Tenn., Memphis	Oral Pathology
Turner, Carroll C., '33	Prof. Univ. of Tenn., Memphis	Neurology
Turner, Richard G., '29 AF	Assoc. Prof., Univ. of Tenn., Junior Col., Martin	Biology
Underwood, J. K., '32	Instr., 1319 Bridge Ave., Knoxville	Botany
Vance, T. Edgar	830 N. 3rd Ave., Knoxville	Biology
Vander Voort, Florence, '33 A	Science Teachers, Lascassas	Science
Van Horn, Clarence Eugene, '30 AF	Prof., Fisk University, Nashville	Mathematics
Wadewitz, M., '29	Box 703, Johnson City	Chemistry
Waldo, Willis G., '30	Consulting Engr., Tenn. River Improvements Assn., 3420 16th St., N. W., Washington, D. C.	Engineering
Walker, Emily Barry	Prof. Teachers, Col., Commerce, Texas	Biology
Walker, Newton H.	Supervisor Fish & Game Dept., Memorial Bldg., Nashville	
Walker, Robert S., '16	808 Greenwood Ave., Chattanooga	Horticulture
Walker, William Massie, '26	Chem., 1638 White Ave., Knoxville	Chemistry
Ward, Francis Watson, '28	Pharmacist, P. O. Box 288, Memphis	Pharmacy
Waterfield, Clough A.	Obion	
Webb, Honor A., '17 AF	Prof. Geo. Peabody Col. for Teachers, Nashville	Chemistry
Webber, Perry A., '32	Teacher, Nash. Agri. and Norm. Inst., Madison	Chemistry
Wells, Herbert S., '28	Asst. Prof., Vanderbilt Univ., Nashville	Pharmacology
Wheeler, Andrew L., '30	Teachers College, Johnson City	Biology, Agriculture
White, William R., '26 A	Head Lab. Dept., Berry DeMerville Co., Nash.	Chem., Pharmacy
Whitlatch, Geo. I., '33	Asst. Geologist, 401 Seventh Ave., N., Nashville	Geology
Williams, C. B.	Prof., Union Univ., Jackson	Classical Languages
Williams, Stewart, '28 A	Member Barnard Club, Springfield	Astronomy
Williams, Mrs. Stewart, '28	Member Barnard Club, Springfield	Astronomy
Williamson, R. M., '26	1412 Eastland Ave., Nashville	Meteorology
Williamson, S. D.	401 Englewood Rd., Middlesboro, Ky.	Geol.
Wilson, C. W., Jr., '33	Asst. Prof., Vanderbilt Univ., Nashville	Geology
Wilson, Charles E.	Grove High School, Paris	Chemistry
Wilson, Gladys Barbara, '32	Teacher, Whitehaven	Science
Wilson, Latimer, J., '14 A	Astronomer and Writer, Box 63, Franklin, Ky.	Astronomy
Witherspoon, Chas. Wesley, Sr., '30	301 24th Ave., S., Nashville	Lawyer
Witt, William H., '25	Prof., Vanderbilt Univ., Nashville	Medicine
Wolfe, Jack M., '32 AF	Instr., Vanderbilt Med. Sch., Nashville	Anatomy
Wollaston, Mrs. O. T.	Research, Walnut Log, Obion County	History
Wood, Percy H., '30	Asst. Prof., Univ. of Tenn., Col. Tower Bldg., Memphis	Gynecology
Woodard, Thomas M., '30	Instr., Vanderbilt Univ., Box 85	Biology
Woodruff, Nathan	1115 E. Delmas, Nashville	Science
Woods, Stephen R., '29	Assoc. Prof., Univ. of Tenn., Junior Col., Martin	Mathematics
Wyman, Pauline	Teacher, Paris	Science
Yomans, John B., '28	Assoc. Prof., Vanderbilt Univ., Nashville	Medicine
Young, Dr. T. Hugh	1104 Bennie-Dillon Bldg., Nashville	Medicine
Zerfoss, Kate Savage, '27	Asst. Med. Arts Bldg., Nashville	Ophthalmology



**JOURNAL**  
**OF THE**  
**TENNESSEE ACADEMY OF SCIENCE**

OFFICIAL PUBLICATION OF THE  
Tennessee Academy of Science

---

Volume X, 1935

With 295 Pages, 46 Figures, and 1 Plate

---

Published Quarterly by  
The Tennessee Academy of Science  
Nashville, Tennessee

# JOURNAL

of the  
Tennessee Academy of Science

## EDITORIAL STAFF

JESSE M. SHAVER, *Editor*, George Peabody College for Teachers, Nashville.

HARRY MONK, *Ornithology Editor*, Ovoca Apts., Nashville.

GEORGE M. HALL, *Geology Editor*, University of Tennessee, Knoxville.

H. M. JENNISON, *Botany Editor*, University of Tennessee, Knoxville.

HENRY E. MELENEY, *Parasitology Editor*, Vanderbilt University, Nashville.

---

Entered as second-class matter February 12, 1926, at the post office at Nashville, Tennessee, under Act of August 24, 1912, acceptance of mailing at special rate of postage provided for in Section 1103 Act of October 3, 1917, and authorized September 16, 1931.

Published quarterly, in January, April, July and October, by the Tennessee Academy of Science at Nashville, Tennessee.

The Journal is sent to all members not in arrears for dues. The subscription price is \$2.00 a year, invariably in advance. Single copies 50c. One dollar from the \$2.00 dues of each member is for a subscription to THE JOURNAL OF THE TENNESSEE ACADEMY OF SCIENCE.

All articles and communications for publication, books and publications for review should be addressed to the Editor.

New subscriptions, changes of address, and applications for membership should be addressed to the Secretary. Personal items, news of events in the scientific world, and other notes suitable for our "Notes Here and There" department may be addressed to the Editor.

---

## THE TENNESSEE ACADEMY OF SCIENCE

(FOUNDED, 1912, AT NASHVILLE, TENNESSEE)

Affiliated with the American Association for the Advancement of Science

### OFFICERS

GEORGE M. HALL, *President*, University of Tennessee, Knoxville.

DR. WILLIAM A. LITTERER, *Vice-President*, State Bacteriologist, Nashville.

JESSE M. SHAVER, *Editor*, George Peabody College for Teachers, Nashville.

J. T. MCGILL, *Secretary-Treasurer*, Vanderbilt University, Nashville.

MISS ELEANOR EGGLESTON, *Librarian*, Vanderbilt University, Nashville.

---

The Tennessee Academy of Science is very anxious to include in its membership all teachers and professors of science, research workers in science both in educational institutions and industrial establishments, and all others who are interested in some phase of science. We invite you to join our organization and take part in our activities. The annual dues are: \$2.00 for members and \$10.00 for sustaining members. They may be sent direct with your application for membership to the secretary.



# TABLE OF CONTENTS

VOLUME X, 1935

NUMBER 1, JANUARY

	PAGE
The Birds of Late Summer on Reelfoot Lake. Compton Crook.....	1
Report of the Director of the Reelfoot Lake Biological Station.	
A. R. Bliss, Jr. ....	19
Report of the Treasurer of the Reelfoot Lake Biological Station.	
J. T. McGill.....	24
Investigations on the Malarial Mosquito at the Reelfoot Lake Biological Station. Dr. J. A. LePrince.....	25
Amateur Astronomical Photography. Latimer J. Wilson.....	26
A Study of the Remote Mountain People of the Tennessee Valley.	
Lester R. Wheeler.....	33
The Effect of Climatological Conditions upon Soot-fall. J. H. Robertson..	37
Sensitive Flames and Jets. Aaron W. Dicus.....	46
The Great Smoky Thrust Fault in the Vicinity of Tuckaleeche, Wear, and Cades Coves, Blount and Sevier Counties, Tennessee. Charles W. Wilson, Jr. ....	57
Experiments with the Winogradsky Spontaneous Culture Test on Humid Soils. Arthur W. Young.....	64
A New Type Photometer and Lamp Efficiencies. C. R. Fountain.....	71

NUMBER 2, APRIL

The Birds on the Campus of George Peabody College for Teachers, Nashville, Tennessee. Jesse M. Shaver and Compton Crook.....	77
The Present Status of the Dutch Elm Disease. George R. Gage.....	83
The Dutch Elm Disease. The Entry and Movement of Elm Burl Logs. R. Kent Beattie and A. E. Verrall.....	86
Methods of Obtaining Upper Air Data. Robert M. Williamson.....	89
The Neural Basis of Cutaneous Sensation. Abstract. Lyle H. Lanier...	95
Common Fallacies in Soot-fall Comparisons of Different Cities. J. H. Robertson .....	97
Memorial of Charles Henry Gordon, First President of the Tennessee Academy of Science. George M. Hall.....	100
The Pre-Chattanooga Development of the Nashville Dome. Abstract. Charles W. Wilson, Jr.....	104
A Preliminary Report on the Ferns of Chester County, Tennessee. J. R. Endsley .....	106
Recent Advances in the Study of the Biological Effects of Heavy Water. S. L. Meyer .....	111
Proceedings of the Annual Meeting of the Tennessee Academy of Science in 1934. J. T. McGill.....	116
Hemoglobin-Ringer, a New Substitute for Blood in Mammals. Abstract. William R. Amberson .....	120
Report of the Librarian of the Tennessee Academy of Science. Eleanor Eggleston .....	121
Report of the Editor of the Journal of the Tennessee Academy of Science. Jesse M. Shaver.....	125
Report of the Treasurer of the Tennessee Academy of Science. J. T. McGill	126
The Action of Deuterium Oxide in Low Concentration on the Course of Gas-Production by Brewer's Yeast. C. S. Shoup and S. L. Meyer.....	127

	PAGE
Notes on Tennessee Helminths II. Two New Species of <i>Strongyluris</i> (Nematoda) and Notes on the Genus. Paul D. Harwood.....	131
Specific Responses Elicitable from Sub-Divisions of the Motor Cortex of the Cat. Abstract. James W. Ward and Sam L. Clark.....	142
Knoxville Smoke Abatement in Retrospect. J. H. Robertson.....	144
The Effects of X-Radiation on Limb Regeneration and Development in <i>Amblystoma</i> . Abstract. W. O. Puckett.....	149
The Library of the Tennessee Academy of Science. Editorial.....	152

#### NUMBER 3, JULY

The Lure of Prehistoric Tennessee. T. M. N. Lewis.....	153
The Forestry Work of the Civilian Conservation Corps in Tennessee. Carl I. Peterson.....	160
Changes in the Dietary Habits of Remote Mountain People Since 1900. Lester R. Wheeler.....	167
Nutritive Protein of Some Newly Discovered Soy Beans. A. A. O'Kelly, Watt Smith, and R. C. Wilson, Jr.....	175
Some Nesting Habits of the Brown Thrasher. W. G. Erwin.....	179
Underclays of the Commercial Coals of Tennessee.....	205
The Effect of High Temperatures on the Length of Life of Certain Species of Mosquitoes. H. A. Johnson.....	225

#### NUMBER 4, OCTOBER

Amoebiasis and Amoebic Dysentery: A Brief Resume. Henry E. Meleney.	229
The Status of the Black-billed Cuckoo ( <i>Coccyzus erythrophthalmus</i> (Wilson)) in Tennessee. Compton Crook.....	241
Notes on the Upper Cretaceous and Tertiary Sub-surface Stratigraphy of Western Tennessee. Kendall E. Born.....	248
Report of the Spring Meeting of the Tennessee Academy of Science. J. T. McGill.....	265
Action of Ether and Ether Anesthesia on Brain Oxidations. George A. Emerson.....	267
Soil Acidity at the Roots of Some Tennessee Pteridophytes. Nathan H. Woodruff.....	276
Membership Roll of the Tennessee Academy of Science.....	291
Index to Volume X, 1935.....	301