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Meetings

Speleology

The 16th annual convention of the National Speleological Society was held in Springfield, Mo., 1-4 April 1959. The convention brought together specialists in several fields, all of them having a common interest in caves. Speleological investigations include inquiry into the origin and development of limestone caves, examination of fossils and evidences of human activity preserved in them, and study of the specialized biota characterizing caves today. The constant temperature and the uniformity with respect to other physical variables has also made caves a natural laboratory for investigation of mineral formation under conditions known to have been stable for long periods of time. These same uniform conditions have been employed in studies of the physics of cave temperature distribution and air movement. As a common meeting ground, speleology might best be compared to oceanography, which also brings together biologists, geologists, physicists, and workers in related fields.

Several papers were given in Springfield on the geomorphology of limestone terrain. Kennedy Nicholson and W. B. White of Pennsylvania State University described investigations of 8 miles of underground drainage in a karst region in Virginia, and R. G. Deike of Columbia, Mo., presented data suggesting that strike joints are predominant in controlling cave and karst development. An investigation of an area of glaciated karst in northern New York state, by R. R. Anderson of Berkeley Heights, N.J., was contrasted with a reconnaissance of tropical karst in Puerto Rico, by Jeanne Gurnee of Closter, N.J. The geomorphic relations of large single-passage caves in central Missouri were discussed by G. H. Deike, III, of the University of Missouri, and W. B. White and his collaborators noted the effect of geologic structure on cave-passage cross section in Cueva del Guacharo, Venezuela. R. L. Curl of Berkeley, Calif., presented a detailed analysis of the application of solutional markings on limestone as quantitative indicators of water flow in the past.

In an important paper, W. S. Broecker of Lamont Geological Observatory described the first successful attempt at dating the calcium carbonate of cave travertine by the radiocarbon method. Using stalactites of known ages as standards, he found the C^{14} content of speleothems to be approximately 80 percent that of wood of comparable age. The method will find wide application in speleological research. M. G. Mehl

of the University of Missouri discussed Pleistocene vertebrate remains in Missouri caves, and H. D. Weaver of Jefferson City, Mo., reported on the abandoned onyx mining industry of Missouri.

The field of cave meteorology was reviewed by R. F. Brown of Davenport, Iowa, who discussed results obtained from instruments stationed in caves in national parks during the International Geophysical Year.

The biologic papers began with a report on the movements and numbers of cave bats in Missouri, by R. F. Myers of the Missouri Cooperative Wildlife Research Unit. Cave salamanders were discussed in three papers: C. E. Mohr (Audubon Nature Center) described the life history of *Eurycea longicauda*; W. W. Varnedoe (Huntsville, Ala.) presented a study of the brooding of *Plethodon g. glutinosus*; and Joe Gorman (St. Louis University) discussed the evolution of cave salamanders. N. B. Causey of Fayetteville, Ark., spoke on speciation in the cave milliped *Scoterpes*, and Kenneth Christiansen of Grinnell College gave an outline of the genus *Sinella* in North American caves. The biologic session was concluded with a report on the cave beetles of Tennessee and Kentucky, by T. C. Barr, Jr., of Tennessee Polytechnic Institute.

The banquet speaker at the convention was Walter B. Jones, state geologist of Alabama, who is completing a monograph on the caves of Alabama.

Officers elected for the coming year are as follows: president, Brother G. Nicholas, Notre Dame University; vice president for administration, D. N. Cournoyer, Washington, D.C.; vice president for organization, D. F. Black, Chattanooga, Tenn.; vice president for publications, T. C. Barr, Jr., Tennessee Polytechnic Institute; vice president for research, G. W. Moore, U.S. Geological Survey; and treasurer, Barbara Munson, Chattanooga, Tenn.

W. E. Davies (U.S. Geological Survey, Washington, D.C.) will continue as editor of the *Bulletin* of the National Speleological Society. The current issue of the *Bulletin* contains a comprehensive index to its first 20 volumes.

Chairman of this convention, which in addition to the technical sessions offered field trips to caves in the Ozark Mountains, was Oscar Hawksley of Central Missouri State College. The 1960 convention of the society will be held in Carlsbad, N.M., and will include field trips to Carlsbad Caverns and other caves of the Guadalupe Mountains. Convention chairman will be J. K. Baker of the National Park Service.

GEORGE W. MOORE
U.S. Geological Survey,
Menlo Park, California

Forthcoming Events

December

26-30. American Assoc. for the Advancement of Science, annual, Chicago, Ill. (R. L. Taylor, AAAS, 1515 Massachusetts Ave., NW, Washington 5.)

The following 46 meetings are being held in conjunction with the AAAS annual meeting.

AAAS Committee on Science and the Promotion of Human Welfare (B. Commoner, School of Botany, Washington Univ., St. Louis 5, Mo.). 27 Dec.

AAAS Cooperative Committee on the Teaching of Science and Mathematics (Brother G. Nicholas, Dept. of Biology,

Univ. of Notre Dame, Notre Dame, Ind.). 27 Dec.

Academy Conference (A. M. Winchester, Stetson Univ., De Land, Fla.). 27-28 Dec.

Alpha Epsilon Delta (M. L. Moore, 7 Brookside Circle, Bronxville, N.Y.). 29 Dec.

American Assoc. of Clinical Chemists (A. Dubin, Cook County Hospital, Chicago 12, Ill.). 26-27 Dec.

American Geophysical Union (W. C. Krumbein, Dept. of Geology, Northwestern Univ., Evanston, Ill.). 28 Dec.

American Meteorological Soc. (K. Spengler, 3 Joy St., Boston, Mass.).

American Nature Study Soc. (E. L. Will, State Univ. Teachers College, Oneonta, N.Y.). 26-30 Dec.

American Physiological Assoc. (F. A. Hitchcock, Ohio State Univ., Columbus). 28 Dec.

American Political Science Assoc. (J. Robinson, Dept. of Political Science, Northwestern Univ., Evanston, Ill.). 28 Dec.

American Psychiatric Assoc. (E. L. Bliss, General Hospital, Salt Lake City, Utah). 28-29 Dec.

American Soc. of Criminology (D. E. J. MacNamara, New York Inst. of Criminology, Inc., New York 36). 28-29 Dec.

American Soc. of Naturalists (A. D. Hasler, Dept. of Zoology, Univ. of Wisconsin, Madison). 27-28 Dec.

American Soc. of Plant Taxonomists (L. R. Heckard, Dept. of Botany, Univ. of Illinois, Urbana). 28-30 Dec.

American Sociological Soc. (J. S. Coleman, Dept. of Sociology, Univ. of Chicago, Chicago 37, Ill.). 28-29 Dec.

American Statistical Assoc. (R. F. Winch, Dept. of Sociology, Northwestern Univ., Evanston, Ill.). 29-30 Dec.

Association of American Geographers (A. Cutshall, Univ. of Illinois, Navy Pier, Chicago 11). 29 Dec.

Association for Computing Machinery (W. F. Cahill, Goddard Space Flight Center, Silver Spring, Md.). 29 Dec.

Astronomical League (E. Halbach, 2971 S. 52 St., Milwaukee 19, Wisc.). 26 Dec.

Beta Beta Beta (Mrs. F. G. Brooks, P.O. Box 515, Ansonia Station, New York 23). 27-28 Dec.

Chicago Acad. of Sciences (R. A. Edgren, Chicago Acad. of Sciences, 2001 N. Clark St., Chicago 14, Ill.). 29-30 Dec.

Conference on Scientific Communications (G. L. Seielstad, Applied Physics Lab., Johns Hopkins Univ., Silver Spring, Md.). 28-29 Dec.

Conference on Scientific Manpower (T. J. Mills, National Science Foundation, Washington 25). 28 Dec.

Ecological Soc. of America (W. C. Ashby, Dept. of Botany, Univ. of Chicago, Chicago 37, Ill.). 28-30 Dec.

Honor Soc. of Phi Kappa Phi (L. R. Guild, 634 S. Western Ave., Los Angeles 5, Calif.). 30-31 Dec.

Illinois Geographical Soc. (Miss M. Grant, Morton Junior College, Cicero, Ill.). 28 Dec.

Institute of Management Sciences (M. M. Flood, College of Engineering, Univ. of Michigan, Ann Arbor). 29 Dec.

Metric Assoc. (J. T. Johnson, Ravenswood YMCA, 1725 Wilson Ave., Chicago 40, Ill.).

Mycological Soc. of America (D. P. Rogers, Dept. of Botany, Univ. of Illinois, Urbana).

National Assoc. of Biology Teachers (H. E. Weaver, 202 Men's Old Gym, Univ. of Illinois, Urbana). 26-30 Dec.

National Acad. of Economics and Political Science (J. Rothrock, Pan American Union, Washington 6). 29 Dec.

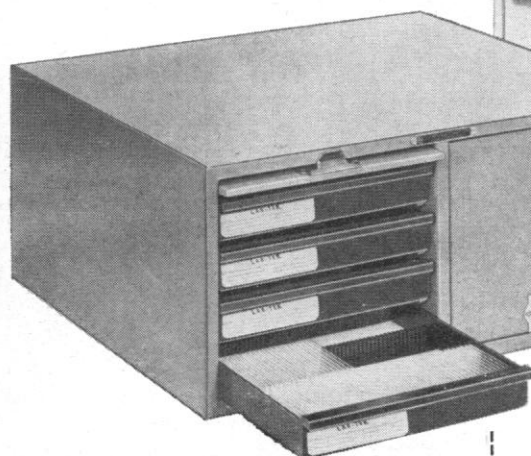
National Assoc. for Research in Science Teaching (J. C. Mayfield, Univ. of Chicago, Chicago 37, Ill.). 26-30 Dec.

National Assoc. of Science Writers (P. Fraley, Evening Bulletin, Philadelphia, Pa.). 27 Dec.

National Geographic Soc. (W. R. Gray, NGS, 16 and M Sts., NW, Washington 6). 30 Dec.

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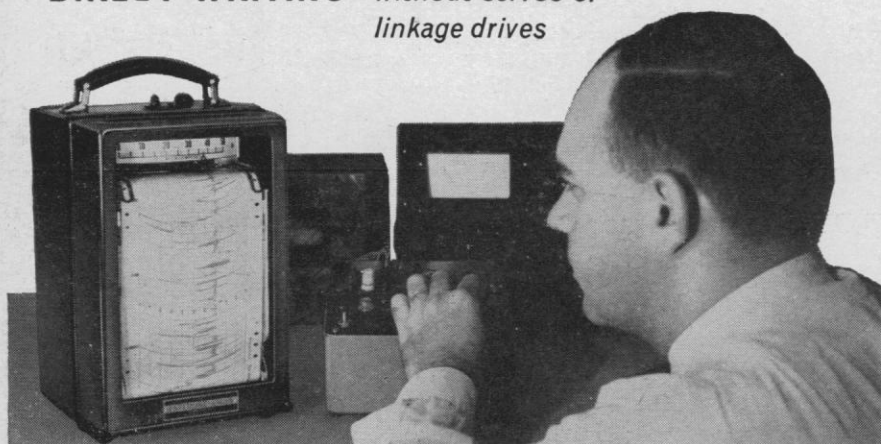
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National Science Teachers Assoc. (R. H. Carleton, NSTA, 1201 16 St., NW, Washington, D.C.). 26-30 Dec.

National Soc. for Medical Research (R. A. Rohweder, NSMR, 920 S. Michigan Blvd., Chicago 5, Ill.). 29 Dec.

National Speleological Soc. (T. C. Barr, Jr., Tennessee Polytechnic Inst., Cookeville, Tenn.). 28 Dec.

Philosophy of Science Assoc. (W. A. R. Ley, Roosevelt College, Chicago, Ill.). 28 Dec.

Scientific Research Soc. of America (D. B. Prentice, 56 Hillhouse Ave., New Haven 11, Conn.). 29 Dec.

Sigma Delta Epsilon (Miss E. S. Anderson, Stratford Hotel, 25 E St., NW, Washington, D.C.). 26-30 Dec.

Society for General Systems Research (R. L. Meier, Mental Health Research Institute, Univ. of Michigan, Ann Arbor).

Society for the History of Technology (M. Kronzberg, Dept. of History, Case Inst. of Technology, Cleveland, Ohio).

Society of the Sigma Xi (T. T. Holme, 56 Hillhouse Ave., New Haven 11, Conn.). 29 Dec.

Society of Systematic Zoology (R. E. Blackwelder, Southern Illinois Univ., Carbondale). 26-30 Dec.

Tau Beta Pi Assoc. (R. H. Nagel, Univ. of Tennessee, Knoxville). 27 Dec.

United Chapters of Phi Beta Kappa (C. Billman, 1811 Q St., NW, Washington, D.C.). 29 Dec.

27-30. American Anthropological Assoc., Mexico City. (W. S. Godfrey, Jr., Logan Museum, Beloit College, Beloit, Wisc.)

27-30. American Astronomical Soc., Cleveland, Ohio. (J. A. Hynek, Smithsonian Astrophysical Observatory, 60 Garden St., Cambridge 38, Mass.)

27-30. American Folklore Soc., Mexico City. (MacE. Leach, 110 Bennett Hall, Univ. of Pennsylvania, Philadelphia 4.)

27-30. American Statistical Assoc., Washington, D.C. (D. C. Riley, 1757 K St., NW, Washington 6.)

27-30. Institute of Mathematical Statistics (weather control), Washington, D.C. (J. Neyman, Statistical Lab., Univ. of California, Berkeley 4.)

28-29. American Chemical Soc. (Div. of Industrial and Engineering Chemistry), symp., Baltimore, Md. (M. A. H. Emery, ACS, 18 and K Sts., NW, Washington D.C.)

28-29. Industrial Relations Research Assoc., Washington, D.C. (E. Young, Sterling Hall, University of Wisconsin, Madison.)

28-29. Mechanism of Interfacial Reaction, American Chemical Soc., annual symp, Baltimore, Md. (H. E. Hoelscher, Chemical Engineering Dept., Johns Hopkins Univ., Baltimore, Md.)

28-29. Lepidopterists' Soc., 10th annual, Ann Arbor, Mich. (E. G. Voss or W. H. Wagner, Dept. of Botany, Univ. of Michigan, Ann Arbor.)

28-29. Northwest Scientific Assoc., Spokane, Wash. (W. B. Merriam, Dept. of Geography, State College of Washington, Pullman.)

28-30. American Economic Assoc., Washington, D.C. (J. W. Bell, Northwestern Univ., 629 Noyes St., Evanston, Ill.)

28-30. American Philosophical Assoc. (eastern div.), New York, N.Y. (L. Garvin, Dept. of Philosophy, Univ of Maryland, College Park.)

28-30. American Physical Soc., Pasadena, Calif. (K. Darrow, APS, Columbia Univ., 116 St. and Broadway, New York, N.Y.)

28-30. Econometric Soc., Washington, D.C. (R. Ruggles, Dept. of Economics, Yale Univ., New Haven, Conn.)

28-30. Western Soc. of Naturalists, Los Angeles, Calif. (Y. U. Amrein, Dept. of Zoology, Pomona College, Claremont, Calif.)

28-31. Phi Delta Kappa, Columbia,

Mo. (A. G. Clark, 316 Dalzell Ave., Ben Avon, Pittsburgh 2, Pa.)

28-16. Bahamas Surgical Conf., Nassau. (B. L. Frank, P.O. Box 4037, Fort Lauderdale, Fla.)

January

1-5. Electrochemical Soc., Chicago, Ill. (Electrochemical Soc., Inc., 216 W. 102 St., New York 25.)

1-5. Institute of Geographers, annual conf., Southampton, England. (A. E. Smailes, Queen Mary College, Univ. of London, Mile End Rd., London, E.1.)

3-9. Indian Science Cong. Assoc., 4th,

Bombay. (B. W. Prasad, ISCA, Lakshmi Niwas, Georgetown, Allahabad 2, India.)

5-7. Recent Mechanical Engineering Developments in Automatic Control, symp., London, England. (Institution of Mechanical Engineers, 1 Birdcage Walk, London, S.W.1.)

6-8. Northeastern Weed Control Conf., 14th annual, New York, N.Y. (M. G. Wiltse, Chairman, Public Relations Committee, Dow Chemical Co., 916 Shoreham Bldg., 15 and H Sts., NW, Washington 5, D.C.)

7-10. Radioactive Isotopes, 4th intern. symp., Bad Gastein, Austria. (R. Hofer, Isotopen-Laboratorium, II. Medizinische Universitäts Klinik, 13, Garnisongasse, Vienna 9, Austria.)

8-11. Sanitary Engineering Conf., ASCE. Cincinnati, Ohio. (E. S. Kirkpatrick, ASCE, 33 W. 39 St., New York 18.)

11-13. American Acad. of Allergy. Hollywood-by-the-Sea, Fla. (J. O. Kelley, 756 N. Milwaukee St., Milwaukee 2, Wisc.)

11-13. Arctic Geology, 1st intern. symp. Calgary, Alberta, Canada. (D. W. R. Wilson, Arctic Symposium Committee, P.O. Box 100, Calgary, Alberta, Canada.)

11-13. Reliability and Quality Control, natl. symp., Washington, D.C. (N. S. Hibshman, AIEE, 33 W. 39 St., New York 18.)

11-15. Society of Automotive Engineers, annual, Detroit, Mich. (R. W. Crory, Meetings Operation Dept., SAE, 485 Lexington Ave., New York 17.)

11-25. Effects of Atomic Radiation, New York, N.Y. (R. Appleyard, Scientific Committee on the Effects of Radiation, United Nations, New York 17.)

12-15. Society of Plastics Engineers, 16th annual conf., Chicago, Ill. (T. A. Bissell, SPE, 65 Prospect St., Stamford, Conn.)

14-18. American Inst. of Mining, Metallurgical, and Petroleum Engineers, annual, New York, N.Y. (E. O. Kirkendall, AIMMPE, 29 W. 39 St., New York 18.)

17-30. Bahamas Medical Serendipity Conf., 2nd, Nassau. (B. L. Frank, P.O. Box 4037, Fort Lauderdale, Fla.)

18-21. American Astronautical Soc., 6th annual, New York, N.Y. (A. P. Mayer-nik, AAS, 6708 53 Rd., Maspeth 78, N.Y.)

19-21. American Meteorological Soc., 40th annual, Boston, Mass. (K. C. Spengler, 3 Joy St., Boston.)

19-21. Congenital Malformations, CIBA symp. (by invitation only), London, England. (G. E. W. Wolstenholme, 41 Portland Pl., London, W.1.)

21-23. American College of Surgeons, Louisville, Ky. (H. P. Saunders, 40 E. Erie St., Chicago 11, Ill.)

23-28. American Acad. of Orthopedic Surgeons, Chicago, Ill. (J. K. Hart, 116 S. Michigan, Chicago 3.)

24-29. American Rocket Soc., Princeton, N.J. (J. J. Harford, ARS, 500 Fifth Ave., New York 36.)

25-28. Institute of the Aeronautical Sciences, 28th annual, New York, N.Y. (IAS, 2 E. 64 St., New York 21.)

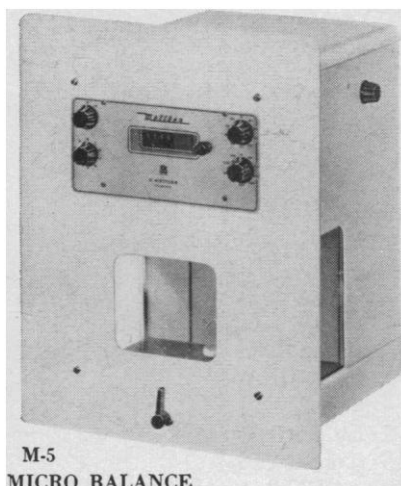
25-28. Plant Maintenance and Engineering Show, Philadelphia, Pa. (R. S. Wolcott, Clapp & Poliak, 341 Madison Ave., New York 17.)

(See issue of 13 November for comprehensive list)

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