

Dept. 568

high lead content of rocks and soils and the incidence of multiple sclerosis in 24 areas of England.

W. H. Allaway (U.S. Department of Agriculture) reported on a recent discovery that a deficiency of selenium (less than 0.1 part per million in the dry weight of forage) causes white muscle disease in lambs and calves. Areas of selenium deficiency and toxicity are being mapped by animal nutritionists. A possible connection with the incidence of muscular dystrophy in humans is being investigated by at least one government agency.

The deficiency problems in Florida that are related to the availability of iron, copper, molybdenum, and cobalt to plants and the effect of these elements on nitrate and potassium contents were described by H. C. Harris (agronomist, University of Florida). Such areas in Florida have been related to salt sickness in cattle and to anemia and bone deformation in children. This situation is being alleviated by adding minor elements to the soil.

Trace-element studies in New Zealand in areas of marked difference in the incidence of dental caries were described by F. L. Losee (U.S. Navy). Areas with soils that have a high pH and CaCO₃ content produce vegetables with more molybdenum and less manganese, and there is a lower incidence of dental caries. This work was corroborated by W. B. Healey (New Zealand) who described recent experiments in feeding molybdenum and manganese to twin lambs.

Hans T. Shacklette (U.S. Geological Survey) showed that the difference in iodine content in plants is an inherent characteristic of the taxonomic group. A given species thus has a characteristic range within which a secondary relation with the environment can occur. The iodine content ranged from 2.7 parts per million dry weight in deciduous trees to 1435 parts per million in brown algae. The iodine content of Spanish moss, an air plant (described by Shacklette), and the differences in humans (described by R. L. Voight, U.S. Public Health Service) indicate that both animals and plants absorb considerable amounts of iodine from the atmosphere.

Maps of the United States that showed areas of trace-element deficiency and excess and also of disease incidence pointed up the geographic, geologic, and soil relationships and suggested the need for compiling maps that would indicate the distribution of

trace elements in ground water, geologic strata, soils, and plants.

J. E. Banta (U.S. Public Health Service) discussed the problems of an epidemiologist in correlating trace-element differences with evolutionary chronic diseases, in defining the population at risk, and in defining the particular geochemical unit related to the disease pattern. Me made a strong plea for cooperation between the geochemist, geologist, and epidemiologist.

Several participants proposed the establishment of a trace-element institute or repository for trace-element information accumulated by workers in many fields. This proposal was considered premature at this time. A tentative decision was made to continue the group under the auspices of the Geochemical Society and the Geological Society of America, but to meet with other health groups and scientific societies in alternate years. Those who are interested in receiving notices of publication of the papers or in participating in further group activity are invited to contact any member of the committee. Members of the committee include Helen L. Cannon, U.S. Geological Survey, Denver, Colorado; Homer K. Hall, U.S. Public Health Service, Columbia, Missouri; Harry V. Warren, University of British Columbia, Vancouver; Michael Fleischer, U.S. Geological Survey, Washington, D.C.; and John Fortescue, Canadian Geological Survey, Ottawa, Ontario.

HELEN L. CANNON U.S. Geological Survey, Denver, Colorado

Forthcoming Events

February

19-21. American Educational Research Assoc., Chicago, Ill. (J. R. Gerberich, 1201 16th St., NW, Washington, D.C.) 19-5. Pan American Medical Assoc., 39th congr., the Americas, during a cruise aboard the S.S. Independence. (J. J. Eller, 745 Fifth Ave., New York, N.Y.) 23-27. Technical Assoc. of the Pulp and Paper Industry, 49th annual, New York, N.Y. (TAPPI, 360 Lexington Ave., New York, N.Y. 10017)

23-28. Otorhinolaryngology and Bronchoesophagology, 9th Pan American congr., Bogota, Colombia. (C. M. Norris, 3401 N. Broad St., Philadelphia, Pa.)

24-25. Atmospheric Movements of Radioactive Materials, Geneva, Switzerland. (World Meteorological Organization, Geneva)

24-25. Writing-Improvement Programs for Engineers, seminar, New York, N.Y. (C. A. Meyer, RCA Commercial Engineering, Harrison, N.J.)

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INTERNATIONAL SUBSIDIARIES: GENEVA, SWITZERLAND; MUNICH, GERMANY; GLENROTHES, SCOTLAND; PARIS, FRANCE; TOKYO, JAPAN; CAPETOWN, SOUTH AFRICA 24-28. Institution of Electrical Engineers, intern. conf. on transmission aspects of communications networks, London, England. (IEE, Savoy Pl., London, W.C.2)

25-26. **Dairy Engineering**, natl. conf., East Lansing, Mich. (C. W. Hall, College of Agriculture, Michigan State Univ., East Lansing)

26-28. **Biophysical** Soc., Chicago, Ill. (W. Sleator, Jr., Washington Univ. Medical School, 660 Kingshighway, St. Louis 10, Mo.)

26-28. Scintillation and Semiconductor symp., Washington, D.C. (G. A. Morton, RCA Laboratories, Princeton, N.J.) 27-28. Cellular Basis for the Action of

27-28. Cellular Basis for the Action of Cardiac Drugs, Philadelphia, Pa. (Heart Assoc. of Southeastern Pa., 318 S. 19 St., Philadelphia 3)

27-28. National Assoc. for Mental Health, annual conf., London, England. (General Secty., 39 Queen Anne St., London, W.C.1)

27-29. American Acad. of Forensic Sciences, Chicago, Ill. (W. J. R. Camp, 1853 W. Polk St., Chicago 12)

27-29. American Physical Soc., Tucson, Ariz. (K. K. Darrow, American Physical Soc., Columbia Univ., New York, N.Y.)

March

1-4. Canadian Assoc. of Radiologists, annual, Vancouver, B.C. (A. I. Ekstrand, 1555 Summerhill Ave., Montreal 25, P.Q., Canada)

2-4. Fundamental Cancer Research, 18th annual symp., Houston, Tex. (R. J. Shalek, Dept. of Physics, Univ. of Texas, Houston)

2-6. Analytical Chemistry and Applied Spectroscopy, Pittsburgh, Pa. (R. B. Fricioni, Allegheny Ludlum Steel Corp., Research Center, Brackenridge, Pa.)

2-6. Applied Meteorology, 5th conf., American Meteorological Soc., Atlantic City, N.J. (A. Hilsenrod, Federal Aviation Agency, Atlantic City)

3-7. Inter-American Nuclear Energy Commission, 5th, Valparaiso, Chile.) Pan American Union, Constitution Ave., NW, Washington, D.C. 20006)

3-21. World Health Assembly, 17th annual, Geneva, Switzerland. (WHO, Palais des Nations, Geneva)

4-6. Thermal Radiation of Solids, symp., San Francisco, Calif. (W. D. Harris, Engineering and Sciences Extension, Univ. of California, Berkeley 4)

4-7. Psychoanalysis, first Pan-American congr., Mexico City, Mexico. (The Congress, Insurgentes 421 "C"-108, Mexico 11, D.F.)

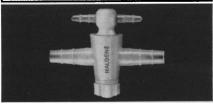
5-6. Theoretical and Applied Mechanics, southeastern meeting, Atlanta, Ga. (Dept. of Short Courses and Conferences, Georgia Inst. of Technology, Atlanta)

5-7. Evaluation and Mechanisms of **Drug Toxicity**, conf., New York, N.Y. (New York Acad. of Sciences, 2 E. 63 St., New York 21)

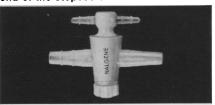
5-7. Macromolecular Colloquium, Freiburg im Breisgau, Germany. (Institut für Makromolekulare Chemie, Univ. Freiburg, Stefan-Meier-Str. 31, 78 Freiburg im Breisgau)

5-7. Pacific Sociological Assoc., Coro-

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nado, Calif. (S. M. Dornbusch, Stanford Univ., Stanford, Calif.)

6-8. Society of Nuclear Medicine, southwestern chapter, Houston, Tex. (S. N. Turiel, SNM, 333 North Michigan Ave., Chicago 1, Ill.)

6-8. National Wildlife Federation, 28th annual, Las Vegas, Nev. (NWF, 1412 16th St., NW, Washington, D.C. 20036)

7-12. **Proctology**, 16th teaching seminar, Miami Beach, Fla. (J. Reichert, 147-

41 Sanford Ave., Flushing, N.Y. 11355) 8-12. Water Resources Engineering, conf., Mobile, Ala. (American Soc. of Civil Engineers, 345 E. 47 St., New York 10017)

8-15. North American Clinical Dermatologic Soc., Mexico City, Mexico. (E. F. Finnerty, 510 Commonwealth Ave., Boston, Mass.)

9-10. Aerodynamic Testing Conf., American Inst. of Aeronautics and Astronautics, Washington, D.C. (J. N. Fresh, David Taylor Model Basin, Code 630, U.S. Navy, Washington, D.C.)

9-11. Computers in Education, conf., Eugene, Ore. (J. W. Loughary, School of

Education, Univ. of Oregon, Eugene) 9-11. Society of **Toxicology**, annual, Williamsburg, Va. (C. S. Weil, Mellon Inst., 4400 Fifth Ave., Pittsburgh, Pa. 15213)

9-13. National Assoc. of Corrosion Engineers, 20th conf., Chicago, Ill. (W. H. Schultz, Dearborn Chemical Corp., Chi-

cago, Ill.)
9-13. Peaceful Applications of Nuclear Energy, 5th inter-American symp., Val-paraiso, Chile. (J. D. Perkinson, Inter-American Nuclear Energy Commission, Pan American Union, Washington, D.C.)

10. Wildlife Telemetry, annual, Las Vegas, Nev. (L. Adams, Univ. of California, Carmel Valley)

10-12. Exploding Conductor Phenomena, 3rd conf., Boston, Mass. (W. G. Chace, Air Force Cambridge Research Laboratories, Hanscom Field, Bedford, Mass.)

10-13. Raman Colloquium, Freudenstadt/Schwarzwald, Germany. (J. Gobeau, Dept. of Chemistry, Technische Hochschule Stuttgart, 7 Stuttgart, Germany)

10-14. American Inst. of Chemical Engineers, New Orleans, La. (AIChE, 345 E. 47 St., New York 17)

11-12. Instrument Soc. of America, 14th conf. on instrumentation for the iron and steel industry, Pittsburgh, Pa. (N. F. Simcic, Research Laboratory, Jones and Laughlin Steel Corp., 900 Agnew Rd., Pittsburgh 30)

12. Interplanetary Monitoring Platform Experiments, symp., Greenbelt, Md. (C. P. Boyle, Code 207, Goddard Space Flight Center, Greenbelt, Md. 20771)

12-13. Information Organization, New Brunswick, N.J. (S. Artandi, Graduate School of Library Service, Rutgers Univ., New Brunswick)

13-14. Louisiana Acad. of Sciences, Baton Rouge. (H. J. Bennett, Dept. of Zoology, Louisiana State Univ., Baton Rouge)

13-14. Institute of Management Sciences. 11th intern., Pittsburgh, Pa. (IMS, Box 273, Pleasantville, N.Y.)

13-14. Effects of Shock and Vibration on the human body, Denver, Colo. (A. E. Paige, Dept. of Electrical Engineering, University of Denver, Denver)

14-15. Endocrinology, 2nd annual symp., Salisbury, N.C. (H. Nushan, Medical Service, Veterans Administration Hospital, Salisbury)

14-19. American Assoc. of Psychiatric Clinics for Children, annual, Chicago, Ill. (AAPCC, 250 W. 57 St., New York 19)

15-19. Microcirculation, 3rd European conf., Jerusalem, Israel. (E. Davis, Capillary Research Laboratory, Hadassah Univ. Hospital, P.O. Box 499, Jerusalem)

15-21. American Soc. of Photogrammetry, congr. on surveying and mapping, Washington, D.C. (American Soc. of Photogrammetry, 44 Leesburg Pike, Falls Church, Va.)
17-18. Hypervelocity Flight Techniques.

symp., Denver, Colo. (W. G. Howell Denver Research Inst., Univ. of Denver, Denver, Colo. 80210)

17-19. Society for Nondestructive Testing, Los Angeles, Calif. (D. E. O'Halloran, Northrop Corp., 1001 E. Broadway, Hawthorne, Calif.)

17-19. Statistical Assoc. Methods for Mechanized Documentation, symp., Washington, D.C. (M. E. Stevens, Natl. Bureau of Standards, Washington, D.C. 20234)

17-20. Society of Biological Chemistry, Paris, France. (P. Malangeau, Executive Committee, 4, Avenue de l'Observatoire, Paris 6^e)

18-19. Mycotoxins in Foodstuffs, intern. symp., Cambridge, Mass. (G. N. Wogan, Rm 16-210-B, Massachusetts Inst. of Technology, Cambridge 02139)

18-20. Chemurgic Council, 28th natl. conf., Philadelphia, Pa. (J. W. Ticknor. Chemurgic Council, 350 Fifth Ave., New York 1)

18-21. Latin Medical Union, intern. congr., Rome, Italy. (B. Urso, Policlinico Umberto I, Viale Policlinico, Rome)

18–21. American Orthopsychiatric Assoc., Chicago, Ill. (M. F. Langer, 1790 Broadway, New York 19)

21-24. Cybernetic Medicine, 3rd intern. congr., Naples, Italy. (A. DeChiara, 348, Via Roma, Naples)

23-24. Society for Economic Botany, 5th annual, Chapel Hill, N.C. (D. J. Rogers, New York Botanical Garden, Bronx Park, N.Y.)

23-25. Federation of European Biochemical Societies, 1st, London, England. (FEBS, Lister Inst., Chelsea Bridge Rd., London, S.W.1)

23-26. Institute of Electrical and Electronics Engineers, intern. conv., New York, N.Y. (IEEE, Box A, Lenox Hill Station, New York 21)

23-26. Gas Chromatography, 2nd intern. symp., Houston, Tex. (A. Zlatkis, Dept. of Chemistry, Univ. of Houston, Houston)

23-26. American Physical Soc., Philadelphia, Pa. (K. K. Darrow, Columbia Univ., New York 27)

20-24. National Assoc. for Research in Science Teaching, Chicago, Ill. (G. G. Mallinson, Western Michigan Univ., Kalamazoo)

20-24. National Science Teachers Assoc., Chicago, Ill. (R. H. Carleton, 1201 16th St., NW, Washington, D.C.)

21-3. British Computer Soc., conf.,



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21-23. Asian-Pacific **Dental** Federation, 4th congr., Singapore and Malaya. (B. B. Eraña, Manila Doctors Hospital, Isaac Peral St., P.O. Box 373, Manila, Philippines)

22-25. American Assoc. of Dental Schools, 41st annual, Los Angeles, Calif. (AADS, 840 Lake Shore Dr., Chicago 11, III)

24-26. Physics and Dynamics of Clouds, conf., American Meteorological Soc., Chicago, Ill. (Miss D. L. Bradbury, Dept. of Geophysical Sciences, Univ. of Chicago, Chicago)

25-27. Aerospace Bearings, USAF-Southwest Research Inst. conf., unclassified, San Antonio, Tex. (P. M. Ku, SwRI, 8500 Culebra Rd., San Antonio)

25-27. Entomological Soc. of America, Northcentral branch, Omaha, Neb. (G. E. Guyer, Dept. of Entomology, Michigan State Univ., East Lansing)

26-28. Michigan Acad. of Science, Arts and Letters, East Lansing (G. G. Mallinson, Western Michigan Univ., Kalamazoo)

26-28. Southern Soc. for **Philosophy** and **Psychology**, 56th annual, Lexington, Ky. (D. Calvin, Psychology Dept., Univ. of Kentucky, Lexington)

26-29. International Assoc. for **Dental Research**, 42nd, Los Angeles, Calif. (J. C. Muhler, 1120 W. Michigan St., Indianapolis, Ind. 46202)

27-28. American Ethnological Soc., Pittsburgh, Pa., (N. F. S. Woodbury, U.S. National Museum, Smithsonian Institution, Washington, D.C.)

27-28. Seismological Soc. of America, annual, Seattle, Wash. (K. V. Steinbrugge, SSA, 465 California St., San Francisco 4, Calif)

27-29. Society for the Study of Evolution, annual, Chapel Hill, N.C. (H. H. Ross, Illinois Natural History Survey, Urbana)

28-30. American Assoc. of Colleges of Pharmacy, Detroit, Mich. (C. W. Bliven, 1507 M St., NW, Washington, D.C. 20005)

29-2. Association of American Geographers, annual, Syracuse, N.Y. (AAG 1201 16th St., NW, Washington, D.C.)

30-2. American Assoc. of Junior Colleges, Bal Harbour, Fla. (W. G. Shannon, AAJC, 1777 Massachusetts Ave., NW, Washington, D.C. 20036)

31-3. American Assoc. of Anatomists, Denver, Colo. (L. B. Flexner, Dept. of Anatomy, Univ. of Pennsylvania, Philadelphia 4)

31-3. Calcified Tissues, European symp., Liége, Belgium. (L. J. Richellè, 32, Boulevard de la Constitution, Liége)

April

1. Thermoplastic Materials, conf., Soc. of Plastics Engineers, Akron, Ohio. (W. H. Nicol, RETEC, Goodyear Tire and Rubber Co., Akron 16)

1-2. Engineering Aspects of Magnetohydrodynamics, symp., Cambridge, Mass. (G. S. Janes, Avco Everett Research Laboratories, Everett 49, Mass.)

1-2. Methods for Measurement of Weak Beta-Emitters, Karlsruhe-Leopoldshaven, Germany. (Gesellschaft Deutscher

Chimiker, Gesellschaftsstelle, Postfach 9075, Frankfurt/Main, Germany)

1-3. Structures and Materials, American Inst. of Aeronautics and Astronautics, 5th annual conf., Palm Springs, Calif. (R. R. Dexter, AIAA, 2 E. 64 St., New York, N.Y.)

1-3. Optical Soc. of America, spring meeting, Washington, D.C. (M. E. Warga, OSA, 1155 16th St., NW, Washington, D.C. 20036)

1-4. National Soc. for **Programmed Instruction**, annual, San Antonio, Tex. (NSPI Program Committee, Trinity Univ., 715 Stadium Dr., San Antonio, Tex.)

1-5. Latin Oto-Rhino-Laryngology Soc., 15th congr., Bologna, Italy. (G. Motta, Via Modica 6, Milan, Italy)

2-3. American Soc. of Civil Engineers, Engineering Mechanics Div., spring conf., Boston, Mass. (ASCE, 33 W. 39 St., New York 18)

2-3. Alexander Graham Bell Assoc. for the **Deaf**, southeastern meeting. New Orleans, La. (R. Tegeder, Utah School for the Deaf, 846 20th St., Ogden)

2-3. Obstetrics and Gynecology, seminar, Gainesville, Fla. (Mrs. D. Miller, Div. of Postgraduate Education, College of Medicine, Univ. of Florida, Gainesville)

2-3. Industrial Applications of New Technology, conf., Atlanta, Ga. (Director, Short Courses and Conferences, Georgia Inst. of Technology, Atlanta, Ga. 30332)

2-4. American Acad. of **Oral Pathology**, Bethesda, Md. (R. J. Gorlin, Univ. of Minnesota, Minneapolis)

2-4. Association of Surgeons of Great Britain and Ireland, annual, St. Andrews, Scotland (Secretariat, 47 Lincoln's Inn Fields, London, W.C.2, England)

2-5. British Medical Assoc., clinical meeting, Northampton, England. (D. Gullick, Tavistock Sq., London, W.C.1)

3-4. Biology colloquium, Corvallis, Ore. (C. M. Gilmour, School of Science, Oregon State Univ., Corvallis)

3-5. Fleming's Lysozyme, 3rd intern. symp., Milan, Italy. (G. Podio, Museo della Scienza e della Tecnica, Via Modica, 6, Milan)

3-5. American Soc. of Internal Medicine, annual, Atlantic City, N.J. (A. V. Whitehall, 3410 Geary Blvd., San Francisco, Calif.)

3-5. American Assoc. of **Pathologists** and **Bacteriologists**, annual, Chicago, Ill. (E. A. Gall, Dept. of Pathology, Cincinnati General Hospital, Cincinnati 29, Ohio)

4. Arizona Acad. of Science, Tempe. (H. B. Whitehurst, Dept. of Chemistry, Arizona State Univ., Tempe)

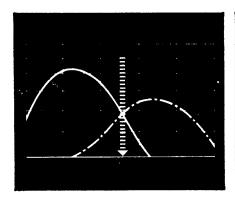
4-5. American **Psychosomatic** Soc., San Francisco, Calif. (C. Binger, 265 Nassau Rd., Roosevelt, N.Y.)

4-6. Neurobiology, 2nd symp. (by invitation), Phoenix, Ariz. (E. Eidelberg, Barrow Neurological Inst., St. Joseph's Hospital, 350 W. Thomas Rd., Phoenix)

5-8. International Acad. of Pathology, annual, Chicago, Ill. (F. K. Mostofi, Armed Forces Inst. of Pathology, Washington, D.C. 20012)

5-10. American Chemical Soc., 147th natl., Philadelphia, Pa. (A. T. Winstead, 1155 16th St. NW, Washington, D.C.)

5-10. Asia-Pacific Acad. of Opthalmol-



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ogy, 2nd congr., Melbourne, Australia. (R. N. Mellor, 82 Collins St., Melbourne C1)

6-8. Nonlinear Magnetics Conf., Washington, D.C. (R. C. Barker, Dept. of Engineering and Applied Science, Yale Univ., New Haven, Conn.)

6-8. Association of Schools of **Public Health**, annual, Toronto, Ont., Canada. (R. E. Coker, Jr., Drawer 229, Chapel Hill, N.C. 27515)

6-9. French Soc. of Biological Chemistry, 50th, Paris. (P. Malangeau, 4 Avenue de l'Observatoire, Paris 6°)

7-9. Atomic Energy Soc. of Japan, Tokyo. (Atomic Energy Research Inst., 1-1, Shiba-tamura-cho, Minato-ku, Tokyo)

7-9. Chemical Soc., Birmingham, England. (General Secretary, Burlington House, London, W.1, England)

7-11. Applied Mathematics and Mechanics, Giessen, Germany, (K. Maruhn, Mathematisches Institut, Justus Liebig Univ., Giessen)

8-10. Textile Research Inst., 34th, New York, N.Y. (TRI, Princeton, N.J.)

9. British Cardiac Soc., annual, London, England. (J. Shillingford, Postgraduate Medical School, Ducane Rd., London, W. 12)

9-11. American Assoc. for Cancer Research, annual, Chicago, Ill. (H. J. Creech, AACR, Institute for Cancer Research, Fox Chase, Philadelphia 11, Pa.)

9-11. Association of Clinical Pathologists, spring meeting, London, England. (G. Cunningham, Dept. of Pathology, 47 Lincoln's Inn Fields, London, W.C.2)

9-11. Geological Soc. of America, southeastern section, Baton Rouge, La. (R. J. Martin, 1426 Harvard Rd., NE, Atlanta, Ga.)

9-11. Southwestern **Psychological** Assoc., annual, San Antonio, Tex. (C. C. Cleland, 2104 Meadowbrook Dr., Austin, Tex. 78703)

9-13. Roentgen Congr., German, Wiesbaden, Germany. (H. Lossen, Deutscher Röntgenkongress, Fichterplatz 20 III, Mainz, Germany)

10. Natural Phenolic Compounds, symp., Tokyo, Japan. (M. Shimokoriyama, Dept. of Botany, Univ. of Tokyo, Hongo, Tokyo)

10-11. American Laryngological Assoc., San Francisco, Calif. (L. G. Richards, 12 Clovelly Rd., Wellesley Hills 82, Mass.)

Clovelly Rd., Wellesley Hills 82, Mass.) 10-11. Association of **Physicians** of Great Britain and Ireland, annual, Oxford, England. (G. de J. Lee, Dept. of Medicine, Radcliffe Infirmary, Oxford)

11. Paleontological Research Inst., Ithaca, N.Y. (R. S. Harris, 109 Dearborn Place, Ithaca)

11-12. Histochemical Soc., 15th annual, Chicago, Ill. (A. D. Deitch, Dept. of Microbiology, Columbia Univ., 630 W. 168 St., New York 32)

12. Industrial Fibers, European inst., Milan, Italy. (F. Tommy-Martin, 40 rue du Stand, Geneva, Switzerland)

12-13. American Soc. for Artificial Internal Organs, Chicago, Ill. (B. K. Kusserow, Dept. of Pathology, Univ. of Vermont College of Medicine, Burlington)

12-17. Federation of American Societies for Experimental Biology, Chicago, Ill. (H. B. Lemp, The Federation, 9650 Wisconsin Ave., Bethesda, Md.)



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