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**Cover** Oblique aerial photograph of desiccation fissures on the Black Rock Desert, Nevada. The car tracks shown in the foreground and elsewhere in the photograph indicate the scale of the fissures. See page 1359.



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\*American Journal of Clinical Pathology Vol. 33. No.2. February 1960, pp 144-151 "Application of Refrigerated Microtome in Surgical Pathology" by Bernard Klionsky, M.D. and Othello D. Smith, M.D.

The Journal of Histochemistry and Cytochemistry Vol. 8, No. 5. September, 1960, pp 310 "A Frozen Section Freeze Substitutions Technique and an Improved Cryostat" by Jeffrey P. Chang and Samuel H. Hori.

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<sup>1</sup>H. E. Gove, Proceedings of the Second Accelerator Conference, Amsterdam, Oct., 1960 (North Holland Publishing Company, 1961) p. 63.

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#### 28 April 1961, Volume 133, Number 3461

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#### Science for the Citizen

"A democratic citizenry today must understand science in order to have a wide and intelligent democratic participation in many national decisions. Such decisions are being made now. They cannot be postponed for twenty years while we are improving our present educational system so that its products will constitute a significant fraction of the mature voting population. . . ." Thus the President's Science Advisory Committee expressed itself nearly two years ago [Education for the Age of Science (24 May 1959)]. What this implies is that if science is to have the kind of support that is essential to its vigorous development, improved ways must be found to increase public understanding of what science and technology can do, of how they are carried out, and of the importance of basic research for its own sake and as the indispensable foundation for an advancing technology.

The public to be reached is the general adult population, but what is the most effective way to reach it? In 1959 the National Science Foundation decided that an approach through the mass media—newspapers, magazines, radio, and television—would be the most effective first step, but that this should be an indirect approach, accomplished by helping reporters, science writers, and editors to meet with scientists under conditions that would permit unhurried discussion of scientific problems and a free interchange of ideas.

The problem so far has involved eight 2- to 10-day "workshops" and "seminars" for reporters and science writers and four 1- to 3-day conferences for editors. To judge by the response of the participants, the results justify the effort: the scientists have come to have a more sympathetic understanding of the reporter's problems, and the reporters and science writers have learned more about scientists and their methods of research; the editors have profited in the same way as the writers and have, in addition, come to appreciate the difficulties their reporters face in putting scientific results into readable form for the public.

The enthusiastic response to a small national meeting for editors and scientists held in an informal setting at Marcell, Minnesota, last September led some of the editors who attended to believe that many of their colleagues might welcome a similar experience. Accordingly, the American Society of Newspaper Editors and the American Association for the Advancement of Science decided to cosponsor a seminar on the day prior to the annual ASNE meeting last week, and the National Science Foundation supplied the modest amount of money required to bring the five participating scientists to Washington. The scientists, with one exception, dealt with science itself, not with science and politics or science and culture. Harlow Shapley talked about the outer reaches of space; Francis O. Schmitt, about macromolecules in organisms; Frank Press, about recent developments in geophysics; and Frank A. Brown, Jr., about biological clocks. Warren Weaver, the luncheon speaker, discussed with characteristic breadth and brilliance the reciprocal responsibilities of scientists and the press in informing the public about science.

There is no question about the immediate success of the meeting: the editors relished the rich scientific fare that was provided. But the more important question is: How much of the initial enthusiasm will be translated into action when the editors go home? If they have been convinced that the need to cover events in science is as compelling as the need to cover sports, politics, and the arts, then the long-term impact of the program will be assured.—G.DU.S.

## SCIENCE



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### Meetings

#### Forthcoming Events

May

22–24. American Thoracic Soc., Cin-cinnati, Ohio. (F. W. Webster. 1790 Broadway, New York 19) 22–24. Global Communications, 5th

natl. symp., Chicago, Ill. (R. D. Slayton, 5555 Touhy Ave., Skokie, Ill.)

22-24. Telemetering Conf., natl., Chicago, Ill. (J. Becker, AC Spark Plug Division, General Motors Corp., Milwaukee 1, Wis.)

22-25. American Urological Assoc., Los Angeles, Calif. (W. P. Didusch, 1120 N. Charles St., Baltimore 1, Md.)

22-25. Design Engineering Conf. and Show, Detroit, Mich. (ASME Meetings Dept., 29 W. 39 St., New York 18) 22–25. National Tuberculosis Assoc., Cincinnati, Ohio. (J. G. Stone, 1790

Broadway, New York 19) 22–26. Engineering Conf. and Exhibit, 29th annual, New York, N.Y. (G. E. Seeley, ASTME Headquarters, 10700 Puritan Ave., Detroit 38, Mich.)

22-26. Society of Photographic Scientists and Engineers, annual, Binghamton, N.Y. (M. G. Anderson, Ansco, Vestal Parkway East, Binghamton, N.Y.)

22-27. International Acad. of Legal Medicine and of Social Medicine, 5th cong., Vienna, Austria. (M. Helpern, Chief Medical Examiner, City of New York, 55 East End Ave., New York 28)

23-25. Large Capacity Memory Tech-niques for Computing Systems, symp., Washington, D.C. (Miss J. Leno, Code 430A, Office of Naval Research, Washington 25)

25. Gastroenterology Research Group, Chicago, Ill. (N. C. Hightower, Scott and White Clinic, Temple, Tex.)

25-26. Medical Technology, symp., Cleveland, Ohio. (J. W. King, Cleveland Clinic, 2020 E. 93 St., Cleveland 6)

25-26. Nitro Aliphatic Chemistry, symp., Lafayette, Ind. (Purdue Memorial Union, Purdue Univ., Lafayette) 25-26. Operations Research Soc. of

America, 9th annual, Chicago, Ill. (D. Schiller, Gaywood-Schiller Associates, 203 N. Wabash Ave., Chicago 1)

26-27. American Otological Soc., Lake Placid Club, Essex County, N.Y. (J. A. Moore, 525 E. 68 St., New York 21)

26-27. Biology of the Trachoma Agent, symp., New York, N.Y. (F. B. Gordon, Natl. Naval Medical Center, Bethesda 14, Md.)

26-27. Cardiovascular Tissue Culture Conf., Dover, Del. (O. J. Pollak, Dover Medical Research Center, Inc., P.O. Box 228, Dover)

26-3. American Acad. of Dental Medicine, cruise to Bermuda and Nassau. (H. Ward, 15 Bond St., Great Neck, N.Y.)

28-1. Special Libraries Assoc., 52nd annual, San Francisco, Calif. (B. M. Woods, SLA, 31 E. 10 St., New York 3)

29-31. American Gynecological Soc., Colorado Springs, Colo. (A. H. Aldridge, 899 Park Ave., New York 21)

29-31. Cancer Symp., 6th annual, Regina, Saskatchewan, Canada. (A. J. S. Bryant, Allan Blair Memorial Clinic, Regina) new electronic hematocrit gives direct readings instantly



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SCIENCE, VOL. 133

29-31. Chemical Inst. of Canada, 44th annual, Ottawa. (Chemical Inst. of Canada, 48 Rideau St., Ottawa 2)

29-3. Molecular Spectroscopy, 5th European cong., Amsterdam, Netherlands. (D. H. Zijp, Secy., Nieuwe Achtergracht 123, Amsterdam-C.)

30. Nutrition Soc. of Canada, 4th annual, Guelph, Ontario. (E. V. Evans, Dept. of Nutrition, Ontario Agricultural College, Guelph)

31–2. Canadian Federation of Biological Societies, Guelph, Ontario, Canada. (E. H. Bensley, Montreal General Hospital, 1650 Cedar Ave., Montreal 25, P.Q.)

31-2. Radar symp., 7th annual, Ann Arbor, Mich. (Coordinator, 7th Annual Radar Symposium, Institute of Science and Technology, Box 618, Ann Arbor)

#### June

2-3. Canadian Soc. for Clinical Chemistry, annual general meeting, Guelph, Ont. (C. R. Cameron, Ontario Veterinary College, Guelph)

2-5. Latin-American Congress of Physical Medicine, Lisbon, Portugal. (C. Lopez de Victoria, 245 E. 17 St., New York, N.Y.)

3-11. Medical-Surgical Film Festival, 4th intern., Turin, Italy. (Minerva Medica, Corso Bramante 83-85, Turin)

4-9. Mass Spectrometry, ASTM Committee E-14, Chicago, Ill. (G. Crable, Gulf Research Center, P.O. Box 2038, Pittsburgh 30, Pa.)

4-10. World Congress of Psychiatry, 3rd, Montreal, Canada. (A. Roberts, Allan Memorial Inst., 1025 Pine Ave. West, Montreal 2, P.Q.)

4-12. Cellular Regulatory Mechanisms, 26th Cold Spring Harbor Symp. on Quantitative Biology, Cold Spring Harbor, N.Y. (A. Chovnick, Long Island Biological Assoc., Cold Spring Harbor)

5-7. American Soc. for Quality Control, Philadelphia, Pa. (W. P. Youngclaus, Jr., 161 W. Wisconsin Ave., Milwaukee 3, Wis.)

Wis.) 5-7. Fundamental Aspects of Radiosensitivity, symp., Upton, N.Y. (A. H. Sparrow, Brookhaven National Laboratory, Upton, L.I.)

5-8. International Instrument-Automation Conf. and Exhibit, Instrument Soc. of America, Toronto, Canada. (I.S.A., 313 Sixth Ave., Pittsburgh 22, Pa.)

5-9. Animal Reproduction, 4th intern. cong., Amsterdam, Netherlands. (Secretariat, Burgemeester de Monchyplein 14, The Hague, Netherlands)

5-9. Effects of Ionizing Radiation on the Nervous System, symp., Vienna, Austria. (J. Burt, International Atomic Energy Agency, United Nations, New York, N.Y.)

5-10. International Colloquium on Spectroscopy, 9th, Lyon, France. (Secretariat, Groupement pour l'Avancement des Méthodes Spectrographiques, 1, rué Gaston Boissier, Paris 15)

5-16. Operations Research and Systems Engineering, Baltimore, Md. (Dean, School of Engineering, Johns Hopkins Univ., Baltimore 18)

6-8. Tissue Culture Assoc., 12th annual, Detroit, Mich. (F. E. Payne, Dept. of Epidemiology, Univ. of Michigan, Ann Arbor)

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