

Meetings

Systematic Collections

During the last year and a half, a number of directors of natural history museums and herbaria held three informal conferences. The first two, supported by a grant from the National Science Foundation, were held, respectively, at the Academy of Natural Sciences in Philadelphia, 19–20 May 1958, and at the New York State Museum, 13–14 October 1958. The third conference, which had no outside sponsorship, was held at the Florida State Museum, University of Florida, 9–10 April 1959.

The following museums and herbaria were represented at one or more of the conferences: Academy of Natural Sciences of Philadelphia; American Museum of Natural History; Bailey Hortorium, Cornell University; Bernice P. Bishop Museum; California Academy of Sciences; Carnegie Museum; Chicago Natural History Museum; Florida State Museum, University of Florida; Gray Herbarium, Harvard University; Herbarium of the University of Michigan; Missouri Botanical Garden; Museum of Comparative Zoology, Harvard University; Museum of Natural History, University of Kansas; Museum of Zoology, University of Michigan; National Museum of Canada; Natural History Museum, Stanford University; Natural History Museum, University of Colorado; New York Botanical Garden; New York State Museum and Science Service; Peabody Museum, Yale University; Royal Ontario Museum; United States National Museum; University of California Herbarium; and University of Nebraska State Museum. Also represented at the conferences were the National Science Foundation, the American Institute of Biological Sciences, and officials of the individual host institutions.

The conferences were quite productive, and many topics of concern to systematic biology were identified and discussed. Among these were centralization of holdings and the question of establishing national centers for collections; over-curating versus under-curating; national needs in terms of facilities and personnel; and fringe benefits for curatorial personnel.

The conferences also foresaw the need for, and provided for the establishment of, a far broader group, tentatively called the Association of Science Museum Administrators, which held its organizational meeting in Pittsburgh on 2 June 1959, the day before the annual meeting of the American Association of Museums. C. B. Schultz, of the University of Nebraska State Museum, was elected chairman of the new association.

Conference committees were formed to conduct a survey of zoological collections (chairman, T. H. Hubbell, Museum of Zoology, University of Michigan); to consider interinstitutional cooperation in the standardization of containers and cases for zoological collections (chairman, C. B. Schultz, University of Nebraska State Museum); and to consider interinstitutional cooperation in the standardization of cases for herbarium specimens (chairman, I. L. Wiggins, Natural History Museum, Stanford University).

The substance of several resolutions adopted at the conferences is as follows:

1) The conference, recognizing the tremendous need for additional research positions in the field of systematic biology, recommended that ways and means be found to provide support for such positions.

2) The conference recommended that the National Science Foundation seek means of supporting institutional programs involving maintenance of research collections in order to increase basic research, to facilitate loans that make material more generally available on a national and international basis, and to improve services to the scientific public.

3) It was recommended that journals not publish descriptions of new species unless the types are deposited in stable institutions that permit free access to the collections by qualified and responsible investigators, and further, that granting agencies require recipients of grants involving systematic studies to agree to place all types resulting from such work in institutions of this kind.

4) The conference commended the National Science Foundation for hav-

ing the foresight to provide long-term grants and urged the Foundation to make greater use of this procedure.

5) In view of the great and increasing interest of the Division of Scientific Personnel and Education of the National Science Foundation in the teaching of science and the recruitment of scientists—and the devotion of over half the budget of the National Science Foundation to these ends—it would be to the national advantage as well as to the advantage of natural history museums to emphasize the educational importance of these “nurseries of scientists.” It was therefore recommended that the conference bring to the attention of the National Science Foundation this as yet generally unrecognized national educational asset, with the express hope that funds might be made available for the expansion of curatorial and other museum activities directly related to educational programs. Since no representations of this sort have yet been made, the results might be surprisingly rewarding, and do much to increase the prestige as well as the effectiveness of our institutions.

6) Since it is believed desirable to improve and formalize the status of museum staffs, it was resolved that all science museums with study collections and research programs seek to establish standards of academic background, professional competence, and salary range for members of their curatorial staffs equivalent to those for faculty members at nearby colleges and universities.

7) The transfer of holotypes from small inactive collections in possibly unstable situations to continuing institutions having significant material or specialists on the group represented is considered desirable and should be encouraged.

Limited numbers of the *Transactions* of the three conferences are available, and interested persons should request them from the directors of the three host institutions.

The fourth conference of this kind is scheduled for the spring of 1960, to be held at the National History Museum of the University of Kansas.

ARNOLD B. GROBMAN
*Biological Sciences Curriculum Study,
University of Colorado, Boulder*

Forthcoming Events

April

20–21. Council on Medical Television, 2nd meeting, Bethesda, Md. (J. Mackenzie, Council on Medical Television, 33 E. 68 St., New York 21.)

20–22. Biological Waste Treatment, 3rd conf., New York, N.Y. (W. W. Eckenfelder, Dept. of Civil Engineering, Manhattan College, New York 71.)

20-22. Manned Space Stations Inst. of the Aeronautical Sciences symp., Los Angeles, Calif. (E. Levin, Rand Corp., 1700 Main St., Santa Monica, Calif.)

20-22. Medical Electronics, natl. conf., Houston, Tex. (K. O. Heintz, Humble Oil and Refining Co., Houston.)

20-22. Southwestern Inst. of Radio Engineers, 12th annual, Houston, Tex. (H. E. Childers, College of Medicine, Baylor Univ., Waco, Tex.)

20-23. National Council of Teachers of Mathematics, Ann Arbor, Mich. (M. H. Ahrendt, 1201 16 St., NW, Washington 6.)

20-24. Congress of Gastroenterology, 6th intern., Leyden and Noordwijk aan Zee, Netherlands. (C. Schreuder, 16, Lange Voorhout, The Hague, Netherlands.)

21-22. Society of Technical Writers and Editors (Technical Publishing Soc.), 7th annual, Chicago, Ill. (R. F. Ellis, American Can Co., 11th Ave. and St. Charles Rd., Maywood, Ill.)

21-23. Association of Southeastern Biologists, New Orleans, La. (H. J. Humm, Dept. of Botany, Duke Univ., Durham, N.C.)

21-28. American Soc. of Tool Engineers, annual, Detroit, Mich. (H. E. Conrad, ASTE, 10700 Puritan Ave., Detroit.)

22-23. High-Temperature Resistance and Thermal Degradation of Polymers, symp., London, England. (Symposium Subcommittee, Plastics and Polymer Group, Soc. of Chemical Industry, 14 Belgrave Sq., London, S.W.1, England.)

24-28. American Ceramic Soc., annual, Philadelphia, Pa. (F. P. Reid, ACS, 4055 N. High St., Columbus 14, Ohio.)

25-27. American Proctologic Soc., Houston, Tex. (N. D. Nigro, 10 Peterboro, Detroit 1, Mich.)

25-27. Canadian Inst. of Mining and Metallurgy, 62nd annual, Toronto, Ontario, Canada. (Secretary-Treasurer, Room 906, Drummond Bldg., 1117 St. Catherine St., Montreal, Canada.)

25-27. International Acad. of Pathology, Memphis, Tenn. (F. K. Mostofi, Armed Forces Inst. of Pathology, Washington, D.C.)

25-28. American Assoc. of Petroleum Geologists, Atlantic City, N.J. (H. T. Morley, Pan American Petroleum Corp., Box 591, Room 1330, Tulsa 2, Okla.)

25-28. Society of Economic Paleontologists and Mineralogists, Atlantic City, N.J. (J. Imbrie, Dept. of Geology, Columbia Univ., New York, N.Y.)

25-30. American Acad. of Neurology, Miami, Fla. (Mrs. J. C. McKinley, 4307 E. 50 St., Minneapolis, Minn.)

25-30. Industrial Health, conf., Rochester, N.Y. (M. E. Fairbank, Kodak Park, Rochester 4.)

26-29. Internal Medical Assoc., Rochester, N.Y. (C. D. Bridges, 28 E. Jackson Blvd., Chicago 4.)

27. Additives and Residues in Human Foods, symp., Columbia, Mo. (T. D. Luckey, Dept. of Biochemistry, School of Medicine, Univ. of Missouri Medical Center, Columbia.)

27. International Acad. of Proctology, annual, Miami Beach, Fla. (A. J. Cantor, IAP, 147-41 Sanford Ave., Flushing 55, N.Y.)

27-29. Algae and Metropolitan Wastes,

conf., Cincinnati, Ohio. (A. F. Bartach, Water Supply and Water Pollution Research, Robert A. Taft Sanitary Engineering Center, Cincinnati.)

27-29. Chemical Reaction Engineering—Section on Non-Conventional Reactors, 2nd European symp., Amsterdam, Netherlands. (P. J. Hoftijzer, Centraal Laboratorium Staatsmijnen, Geleen (L.), Netherlands.)

27-30. American Meteorological Soc., general meeting with American Geophysical Union, Washington, D.C. (K. C. Spengler, AMS, 45 Beacon St., Boston 8, Mass.)

28-30. American Assoc. of Pathologists and Bacteriologists, Memphis, Tenn. (R. L. Holman, Dept. of Pathology, Louisiana State Univ., School of Medicine, New Orleans.)

28-30. American Soc. of Human Genetics, Memphis, Tenn. (W. J. Schull, Dept. of Human Genetics, Univ. of Michigan, 1133 E. Catherine St., Ann Arbor.)

28-30. Current Concepts in Medicine, 2nd intern. symp., Philadelphia, Pa. (M. J. Schwartz, Deborah Hospital, 901 Walnut St., Philadelphia 7.)

28-30. Midwestern Psychological Assoc., Columbus, Ohio. (I. E. Farber, Dept. of Psychology, State Univ. of Iowa, Iowa City.)

29. Parenteral Drug Assoc., Philadelphia, Pa. (H. E. Boyden, PDA, 4865 Stenton Ave., Philadelphia 44.)

29-30. Thernonuclear Processes, conv., London, England. (Institution of Electrical Engineers, Savoy Pl., London, W.C.2.)

30. Idaho Acad. of Science, annual, Po-

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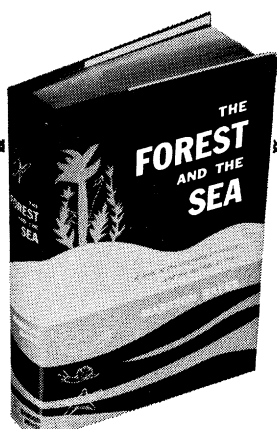
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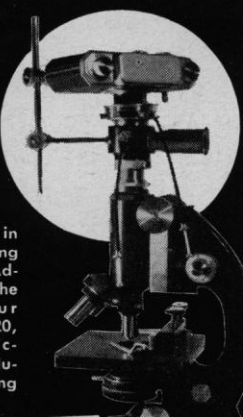
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catello. (A. E. Taylor, Graduate Div., Idaho State College, Pocatello.)

30-2. Society for American Archaeology, Salt Lake City, Utah. (D. A. Baerreis, Sterling Hall, Univ. of Wisconsin, Madison 6.)

May

1-2. American Soc. for Clinical Investigation, Atlantic City, N.J. (S. J. Farber, New York University College of Medicine, 550 First Ave., New York 16)

1-5. American Assoc. of Cereal Chemists, Chicago, Ill. (J. W. Pence, Western Utilization Research and Development Div., 800 Buchanan St., Albany 10, N.Y.)

1-5. Electrochemical Soc., Chicago, Ill. (H. B. Linford, ES, 1860 Broadway, New York 23)

1-5. Society of American Bacteriologists, 60th annual, Philadelphia, Pa. (D. M. Cleary, Box 354, Upper Darby, Pa.)

2. American Federation for Clinical Research, Atlantic City, N.J. (J. E. Bryan, 250 W. 57 St., New York 19)

2-3. Reactions between Complex Nuclei, 2nd conf., Gatlinburg, Tenn. (R. S. Livingston, Oak Ridge Natl. Laboratory, Oak Ridge, Tenn.)

2-4. Aeronautical Electronics, conf., Dayton, Ohio. (L. G. Cumming, IRE, 1 E. 79 St., New York 21)

2-5. Flight Test Symp., natl., San Diego, Calif. (H. S. Kindler, Instrument Soc. of America, 313 Sixth Ave., Pittsburgh 22, Pa.)

2-11. International Cancer Cytology conf., Mexico, D.F., Mexico. (Office of Intern. Conferences, Department of State, Washington 25)

2-11. Pan American Medical Assoc., cong., Mexico City, Mexico. (J. J. Eller, 745 Fifth Ave., New York 22)

3-4. Association of American Physicians, Atlantic City, N.J. (P. B. Beeson, Yale Univ. School of Medicine, New Haven 11, Conn.)

3-4. Conference of Veterinarians, annual, Philadelphia, Pa. (W. H. Rhodes, School of Veterinary Medicine, Univ. of Pennsylvania, Philadelphia 4)

3-5. Society of Pediatric Research, Swampscott, Mass. (C. D. West, Children's Hospital, Cincinnati 29, Ohio)

3-6. Fuel Element Fabrication, symp., Vienna, Austria. (Intern. Atomic Energy Agency, 11 Kärntner Ring, Vienna)

5-6. American Pediatric Soc., annual, Swampscott, Mass. (A. C. McGuinness, 2800 Quebec St., NW, Washington 8)

5-8. Wilson Ornithological Soc., Gatlinburg, Tenn. (A. M. Bagg, Farm St., Dover, Mass.)

6-7. Population Assoc. of America, annual, Washington, D.C. (K. B. Mayer, Dept. of Sociology and Anthropology, Brown Univ., Providence 12, R.I.)

6-7. South Dakota Acad. of Science, 45th annual, Brookings. (J. M. Winter, Dept. of Botany, Univ. of South Dakota, Vermillion)

6-8. International Cong. of Phlebology, 1st, Chambéry, France. (J. Marmasse, 3, rue de la République, Orléans (Loiret), France)

6-9. American Psychoanalytic Assoc., annual, Atlantic City, N.J. (Mrs. H. Fischer, 36 W. 44 St., New York 36)

(See issue of 18 March for comprehensive list)

Letters

Measuring Eye Movements

With reference to the report entitled "Photoelectric technique for measuring eye movements," by William M. Smith and Peter J. Warter, Jr. [*Science* 130, 1248 (1959)], I wish to make the following observations. To record eye movement is an endeavor with a long history in neuro-otological research and clinical investigations. The first such effort was made as early as 1881 by Hogenes. In the otolaryngology department of the University of Illinois College of Medicine in Chicago, the photoelectric principle of picking up and recording nystagmus (rhythmic involuntary eye movements) was first applied in 1950. The idea discussed in the article mentioned above is almost identical with the method we have been using for the last 9 years.

Through clinical experience our method was gradually and repeatedly improved. Several reports have been presented before national and international societies, and publications in the United States and foreign countries have carried descriptions of the instrument and the technique. Our present model is an advanced nystagmus-recording device. It is applicable not only in vestibular research (concerned with the sense of equilibrium) but also in everyday clinical evaluation of the function of the sense organ of balance.

NICHOLAS TOROK

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The interesting work of Torok and his colleagues in the field of nystagmography (1, 2) unfortunately was unknown to us until it was called to our attention by his letter to *Science*. Our coverage of the literature obviously was incomplete.

We do not accept as accurate Torok's assertion that the idea discussed in our report in *Science* is "almost identical" with the method he and his associates have used in their work. There is a similarity in one specific sense—namely, both techniques of measurement utilize the fact of differential reflectance of the iris and sclera of the eye. According to the descriptions in the articles cited (1, 2), a rectangular pattern of light is cast upon the eye in such a way that part falls upon the iris and part falls upon the sclera. As the eye moves, therefore, the total amount of light reflected from the eye varies. This variation in total reflectance is detected by two photovoltaic cells in series mounted immediately in front of