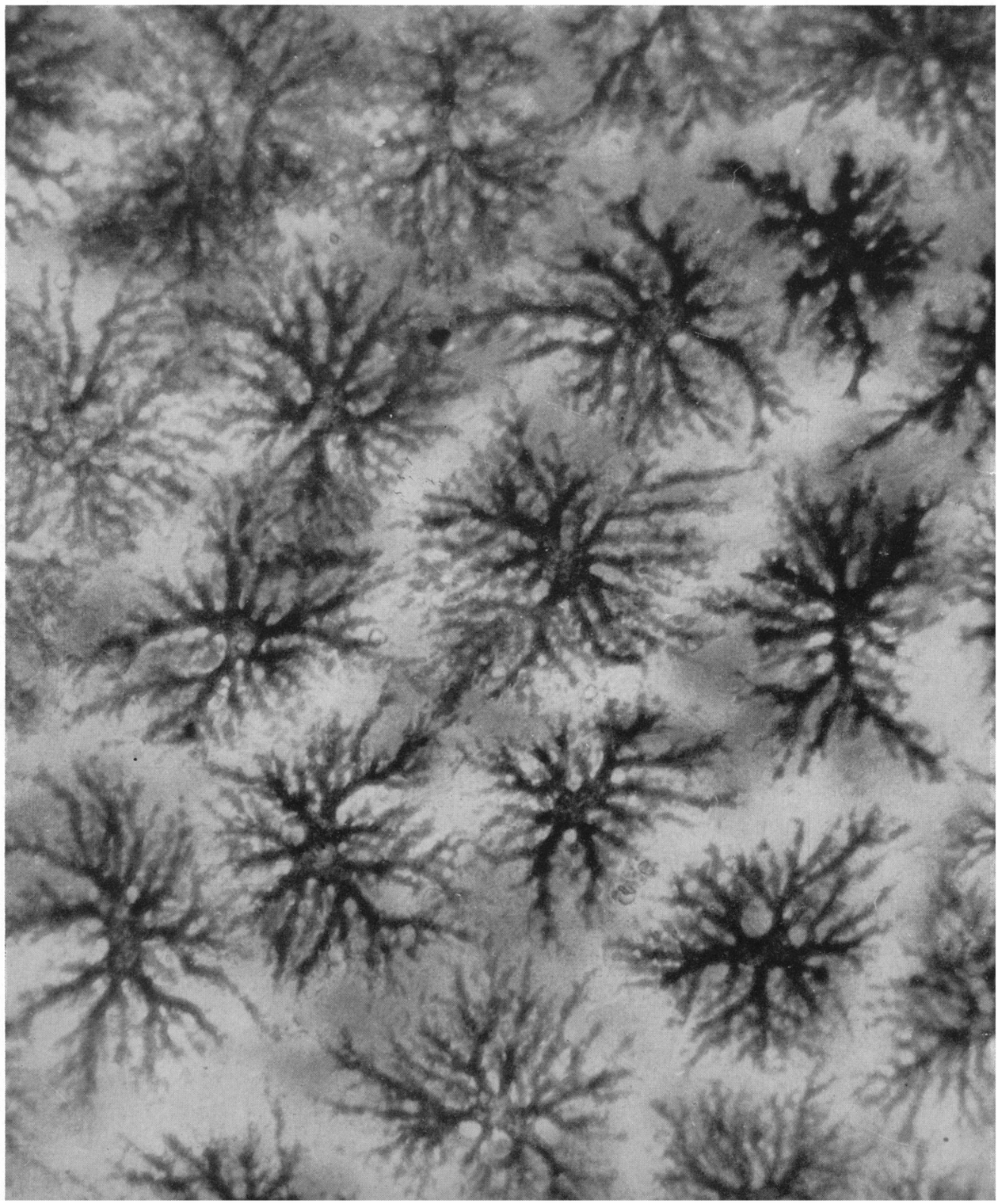
SCIENCE

18 November 1960

Vol. 132, No. 3438

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE



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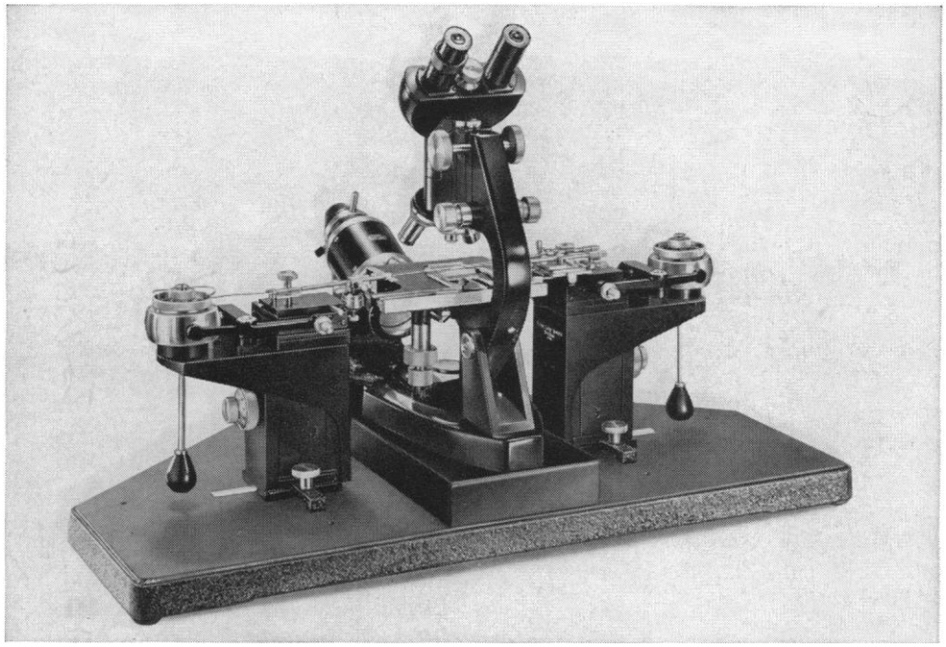

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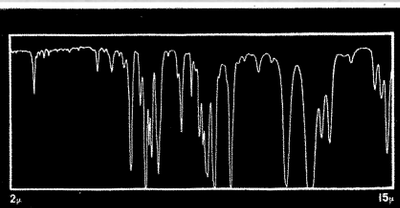

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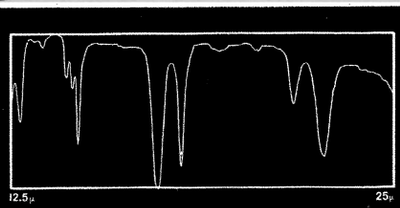

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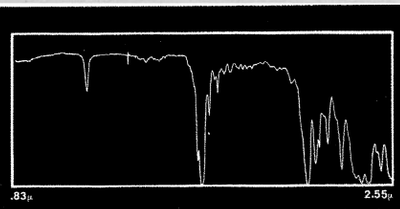

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SCIENCE

Cover Pigment cells with dispersed melanin in the tail fin of the tadpole of the South African clawed toad, *Xenopus laevis* (about × 295). Tails of these tadpoles become dark in color when they are subjected to darkness because the melanin in their pigment cells is dispersed. The reaction seems to be mediated by the action of light on the pigment cells of the fin. Other pigment cells of such tadpoles react differently because they are influenced by the pineal gland (see page 1481).

PHOTO BY WILL CONNELL

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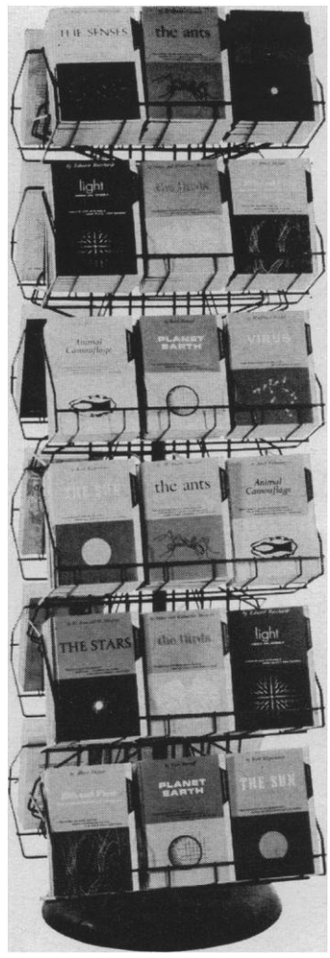

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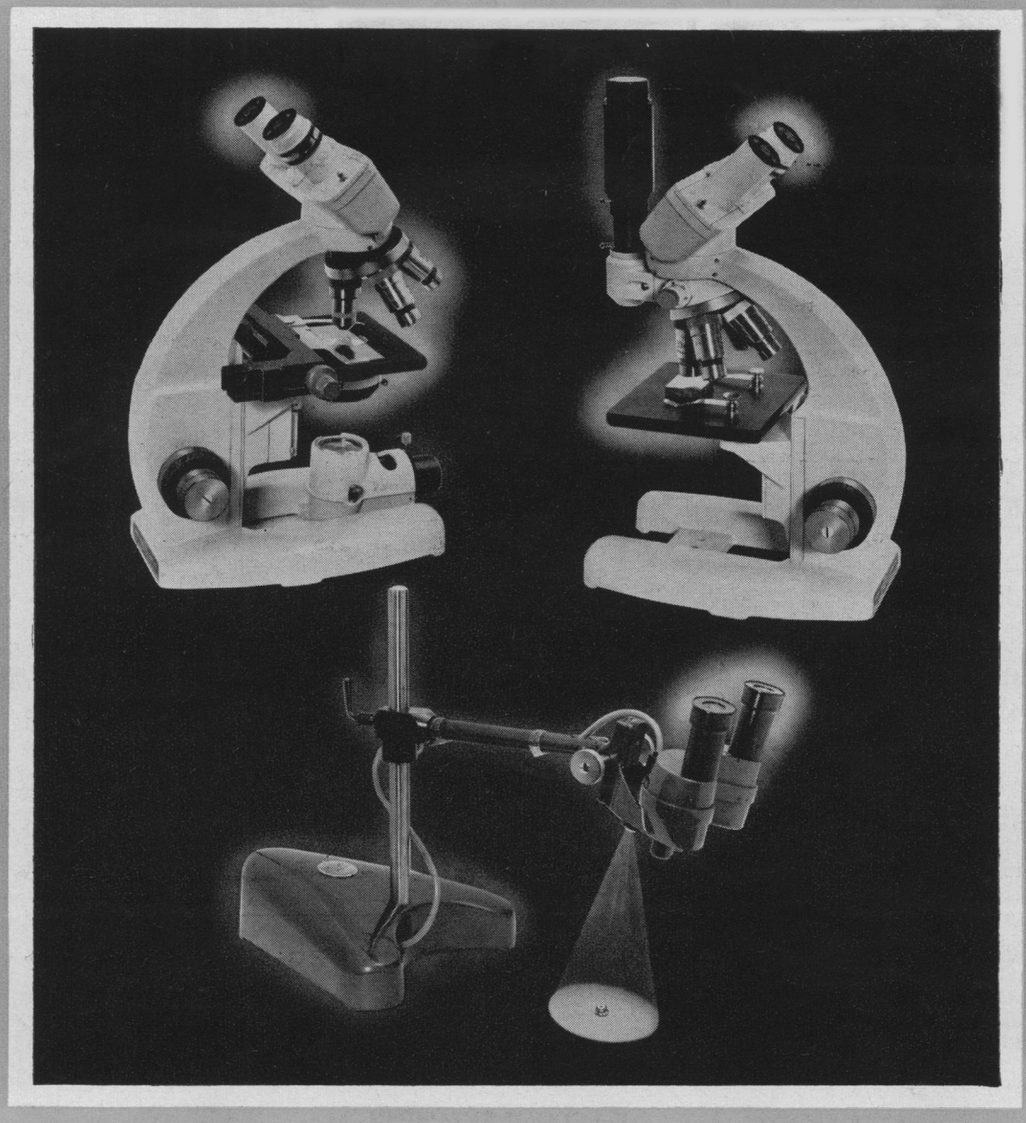

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AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

For a list of the headquarters of each participating society and section, see page 230, *Science*, 22 July. Both the Commodore and the Biltmore are AAAS headquarters hotels.

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Mail this now to the Housing Bureau. **Rooms will be assigned and confirmed in order of receipt of reservation.**

18 November 1960, Volume 132, Number 3438

SCIENCE

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Editorial and personnel-placement correspondence should be addressed to SCIENCE, 1515 Massachusetts Ave., NW, Washington 5, D.C. Manuscripts should be typed with double spacing and submitted in duplicate. The AAAS assumes no responsibility for the safety of manuscripts or for the opinions expressed by contributors. For detailed suggestions on the preparation of manuscripts and illustrations, see *Science* **125**, 16 (4 Jan. 1957).

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Science Proves . . .

One need watch television only briefly to learn that scientific instruments, phrases, and symbols are being used—and misused—to promote a wide variety of products. If the listener reacts as the advertiser wishes, he smokes the cigarette chosen by "more scientists and educators" than any other brand, dresses his hair with the preparation that does not evaporate in a solar heater, shaves with the blade that "engineers" call a "scientific breakthrough," and then, for he probably needs it, takes the pill recommended by "three out of four doctors" and follows it with the one shown in blown-up cross section and improved by its "enteric coating."

This din of pseudoscientific chatter has nothing to do with the brilliant generalization or the careful collection of data by which science advances. But for scientists it has two meanings: (i) "science" is a useful sales gimmick, now apparently on a par with endorsement by a pretty girl; and (ii) the public, including children, is given a false and misleading impression of the methods, character, and integrity of scientific work. Against this result there is growing revolt.

What can be done? First, protest. Specific ads that are false or misleading can be protested to the Federal Trade Commission, which invites such reports, and to the advertisers and TV chains, which should receive them whether invited or not.

FTC chairman Earl W. Kintner recently told the Association of Consulting Chemists and Chemical Engineers that scientists and consulting laboratories should extend the scope of their professional responsibility to insist that their findings be properly reported in any commercial usage made of them. Advertisers and advertising agencies, he continued, also have a professional responsibility, and warned them that if they abdicate self-discipline, they invite the imposed discipline of tighter government controls.

Ridicule is also useful. A *New Yorker* cartoon shows an executive blasting as "absolutely unscrupulous" an ad in which SCIENCE, in large caps, is paired with a bottle of unknown content, and adding, "Why didn't we think of it first?"

But attacking misleading ads alone is like treating symptoms; TV ads reflect the state of television as a whole. The widely syndicated critic John Crosby, in a roundhouse swing at the whole industry, recently announced that television has become so bad that it no longer merits a daily column; he will write about it only once in a while. The 1 January 2000 issue of the *Seattle Daily Galaxy* (a publicity paper for the Century 21 International Exposition to be held in Seattle in 1962) discusses tariffs on Mars imports, regrets surplus production of sea farms, and reports low morale at the moon colony. In contrast with these indications of how the world is sweeping on, and in a transparent jibe at the state of television, the day's TV program ends with a movie that was grade B 57 years earlier. Perhaps television executives should be included among the groups that need to develop professional attitudes and self-discipline; TV advertising is not likely to exhibit high standards until TV producers gain respect for the taste and intelligence of their audience.

In the meantime, we can protest and we can ridicule. TV commercials too frequently deserve both.—D.W.

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Dentistry

Section Nd. Two-session symposium, cosponsored by Section N–Medical Sciences, the American College of Dentists, the American Dental Association, and the International Association for Dental Research, North American Division: "Fundamentals of Keratinization," arranged by Earl O. Butcher, College of Dentistry, New York University; 30 Dec.

Butcher will preside over Session I, in which papers will be presented on the mechanism of keratinization (A. Gedeon Matoltsy, University of Miami); the histochemical distribution of sulfhydryls and disulfides in vertebrate keratins (R. J. Barrnett, Yale University School of Medicine, and Reidar F. Sognnaes, School of Dentistry, University of California, Los Angeles); keratinization of whole skin and isolated epidermis in vitro (George Szabo, Harvard Medical School); keratinization as seen with the electron microscope (J. A. Rhodin and E. J. Reith, New York University School of Medicine); the effects of vitamin A on keratinizing epithelia (Howard A. Bern and Donald J. Lawrence, Cancer Research Genetics Laboratory, University of California, Berkeley); effects of vitamin A on keratinization in the vitamin-A-deficient rat (J. P. Parnell and B. Sherman, Downstate Medical Center, State University of New York).

Sognnaes will preside over Session II. Papers will be presented on the effect of environment on the physical characteristics of the cornified epithelium (Irvin H. Blank, Harvard Medical School); keratinization of the oral mucosa (Julia Meyer, College of Dentistry, University of Illinois); keratinization in dental cysts (Jens J. Pindborg, Royal Dental College, Copenhagen); the extracellular position of enamel (M. L. Watson, University of Rochester); the chemistry of the protein matrix of enamel (K. A. Piez, National Institutes of Health).

Pharmacy

Section Np. There will be opening remarks by John E. Christian, secretary of Section Np, and this will be followed by greetings from the American Society of Hospital Pharmacists, the American Pharmaceutical Association, the New York State Council of Hospital Pharmacists, and the American Hospital Association.

There will be two sessions for contributed papers in hospital pharmacy, arranged by George F. Archambault, Division of Hospitals, U.S. Public Health Service, and Joseph A. Oddis, American Society of Hospital Pharmacists and American Pharmaceutical Association; 27 Dec. Oddis will preside over Session I; Archambault, over Session II.

On the same day there will be a luncheon, arranged by E. R. Squibb and Sons, New York (coordinated by P. A. Freeman), and the vice-presidential address of Section Np, "Dedication to Pharmacy," given by Joseph V. Swintosky.

On 27 Dec. there will also be programs arranged by Wyeth Laboratories, Philadelphia (coordinated by H. L. Ferrier), and by McKesson and Robbins, Inc., New York (coordinated by Milton N. Stamatos.

There will be two sessions for contributed papers, arranged by John E. Christian. John Autian (University of Texas) will preside over one of these, on 29 Dec.; Lee H. MacDonald (Upjohn Company, Kalamazoo, Mich.) will preside over the other, on 30 Dec.

The entire program of Section Np is cosponsored by the American Association of Colleges of Pharmacy, the American College of Apothecaries, the American Pharmaceutical Association, the American Society of Hospital Pharmacists, and the National Association of Boards of Pharmacy.

Meetings

Biochemical Anthropology

On 6–8 July a group of 24 scientists from three continents gathered at the Fels Research Institute in Yellow Springs, Ohio, for a conference on biochemical anthropology. Under discussion were biochemical differences that have, or may have, adaptive value under particular circumstances. Inevitably the conference, concerned with biochemical polymorphisms in man, overlapped the growing new field of geographical medicine.

Considerable attention was paid to the abnormal hemoglobins, especially where the heterozygote is at an adaptive advantage in malarial areas. Of particular interest were those parts of the world where more than one of the abnormal hemoglobins are present, or where both abnormal hemoglobins and glucose-6-phosphate dehydrogenase deficiency states are coexistent. Of interest, too, were iron requirements in hemolitic disorders having a genetic basis.

Interestingly, discussions on the various serological factors and on the globulin fractions both took a developmental tack. Since maternal-fetal incompatabilities will not arise where the relevant antigen does not develop during prenatal life, "late developing" blood types are obviously at a selective advantage. The ontogenetic timing of other serum fractions may prove useful in phylogenetic comparisons as well, as several participants suggested.

To the anatomists and physical anthropologists present at the conference, the implications currently read into human biochemical polymorphisms proved exceptionally stimulating. Traditionally, morphological variability has been viewed as having no particular significance. Clearly, variability in form and function now suggests either competing directions of selection or a selective advantage associated with heterozygosity.

Mentioned, too, were various "genetic" diseases whose frequency in contemporary populations demands explanation. Here nutritional variables were introduced, as in the interaction between diet and genetic disease. Other immunochemical reactions, chief among them allergies, suggested a fertile field for investigation. Are the disadvantages of being allergic balanced by enhanced resistance to infectious disease?

The meaning of human polymorphisms has emerged only recently as a major area of investigation. Most authors followed Darwin in assuming that polymorphisms exist because they are neutral with respect to natural selection. The conference on biochemical anthropology, aided by the Wenner-Gren Foundation for Anthropological Research, casts new light on this old question. People differ at the molecular level, and in enzyme content and concentration. We are beginning to know why, and we are increasingly able to define the situations that are responsible.

STANLEY M. GARN
Physical Growth Department, Fels Research Institute, Yellow Springs, Ohio

Forthcoming Events

December

1–16. Commission for Climatology, 3rd session, London, England. (World Meteorological Organization, Campagne Rigot, 1, avenue de la Paix, Geneva, Switzerland)

2–5. Central American Medical Conf., 8th, Panama City. (A. Bissot, Departamento de Saud Publica, Ministerio de Trabajo, Prevision Social y Salud Publica, Panama)

3–6. Visual Communications, 4th annual intern. cong., Chicago, Ill. (Visual Communications Cong., 10600 Puritan Ave., Detroit 38, Mich.)

3–8. American Acad. of Dermatology and Syphilology, Chicago, Ill. (R. R. Kierland, First National Bank Building, Rochester, Minn.)

4–6. Spectroscopy, annual southern seminar, Gainesville, Va. (Annual Seminar on Spectroscopy, Univ. of Florida, Gainesville)

4–7. American Inst. of Chemical Engineers. annual, Washington, D.C. (F. J. Van Antwerpen, AICE, 25 W. 45 St., New York 36)

4–9. Radiological Soc. of North America, Cincinnati, Ohio. (D. S. Childs, 713 E. Genesee St., Syracuse 2, N.Y.)

5–7. American Soc. of Agricultural Engineers, winter, Memphis, Tenn. (J. L. Butt, 420 Main St., St. Joseph, Mich.)

5–7. Electronic Industries Assoc., 3rd conf. on maintainability of electronic equipment, San Antonio, Tex. (E. B. Harwood, Office of the Secretary of Defense, Room 3D1018, Pentagon, Washington 25)

5–8. American Rocket Soc., 15th annual, Washington, D.C. (R. L. Hohl, ARS, 500 Fifth Ave., New York 36)

5–8. American Soc. of Agronomy, annual, Chicago, Ill. (L. G. Monthey, ASA, 2702 Monroe St., Madison 5, Wis.)

7–13. American Acad. of Optometry, San Francisco, Calif. (C. C. Koch, 1506–08 Foshay Tower, Minneapolis 2, Minn.)

9–10. The Myocardium—Its Biochemistry and Biophysics, New York, N.Y. (A. P. Fishman, New York Heart Assoc., 10 Columbus Circle, New York 19)

9–11. American Psychoanalytic Assoc., New York, N.Y. (D. Beres, 151 Central Park West, New York 23)

10–11. Academy of Psychoanalysis, New York, N.Y. (J. H. Merin, 125 E. 65 St., New York 21)

11–14. Hot Laboratory and Equipment Conf., 8th, San Francisco, Calif. (J. R. Lilienthal, Los Alamos Scientific Laboratory, P.O. Box 1663, Los Alamos, N.M.)

12–14. American Nuclear Soc. (Isotopes and Radiation Div.), San Francisco, Calif. (O. J. Du Temple, ANS, 86 E. Randolph St., Chicago 1, Ill.)

12–14. Water Pollution, natl. conf., Washington, D.C. (F. A. Butrico, Office of Engineering Resources, Div. of Engineering Services, U.S. Public Health Service, Washington 25)

12–16. Atomic Industrial Forum, conf., San Francisco, Calif. (D. J. Scherer, 3 E. 54 St., New York 22)

13–15. Eastern Joint Computer Conf., New York, N.Y. (E. C. Kubie, EJCC, Computer Usage Co., Inc., 18 E. 41 St., New York 17)

19–20. Statistical Mechanics, conf., London, England. (Organizing Secretary, Physical Soc., 1, Lowther Gardens, London)

22–2. Panamerican Diabetic Congress, 1st, British Honduras. (B. R. Hearst, Director, Diabetic Inst. of America, 55 E. Washington St., Suite 1646, Chicago 2, Ill.)

26–30. Inter-American Cong. of Psychology, 7th, Havana, Cuba. (G. M. Gilbert, Psychology Dept., Long Island Univ., Brooklyn 1, N.Y.)

26–31. American Assoc. for the Advancement of Science, annual, New York, N.Y. (R. L. Taylor, AAAS, 1515 Massachusetts Ave., NW, Washington 5)

27–14. Bahamas Surgical Conf., Nassau. (B. L. Frank, P.O. Box 4037, Fort Lauderdale, Fla.)

27–29. Conference on Strong Interactions, Berkeley, Calif. (A. C. Helmholz, Dept. of Physics, Univ. of California, Berkeley.)

27–29. Northwest Scientific Assoc. and Idaho Acad. of Science, joint meeting, Moscow. (E. J. Larrison, Dept. of Biological Sciences, Univ. of Idaho, Moscow.)

28. Association for Education in International Business, St. Louis, Mo. (J. N. Behrman, Univ. of Delaware, Newark, Delaware)

28–30. American Economic Assoc., St. Louis, Mo. (J. W. Bell, Northwestern Univ., Evanston, Ill.)

28–30. Econometric Soc., St. Louis, Mo. (R. Ruggles, Dept. of Economics, Yale Univ., New Haven, Conn.)

28–29. Linguistic Soc. of America, annual, Hartford, Conn. (A. A. Hill, Box 7790, University Station, Austin 12, Tex.)

28–30. National Council of Teachers of Mathematics, Tempe, Arizona. (M. H. Ahrendt, 1201 16 St., NW, Washington 6, D.C.)

29–31. American Physical Soc., Berkeley, Calif. (K. Darrow, APS, Columbia Univ., 116 St. and Broadway, New York, N.Y.)

January

3–9. Indian Science Cong., 48th session, Roorkee (Uttar Pradesh), India. (General Secretary, ISC Assoc., 64 Dilkhusa St., Calcutta 17, India)

8–12. Thermoelectric Energy Conversion, symp., Dallas, Tex. (P. H. Klein, General Electric Co., Electronics Lab., Bldg. 3, Room 221, Electronics Park, Syracuse, N.Y.)

8–13. American Acad. of Orthopedic Surgeons, Miami Beach, Fla. (J. K. Hart, 116 S. Michigan Ave., Chicago 3, Ill.)

8–14. Bahamas Conf. on Hypertension, Nassau. (I. M. Wechsler, P.O. Box 1454, Nassau)

8–14. International Conf. of Social Work, 10th, Rome. (Miss R. M. William, ICSW, 345 E. 46 St., Room 1012, New York 17)

9–11. Reliability and Quality Control, 7th natl. symp., Philadelphia, Pa. (R. L. Schwerin, ACF Electronics Div., ACF Industries, Inc., 11 Park Place, Paramus, N.J.)

9–12. White House Conf. on Aging, Washington, D.C. (Special Staff on Aging, Office of the Undersecretary, Dept. of Health, Education and Welfare, Washington 25)

9–13. Society of Automotive Engineers, annual, Detroit, Mich. (SAE, 485 Lexington Ave., New York 17)

10–11. Conference on Physics of Polymers, Bristol, England. (Organizing Secretary, Physical Soc., 1 Lowther Gardens, London, S.W.7)

16–18. American Astronautical Soc., annual, Dallas, Tex. (F. F. Martin, AAS, 304 S. Woodstock Dr., Haddonfield, N.J.)

16–19. Instrument Soc. of America, winter instrument-automation conf., St. Louis, Mo. (W. H. Kushnick, 313 Sixth Ave., Pittsburgh 22, Pa.)

22–28. Bahamas Serendipity Conf., 3rd, Nassau. (I. M. Wechsler, P.O. Box 1454, Nassau)

23–25. Institute of the Aeronautical Sciences, 29th annual, New York, N.Y. (Meetings Dept., IAS, 2 E. 64 St., New York 21)

24–27. American Mathematical Soc., 67th annual, Washington, D.C. (J. W. Green, Univ. of California, Los Angeles 24)

24–27. Society for Industrial and Applied Mathematics, Washington, D.C. (G. Kaskey, Remington Rand Univac, 1900 W. Allegheny Ave., Philadelphia, Pa.)

24–27. Society of Plastics Engineers, 17th annual conf., Washington, D.C. (T. A. Bissell, SPE, 65 Prospect St., Stamford, Conn.)

25–27. Mathematical Assoc. of America, annual, Washington, D.C. (H. L. Alder, Dept. of Mathematics, Univ. of California, Davis)

26–27. Western Spectroscopy Conf., 8th annual, Pacific Grove, Calif. (R. C. Hawes, Applied Physics Corp., 2724 S. Peck Rd., Monrovia, Calif.)

27–28. Royal College of Physicians and Surgeons, annual, Ottawa, Ontario, Canada. (T. J. Giles, 150 Metcalfe St., Ottawa)

28–30. Control of the Mind, symp., San Francisco, Calif. (Dept. of Continuing Education in Medicine, Univ. of California Medical Center, San Francisco 22)

29–3. American Inst. of Electrical Engineers, winter meeting, New York, N.Y. (E. C. Day, AIEE, Technical Operations Dept., 33 W. 39 St., New York 18)

30–3. Clinical Cong. of Abdominal Surgeons, Miami Beach, Fla. (B. F. Alfano, 663 Main St., Melrose 76, Mass.)

30–4. American Library Assoc., midwinter meeting. (Mrs. F. L. Spain, New York Public Library, 20 W. 53 St., New York, N.Y.)

31–4. American Assoc. of Physic Teachers, New York, N.Y. (F. Verbrugge, 135 Main Engineering, Univ. of Minnesota, Minneapolis)

31–4. American Physical Soc., annual, New York, N.Y. (K. Darrow, APS, Columbia Univ., 116th St. and Broadway, New York)