Meetings and Societies

Nuclear Sex

The introduction of a relatively simple method of chromosomal sex detection by Moore, Graham, and Barr in 1953 focused attention on the sex chromosomes of somatic cells and served as a starting point for much new work on human sex anomalies. In view of the rapid and unexpected developments and the diversity of disciplines involved, an exchange of information within a small but representative group of workers in this field seemed advisable. Accordingly, a group of scientists in Great Britain arranged a Symposium on Nuclear Sex, which took place in King's College Hospital Medical School on 6–7 September. In addition to aid from that medical school, aid to help defray the costs of the symposium was provided by the Wellcome Foundation and the Ciba Foundation. About 70 persons participated by invitation, coming from Austria, Canada, Denmark, France, Germany, Great Britain, Israel, Italy, Portugal, Switzerland, and the United States. Emphasis was on informal discussion, which cannot be accurately reported here, but the following notations concerning individual papers will give some idea of current trends in this field.

The first session, under the chairmanship of L. S. Penrose, was devoted to cytologic and genetic aspects of nuclear sex. B. Slizynski sought to explain the recorded incidence of 60 to 80 percent for sex chromatin in the nuclei of sections of various tissues from females on the basis of somatic inconstancy of chromosome number. It was pointed out by other participants that published figures for the incidence of sex chromatin are too low, since corrections have seldom been made for the mean diameter of nuclei being greater than the thickness of the section. C. E. Ford presented evidence in favor of a chromosome number of 46 rather than 48 in man and discussed the nature of the pairing between X and Y chromosomes (end to end and inconstant). He stressed the need for more detailed information on the morphology of individual chromosomes in man and struck an optimistic note with respect to techniques now being developed.

J. L. Hamerton described the structure and behavior of the sex chromosomes in *Rattus natalensis* and showed that normal pairing and chiasma formation between the homologous segments of the X and Y chromosomes occur regularly in this species. C. Leuchtenberger drew attention to refined techniques that may be brought to bear on the problem of nuclear composition. As examples, she presented microspectrophotometric and interferometric determinations of desoxyribonucleic acid, arginine, and dry mass in sperm nuclei of fertile men and fertile bulls. The amount of arginine was about 80 percent less in human than in bull sperm, but the desoxyribonucleic acid content and dry mass were similar in the two species.

H. P. Klinger described the detailed morphology of the sex chromatin of female cells, stressing its bipartite structure, which supports the contention that the sex chromatin represents heterochromatic regions of the two X chromosomes. Division of the sex chromatin prior to amitotic division in fetal membranes was also described. Klinger's introduction of mild acid hydrolysis followed by staining with thionin has brought a valuable improvement to the staining of sections and smears. P. Riis showed that the sex chromatin of lymphocytes from females becomes unmasked as pyknotic nuclei change to vesicular nuclei *in vitro*.

L. Sachs and M. Danon favored the genetic origin of human sex anomalies in general. They pointed out that genetic factors operate at the following levels: (i) on the development of the gonads (agenesis in Turner's syndrome and extreme dysgenesis in Klinefelter's syndrome); (ii) on the synthesis of steroid hormones (adrenogenital syndrome); or (iii) on tissue response to hormones (syndrome of testicular feminization). They also presented preliminary evidence for a nuclear mosaicism (XX and XO) in some cases of gonadal agenesis and for an unusual sex chromosome complex (XXY) in the syndrome of testicular feminization. The meticulous study of chromocenters (of which the sex chromatin is one) in resting nuclei, by Sachs and Danon, opens the way to refinements in the tests of chromosomal sex.

The second session, for which P. M. F. Bishop was chairman, dealt with the application of the sex chromatin principle to anomalies of sex development in man. Danon and Sachs indicated that the primary role of the sex chromosomes is to direct normal gonadal differentiation. When they fail in this, there is a sequence of events that may lead to the phenotypical sex being contrary to the chromosomal sex, as occurs in the syndromes of Turner and Klinefelter. C. Overzier suggested a classification of sex anomalies and developed the hypothesis that Wolffian and Mullerian ducts are exposed to an "initial induction" by the anlage of the gonads and to a "permanent induction" by gonads in a later stage of maturation. Interference with initial or permanent induction could explain some variants of Turner's syndrome.

A. Prader described a new congenital syndrome, with lipoid adrenal hyperplasia and adrenal insufficiency, which causes feminization in boys. He suggested that the syndrome stems from a hereditary enzymatic failure of steroid synthesis in the fetal adrenal cortex and in the Leydig cells of the fetal testis. D. J. B. Ashley presented the first reported instance of a patient with ovarian tissue only (insofar as this could be established by laparotomy and gonadal biopsy), with male nuclei in oral smear and skin biopsy. However, the issue was confused by the finding of female-type neutrophils in the blood film.

E. Slater reported uniform agreement between chromosomal and somatic sex in homosexuality and transvestitism. Family studies of sex deviates showed that they were likely to occupy a late position in the sibship. C. N. Armstrong described a male transvestite in detail and suggested that there may be a specific constitutional factor on a genetic basis, even though psychological factors contribute to causation. H.-R. Wiedemann submitted data derived from use of the neutrophil test of sex in a large series of sex anomalies. The test proved reliable except in some instances of Klinefelter's syndrome.

The remainder of this session was given over to a discussion of Klinefelter's syndrome, which has recently (and quite unexpectedly) been shown to include patients with an apparent female-to-male sex reversal. B. Lennox, M. A. Ferguson Smith, W. S. Mack, and J. S. S. Stewart found that, of all men with any degree of oligospermia who attended an infertility clinic, about 3 percent were chromosomal females. Patients classified as Klinefelter's syndrome could be identified as chromosomal females or chromosomal males on the basis of qualitative and quantitative differences in testicular histopathology. R. E. Siebenmann also stressed the constancy of severe testicular abnormality in Klinefelter's syndrome

with female nuclei, in contrast to the variable and less severe testicular pathology in Klinefelter's syndrome with male nuclei. W. M. Davidson and D. Robertson Smith confirmed sporadic reports that the incidence of female-type neutrophils may be unexpectedly low in patients with Klinefelter's syndrome and female nuclei elsewhere. The cause of this discrepancy is obscure, but it cannot be attributed to a leftward shift in the Arneth index of nuclear lobulation.

P. M. F. Bishop, M. A. Ferguson Smith, B. Lennox, P. Polani, and J. S. S. Stewart found that the incidence of defective color vision in Klinefelter's syndrome was consistent with the sex chromosome constitution (XX in one group, XY in the other) as inferred from cytological tests of chromosomal sex. J. S. S. Stewart, M. Izatt, M. A. Ferguson Smith, B. Lennox, and W. S. Mack found a high incidence of sterility among the uncles of patients with Klinefelter's syndrome. Paternal uncles were affected in cases where the patients had female nuclei, and maternal uncles were affected in cases where the patients had male nuclei. A hereditary mechanism was postulated, based on an autosomal translocation involving the masculinizing (M) genes (female nuclei = MMMXX, male nuclei = MXY).

The application of the sex chromatin principle to the study of tumors was the subject for the third and final session of the symposium, with M. L. Barr acting as chairman. L. Myers presented data on the nuclei of teratomas. The nuclei were female in tumors from female hosts, except that the sex chromatin could not be identified accurately in a few tissues of malignant teratomas. Tumors from male hosts had, for the most part, typical male or female nuclei, as has previously been reported. However, some testicular tumors were encountered with a mosaicism of the nuclei, since they were female in some tissues and male in others. Discussants of the paper felt that the latter observation did not necessarily invalidate the etiological hypotheses of Hunter and Lennox and of Tavares (both hypotheses having haploid cells as their starting point), when chromosomal anomalies in malignant cells and technical difficulties are taken into consideration.

A. S. Tavares reported on the sex characteristics of differentiated-cell carcinomas compared with undifferentiated-cell carcinomas, using malignant tissues from female hosts. The sex chromatin of differentiated-cell carcinomas was similar to that of nonmalignant tissues. In undifferentiated-cell carcinomas, on the other hand, the incidence of sex chromatin in a population of nuclei was exceedingly variable, the figures for some tumors falling within the male, or an intermediate, range. N. B. Atkin described the chromosomes and sex chromatin of human cancer cells from female hosts, as seen in squash preparations. One mass of sex chromatin per nucleus was the rule for most of the tumors. However, there was no typical sex chromatin in the nuclei of a few tumors (they may have lost the XX complex), and two masses of sex chromatin were present in most nuclei of other tumors (they were probably tetraploid, as indicated by nuclear size, chromosome counts, and desoxyribonucleic acid content).

The symposium concluded with a summary by Barr. A committee was appointed to consider a revision of the classification of sex anomalies and their terminology in the light of current developments. Robert Platt, president of the Royal College of Physicians, was the principal speaker at a dinner given by the dean and council of King's College Hospital Medical School.

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Ethology and Comparative Psychology

Between 9 July and 3 August a conference on ethology and comparative psychology was held at the Center for Advanced Study in the Behavioral Sciences, Stanford, Calif. The purpose of the conference was to facilitate the exchange of ideas between representatives of ethology and comparative psychology. No formal program or agenda was drawn up in advance of the meeting, and no "papers" in the usual sense were presented. Each participant reported results of his more recent investigations. This took approxi-

mately 2 weeks in all. The second half of the conference was given over to the discussion of general theoretical issues, such as the use of formal and physiological genetics in the interpretation of behavior, the ontogeny of behavior, the role of physiology in behavioral theory, phylogenetic differences in motivational systems, and "drive" as a hypothetical concept and as an intervening variable, and of a number of specialized ethological concepts, including those of displacement activities, innate releasing mechanisms, and imprinting.

Because the conference was planned as an informal, relatively unstructured series of meetings, and because each participant was promised that he would not be required to produce any publishable paper, the results of the conference will not appear in any journal or book. However, intangible results were numerous and important, and each contributor felt that his own thinking and research would benefit greatly as a consequence of the discussions.

The expenses of the conference were defrayed by the Center. The participants were Gerard Baerends (University of Groningen), Frank Beach (Yale University), Harry Harlow (University of Wisconsin), Donald Hebb (McGill University), Eckard Hess (University of Chicago), Robert Hinde (Cambridge University), Jan van Iersel (Leiden University), Daniel Lehrman (Rutgers University), Jay Rosenblatt (American Museum of Natural History), Niko Tinbergen (Oxford University), and David Vowles (University of Reading).

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International Biochemistry Congress

The National Science Foundation, the American Society of Biological Chemists, and the Division of Biological Chemistry of the American Chemical Society are cooperating to support the travel of a limited number of American scientists to the fourth International Congress of Biochemistry, to be held in Vienna, Austria, 1–7 September 1958. The closing date for the receipt of applications is *1 February 1958*. Application blanks are available from the National Science Foundation, Washington 25, D.C.

The size of each grant will be sufficient to defray only a part of the travel costs incurred in attending the congress. An attempt will be made to have the awards approximate air-coach fare from the scientists' home institutions to Vienna and return. As in the past, a portion of the funds will be used to support the travel of qualified younger investigators who have not had the opportunity to attend an international congress.

Conference on Salt Marshes

The Marine Institute of the University of Georgia has announced that a Conference on Salt Marshes is to be held at Sapelo Island 25–28 March 1958. The conference, which is being sponsored jointly by the institute and the National Science Foundation, will be international in character. A group of about 25 people has participated in the conference; however, invitations will be extended on request to a limited number of additional persons who wish to attend at their own expense. The conference is under the direction of Alfred C. Redfield of Woods Hole, Mass. Inquiries should be directed to Dr. Robert A. Ragotzkie, University of Georgia Marine Institute, Sapelo Island, Ga.

Forthcoming Events

December

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

The following 44 meetings are being held in conjunction with the AAAS annual meeting.

AAAS Acad. Conference, annual (Father P. H. Yancey, Spring Hill College, Mobile, Ala.). 28 Dec.

AAAS Cooperative Committee on the Teaching of Science and Mathematics (F. B. Dutton, Dept. of Chemistry, Michigan State Univ., East Lansing). 27 Dec.

Alpha Epsilon Delta (M. L. Moore, 7 Brookside Circle, Bronxville, N.Y.). 28 Dec.

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

American Geophysical Union (E. M. Brooks, Dept. of Geophysics, St. Louis Univ., St. Louis 8, Mo.).

American Medical Assoc. Committee on Cosmetics (Mrs. V. L. Conley, AMA, 535 N. Dearborn St., Chicago, Ill.). 28–29 Dec.

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

American Nature Study Soc., annual (R. L. Weaver, School of Natural Resources, Univ. of Michigan, Ann Arbor). 26–30 Dec.

American Physiological Soc. (F. A. Hitchcock, Dept. of Physiology, Ohio State Univ., Columbus 10.)

American Political Science Assoc. (C. S. Hyneman, Dept. of Government, Indiana Univ., Bloomington). 29 Dec.

American Psychiatric Assoc. (M. Greenblatt, Massachusetts Mental Health Center, 74 Fenwood Rd., Boston 15). 29–30 Dec.

American Soc. of Hospital Pharmacists (G. E. Archambault, Pharmacy Branch, U.S. Public Health Service, Washington 25).

American Soc. of Naturalists (B. Wallace, Biological Lab., Cold Spring Harbor, Long Island, N.Y.).

American Sociological Soc. (V. H. Whitney, Brown Univ., Providence, R.I.). 28 Dec.

American Statistical Assoc. (V. L. Anderson, Statistical Lab., Purdue Univ., Lafayette, Ind.).

Association of American Geographers (L. L. Ray, U.S. Geological Survey, Washington 25).

Association for Computing Machinery (J. E. Robertson, Digital Computer Lab., Univ. of Illinois, Urbana).

Astronomical League (W. Garnatz 2506 South East St., Indianapolis).

Beta Beta Beta (Mrs. F. G. Brooks, P.O. Box 336, Madison Sq. Station, New York 10). 27 Dec.

Biometric Soc., ENAR (T. A. Bancroft, Dept. of Statistics, Iowa State College, Ames).

Conference on Scientific Editorial Problems, annual (G. L. Seielstad, Applied Physics Lab., Johns Hopkins Univ., Silver Spring, Md.). 26–30 Dec.

Conference on Scientific Manpower, annual (T. J. Mills, National Science Foundation, Washington 25). 30 Dec.

Ecological Soc. of America (A. A. Lindsey, Dept. of Biological Sciences, Purdue Univ., Lafayette, Ind.). 27–29 Dec.

Metric Assoc. (J. T. Johnson, 694 West 11 St., Claremont, Calif.).

National Acad. of Economics and Political Science (D. P. Ray, Hall of Government, George Washington Univ., Washington, D.C.).

National Assoc. of Biology Teachers, annual (Miss I. Hollenbeck, Southern Oregon College of Education, Ashland). 26–31 Dec.

National Assoc. for Research in Science Teaching (G. G. Mallinson, Western Michigan College, Kalamazoo). 26–30 Dec.

National Assoc. of Science Writers (J. Troan, *Pittsburgh Press,* Pittsburgh, Pa.).

National Council of Teachers of Mathematics (P. Peak, College of Education, Indiana Univ., Bloomington). 27 Dec.

National Foundation for Junior Museums (J. R. Forbes, NFJM, 114 E. 30 St., New York 16). 26, 28 Dec.

National Geographic Soc. (W. R. Gray, NCS, 16th and M Sts., NW, Washington 6). 29 Dec.

National Science Teachers Assoc. (R. W. Schulz, Emmerich Manual Training High School, 2405 Madison Ave., Indianapolis 25). 26–30 Dec.

National Speleological Soc. (Brother G. Nicholas, LaSalle College, 20th and Olney Aves., Philadelphia 41, Pa.) 28 Dec.

Philosophy of Science Assoc. (C. W. Churchman, Case Inst. of Technology, Cleveland, Ohio).

Scientific Research Soc. of America, annual (D. B. Prentice, 56 Hillhouse Ave., New Haven 11, Conn.). 27 Dec.

Sigma Delta Epsilon, annual (Miss M. Chalmers, Dept. of Chemistry, Purdue Univ., Lafayette, Ind.). 26–30 Dec.

Sigma Pi Sigma (M. W. White, Pennsylvania State Univ., University Park). 27 Dec.

Society for the Advancement of Criminology (D. E. J. MacNamara, New York Inst. of Criminology, 40 E. 40 St., New York 16). 27–28 Dec.

Society for General Systems Research,

annual (R. L. Meier, Mental Health Research Inst., Ann Arbor, Mich.).

Society for Industrial Microbiology, Washington Section (W. N. Ezekiel, Bureau of Mines, Washington 25).

Society for Investigative Dermatology (H. Beerman, Univ. of Pennsylvania School of Medicine, Philadelphia 3), 28–29 Dec.

Society of the Sigma Xi, annual (T. T. Holme, 56 Hillhouse Ave., New Haven 11, Conn.). 27 Dec.

Society of Systematic Zoology, annual (R. E. Blackwelder, Box 500, Victor, N.Y.). 26–31 Dec.

United Chapters of Phi Beta Kappa, annual address (C. Billman, 1811 Q St., NW, Washington, D.C.). 27 Dec.

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27. **Association for Symbolic Logic., Cambridge, Mass. (J. Barlaz, Rutgers Univ., New Brunswick, N.J.)**

27–28. **Linguistic Soc. of America, Chicago, Ill. (A. A. Hill, Box 7790, University Station, Austin 12, Tex.)**

27–30. **American Finance Assoc., annual, Philadelphia, Pa. (G. E. Hassett, Jr., New York Univ., 90 Trinity Pl., New York 6.)**

28–29. **American Folklore Soc., annual, Chicago, Ill. (M. Leach, Box 5, Bennett Hall, Univ. of Pennsylvania, Philadelphia 4, Pa.)**

28–30. **American Anthropological Assoc., annual, Chicago, Ill. (W. S. Godfrey, Jr., Logan Museum, Beloit College, Beloit, Wis.)**

28–30. American Economic Assoc., annual, Philadelphia, Pa. (J. W. Bell, Northwestern Univ., Evanston, Ill.)

28–30. Archaeological Inst. of America, annual, Washington, D.C. (C. Boulter, 608, Univ. of Cincinnati Library, Cincinnati 21, Ohio.)

28–30. Econometric Soc., Philadelphia, Pa. (R. Ruggles, Dept. of Economics, Yale Univ., New Haven, Conn.)

28–30. History of Science Soc., annual, New York, N.Y. (Miss M. Boas, Brandeis Univ., Waltham 54, Mass.)

January

6–8. Reliability and Quality Control, 4th natl. symp., Washington, D.C. (C. M. Ryerson, RCA Bldg. 10–6, Camden 2, N.J.)

7–10. Radioactive Isotopes in Clinical Application and Research) 3rd internatl. symp., Bad Gastein, Austria. (Second Medical Clinic, Vienna Univ., Vienna Austria.)

8–10. Northeastern Weed Control Conf., 12th annual, New York. (R. J. Aldrich, Farm Crops Dept., Rutgers Univ., New Brunswick, N.J.)

13–17. Society of Automotive Engineers, annual, Detroit, Mich. (Meetings Div., SAE, 29 W. 39 St., New York 18.)

17–18. Blood Symposium, 7th annual, Detroit, Mich. (W. H. Seegers, Dept. of Physiology and Pharmacology, Wayne State Univ. College of Medicine, 1401 Rivard, Detroit 7.)

22–24. American Council of Learned Societies, 39th annual, Bloomington, Ind. (ACLS, 2101 R St., NW, Washington 8.)

22–25. American Group Psychotherapy Assoc., 15th annual, New York. (M. Berger, 50 E. 72 St., New York 21.)

27–28. Scintillation Counter Symp., Washington, D.C. (G. A. Morton, Radio Corporation of America, Princeton, N.J.)

27–29. American Soc. of Heating and Air-Conditioning Engineers, Pittsburgh, Pa. (A. V. Hutchinson, ASHAE, 62 Worth St., New York 13.)

27–30. American Meteorological Soc., 163rd natl., New York. (K. C. Spengler, AMS, 3 Joy St., Boston 8, Mass.)

27–31. Institute of Aeronautical Sciences, 26th annual, New York, N.Y. (S. P. Johnston, IAS, 2 E. 64 St., New York 21.)

28–30. Aging, 4th Ciba Foundation Colloquium (by invitation), London, England. (G. E. W. Wolstenholme, 41 Portland Pl., London, W.1.)

28–30. American Mathematical Soc., 64th annual, Cincinnati, Ohio. (J. H. Curtiss, AMS, 190 Hope St., Providence 6, R.I.)

29–1. American Physical Soc., annual, New York, N.Y. (K. K. Darrow, Columbia Univ., New York 27.)

30–31. College–Industry Conf., American Soc. for Engineering Education, 10th annual, Ann Arbor, Mich. (W. D. McIlvaine, College of Engineering, Ann Arbor.)

30–31. Mathematical Assoc. of America, annual, Cincinnati, Ohio. (H. M. Gehman, Univ. of Buffalo, Buffalo 14, N.Y.)

30–1. American Assoc. of Physics Teachers, New York. (F. Verbrugge, Univ. of Minnesota, Minneapolis.)

30–1. Western Soc. for Clinical Research, 11th annual, Carmel-by-the-Sea, Calif. (A. J. Seaman, Univ. of Oregon Medical School, Portland 1.)

31–1. Problems of Geriatrics, symp. (by invitation only), New York. (B. F. Chow, Johns Hopkins Univ., School of Hygiene and Public Health, 615 N. Wolfe St., Baltimore 5, Md.)

February

1–14. Pan American Assoc. of Ophthalmology, Caribbean cruise cong., sailing from New York, N.Y. (L. V. Arnold, 33 Washington Sq. W., New York 11.)

3–4. Progress and Trends in Chemical and Petroleum Instrumentation, Wilmington, Del. (H. S. Kindler, Instrument Soc. of America, 313 Sixth Ave., Pittsburgh 22, Pa.)

3–7. American Inst. of Electrical Engineers, winter genl., New York, N.Y. (N. S. Hibshman, AIEE, 33 W. 39 St., New York 18.)

10–14. American Soc. for Testing Materials, St. Louis, Mo. (F. F. Van Atta, ASTM, 1916 Race St., Philadelphia 3, Pa.)

13–15. National Soc. of Professional Engineers, spring, East Lansing, Mich. (NSPE, 2029 K St., NW, Washington 6.)

16–20. American Inst. of Mining, Metallurgical and Petroleum Engineers, annual, New York. (E. O. Kirkendall, AIME, 29 W. 39 St., New York 18.)

20–21. Transistor and Solid State Circuits Conf., Philadelphia, Pa. (J. H. Milligan, Jr., Dept. of Electrical Engr., New York Univ., New York 53.)

24–28. American Soc. of Civil Engineers, Chicago, Ill. (W. W. Wisely, ASCE, 33 W. 39 St., New York 18.)

March

1. Junior Solar Symposium, Tempe, Ariz. (Association for Applied Solar Energy, 3424 N. Central Ave., Phoenix, Ariz.)

5–6. Gas Conditioning Conf., 7th annual, Norman, Okla. (M. L. Powers, Extension Div., Univ. of Oklahoma, Norman.)

6–8. Fundamental Cancer Research, 12th annual, Houston, Tex. (W. K. Sinclair, M. D. Anderson Hospital and Tumor Inst., Univ. of Texas, Houston 25.)

6–8. Optical Soc. of America, annual, New York. (A. C. Hardy, Massachusetts Inst. of Technology, Cambridge 39.)

10–13. American Assoc. of Petroleum Geologists, annual, Los Angeles, Calif. (R. H. Dott, AAPG, Box 979, Tulsa 1, Okla.)

16–21. Nuclear Engineering and Science Cong., Chicago, Ill. (D. I. Cooper, *Nucleonics,* 330 W. 42 St., New York.)

17–21. National Assoc. of Corrosion Engineers, 14th annual, San Francisco, Calif. (NACE, Southern Standard Bldg., Houston 2, Tex.)

18–20. Amino Acids and Peptides, Ciba Foundation symp. (by invitation), London, England. (G. E. W. Wolstenholme, 41 Portland Pl., London, W.1.)

20–22. Pulmonary Circulation Conf., Chicago, Ill. (Wright Adams, Chicago Heart Assoc., 69 W. Washington St., Chicago 2.)

20–23. International Assoc. for Dental Research, annual, Detroit, Mich. (D. Y. Burrill, Univ. of Louisville, School of Dentistry, 129 E. Broadway, Louisville 2, Ky.)

23–26. American Assoc. of Dental Schools, annual, Detroit, Mich. (M. W. McCrea, 42 S. Greene St., Baltimore 1, Md.)

23–29. American Soc. of Photogrammetry, 24th annual, jointly with American Cong. on Surveying and Mapping, 18th annual, Washington, D.C. (C. E. Palmer, ASP, 1515 Massachusetts Ave., NW, Washington 5.)

24–27. Institute of Radio Engineers, natl. conv., New York. (G. W. Bailey, IRE, 1 E. 79 St., New York 21.)

27–29. National Science Teachers Assoc., 6th natl., Denver, Colo. (R. H. Carleton, NSTA, 1201 16 St., NW, Washington 6.)

29. South Carolina Acad. of Science, annual, Charleston. (Miss M. Hess, Dept. of Biology, Winthrop College, Clemson, S.C.)

29–30. American Psychosomatic Soc., 15th annual, Cincinnati, Ohio. (T. Lidz, 551 Madison Ave., New York 22.)

30–3. American College Personnel Assoc., annual, St. Louis, Mo. (L. Riggs, DePauw Univ., Greencastle, Ind.)

31-2. Instruments and Regulators Conf., Newark, Del. (W. E. Vannah, *Control Engineering,* 330 W. 42 St., New York 36.)

(See issue of 15 November for comprehensive list)