Improvements along these lines can be achieved if sufficient funds are made available by all levels of government and industry to train better teachers and to keep these teachers in the high schools and the colleges, to re-examine scientific and engineering curriculums, to educate the American public on the value of science and engineering, to provide financial support for *all* young people who desire to embark on scientific and engineering careers, and in many other ways. It is also essential for American government and industry to provide the increasingly large sums of money which are required to carry on basic research in the sciences in this, the middle of the 20th century. Finally, it seems to me too that American industry must re-examine the use to which it is putting its scientific manpower: Are engineers being utilized to the full extent of their intellectual resources, or are they being placed in inferior and less productive positions? Can basic research programs that are now being started up in industrial laboratories be undertaken more profitably by throwing the equivalent financial support to high-quality university laboratories where at the same time the scientists are reproducing their own kind—that is, developing new scientific manpower?

I am convinced that all these and many other things can be done without losing the essential ingredients of the scientific freedom which now obtain in the United States and without impairing the research that must be carried on in our government and industrial laboratories. I should like to conclude by stating my firm belief that American scientific research still holds a substantial lead and will continue to do so if the American government, industry, and the universities work harmoniously together in strengthening those areas in which we have developed weaknesses, in throwing our full resources into the support of basic research, and in treating the American scientist as a responsible and dedicated person. The minimum that I foresee is that American science will help to preserve the peace and that Soviet scientific achievements, impressive as they may ultimately become, will simply make their just contribution to the welfare of the human race.

AAAS Meeting, New York

Raymond L. Taylor

In the months following the preliminary announcement of the New York meeting, which will be held 26–30 Dec. inclusive [*Science* **123**, 947 (25 May 1956)], the symposia listed there have been implemented and augmented and the sections and participating societies, in a number of instances, have had to open additional sessions for contributed papers. From such program details as the names and addresses of authors, and from the volume of advance registrations and applications for housing accommodations, it is quite apparent that this year's 123rd AAAS meeting will have an excellent attendance representing all sections of the continent and abroad.

Apparently because Wednesday, 26 December, is not a holiday but Monday, 31 December, is, most sections and participating societies have started their programs on the first day, 26 December.

As the outline of symposia shows, virtually no principal field of science will be neglected. The special Moving Frontiers of Science program, "Fundamental concepts and units of science," has already been announced [*Science* **124**, 945 (9 Nov. 1956)]. Other programs that have appeared in *Science* in recent weeks are AAAS special sessions and conferences, 16 Nov.; mathematics, physical sciences, and earth sciences, 23 Nov.; biological sciences, engineering, social sciences, and philosophy, 30 Nov. The programs in psychology, agriculture, industrial science, and science in general will appear in the issue of 14 Dec.

A conspectus of symposia, panels, groups of invited papers on a particular subject, and the like, follows. (Single sessions unless otherwise noted.)

Symposia

AAAS general symposium: Fundamental concepts and units of science (two sessions).

Mathematics: The application of digital computers.

Physics: Optical absorption in solids; Optics and oriented nuclei; Diffusion in solids (two sessions); Crystal growth (two sessions).

Chemistry: Chemical and biological aspects of cellular competition; Biosynthesis of isoprenoid compounds; Organic reaction mechanisms.

Astronomy: The recent close approach of Mars; The benefits of astronomy to young people.

Geology and Geography: Recent advances in geochronometry (three sessions); Carbonate sedimentation; Ground water (two sessions); Appalachian stratigraphy and structure (two sessions); Geographical research in progress (two sessions).

Biological sciences: Modern ideas on spontaneous generation (two sessions); Museum techniques (two sessions); Biochemistry of the cell nucleus; Some unsolved problems in biology; Problems of aging (two sessions); Recruitment and training of biological scientists; Values in human ecology; The social significance of ecological research (two sessions); Biotic communities in the past and today.

Entomological sciences: Communication in insects (two sessions); Teaching entomology; The nematode situation; Responsibilities of the extension entomologist; Insect attractants; Museums and their problems; The role of insects in nature; The fate of insecticides in plants and animals.

Botanical sciences: Genetics of the fungi.

Anthropology: American archeology; Commemorating the 100th anniversary of the discovery of Neanderthal man; Man in the tropics: the Caribbean (two sessions); Anthropological theory; Transitional communities in India, Pakistan, and Burma; Current studies in cultural evolution: Oceania.

Psychology: Experimental approaches to research with children; Avoidance conditioning and anxiety; Motivational and rewarding effects of direct stimulation of the brain; Sensory processes; Advances in experimental psychopathology.

Social and economic sciences: The impact of natural science on social science; Labor mobility and earnings; Statistics in public health; Resource devel-

opment and population growth; Science versus crime (two sessions); Community planning.

History and philosophy of science: Science and ethics (two sessions); The general significance of the work of Freud; The interaction of science and technology; Measurement (five sessions); Studies in modern science; Studies in medieval science; History of medicine; Systems under stress.

Engineering: Aids for environmental control (three sessions).

Medical sciences: Epidemiology of mental disorder (four sessions); Evolution of nervous control from primitive organisms to man (four sessions); Significant trends in clinical enzymology; Antienzymes; The hospital and the sequence of care; Problems in premedical education.

Dentistry: Contributions of science to everyday practice; The human dentition in forensic medicine (two sessions).

Pharmacy: Cosmetics; Compressed tablet coatings.

Agriculture: Grassland reports—research and practice (six sessions); Ecology of grasslands; Grassland climatology; Range management; Grasslands in our national life (four sessions).

Education: Current approaches to the education of the gifted; Problems and issues in future education planning for the gifted; Cultivating the gifted underachiever; Testing for the professions; Scientists and education; Proposals for meeting the science teaching manpower crisis; Recent research in science education; Methods and techniques in high-school biological science; Methods and techniques in elementary science; How industry helps teachers bring recent advances in the physical sciences into the classroom; Making nature study and science fun; Nature in camping; New approaches to conservation; Urban conservation.

Science in general: Academy conference (three sessions); Conference on scientific editorial problems (six sessions); Conference on scientific manpower; Changing patterns of information organization; Natural history of the New York region.

AAAS Business Sessions

The board of directors of the association will meet after breakfast in a private suite in the Hotel Statler, at 9:30 A.M., Thursday, 27 Dec. Dates and hours of subsequent sessions of the board of directors during the meeting will be decided at this first session.

The council of the association will meet Thursday afternoon, 27 Dec. at 4 P.M. in the Keystone Room, Hotel Statler. A second session of the council is scheduled for Sunday morning, 30 Dec., at 9 A.M. in the same room. All members of the council have been notified individually, and it is hoped that all can attend. Subjects to be considered by the council (in addition to the agenda prepared) usually are first brought before the board of directors through the executive officer. During the meeting, communications for the board of directors should be submitted in writing and left at the Hotel Statler mail desk, addressed Dael Wolfle.

All section chairmen and section secretaries will meet Saturday, 29 Dec., for luncheon and a business session in the Gramercy Room of the Hotel Governor Clinton. Dael Wolfle and Raymond L. Taylor will be cochairmen.

AAAS Science Theatre Programs

The AAAS Science Theatre, a permanent feature of the association's annual meeting, presents showing of the latest domestic and foreign scientific films—all with sound—throughout the meeting period. In the following schedule, programs are both repeated and transposed to increase the opportunities for those attending the sessions of the 123rd meeting to see particular films. All titles will be shown twice and some a third time. The association is greatly indebted to all those who made these pictures and lent them for showing.

The AAAS Science Theatre will be in a room on the mezzanine of the Hotel Statler, near the Annual Exposition of Science and Industry.

Admission to the Science Theatre. The Science Theatre is a feature for the pleasure and information of all registrants at the annual meeting and it is deemed well worth the considerable cost of projection. Because of limitations of space, it cannot be for the casual passerby, and thus admission is restricted to those who wear the AAAS convention badge.

Hours of the Science Theatre are 9 A.M. to 1 P.M. and 2 P.M. to 6 P.M. on the 4 days 26–29 Dec., inclusive, and 9 A.M. to 1 P.M. 30 Dec.

26 Dec., Morning

The Waiting Harvest. U.S. Steel Corporation. Color, 23 min.

The Secrets of the Heart. Produced by MPO Productions for the American Heart Association, and local Heart Chapters, with Irvine H. Page as guide. Black and white, 29 min.

Station 307. Produced by Jean Cousteau for the British Petroleum Co. Ltd.; distributed by J. E. Anderson, New York, purchasing agent for British Petroleum Trading, Ltd. Black and white, 20 min.

American Engineer. Presented by the Chevrolet Motor Division, General Motors Corporation; distributed by Jam Handy Organization. Color, 29 min.

Handling of Laboratory Animals. Produced by MacQueen Film Organization, Great Britain; distributed by the National Society for Medical Research. Black and white, 18 min.

A Report on Smog. Produced by Stanford Research Institute; distributed by Modern Talking Picture Service, Inc. Color, 28 min.

This Is Color. Produced by the Interchemical Corporation; distributed by Modern Talking Picture Service, Inc. Color, 27 min.

To Serve the Mind. Produced by the National Film Board of Canada; distributed by Text-Film Department, McGraw-Hill Book Company. Black and white, 25 min.

Continental Glaciers. Produced by the department of photography for the department of geology, Ohio State University, with the assistance of Richard Goldthwait; distributed by the Motion Picture Division, Ohio State University. Color, 13 min.

26 Dec., Afternoon

Iron Ore from Cerro-Bolivar. U.S. Steel Corporation. Color, 31 min.

The Petrified River: the Story of Uranium. Produced by Union Carbide and Carbon Corporation in cooperation with the Bureau of Mines, Department of Interior, with the technical assistance of the U.S. Atomic Energy Commission. Color, 28 min.

Dynamics of the Tubercle: in vivo Observations of Pathogenesis and Effects of Chemotherapy in the Clark Rabbit Ear Chamber. Produced by Robert H. Ebert and William R. Barclay, department of medicine, University of Chicago, with technical assistance by Churchill-Wexler Film Productions, Inc.; supported by a grant from Pfizer Laboratories. Color, 28 min.

The Rival World. Shell Oil Company. Color, 27 min.

Atomic Achievement. British Information Services. Color, 20 min.

Unconditional Surrender. National Foundation for Infantile Paralysis. Black and white, 24 min.

Better Seeds for Better Grasslands. U.S. Department of Agriculture. Color, 31 min.

The Colour of Life. National Film Board of Canada. Color, 24 min.

27 Dec., Morning

Down a Long Way. Produced by Halas & Batchelor Cartoon Films Ltd., London; distributed by J. E. Anderson, New York, purchasing agent for British Petroleum Trading, Ltd. Color, 18 min.

Still Going Places. Written and directed by George C. Stoney, in collabora-

tion with Frederic D. Zeman and Leo Dobrin, Home for Aged and Infirm Hebrews of New York; produced by Potomac Film Production; supported by a grant from Pfizer Laboratories. Black and white, 40 min.

The Sodium Reactor Experiment Fabrication. Produced by Atomics International, Division of North American Aviation, Inc., for the U.S. Atomic Energy Commission. Color, 18 min.

Meiosis. Produced by Commonwealth Scientific and Industrial Research Organization, Australia; distributed by International Film Bureau, Inc. Color, 12 min.

The Golden Leaf. Produced by the American Tobacco Company, Inc. Color, 24 min.

Anger at Work. Produced by International Film Bureau and Oklahoma State Department of Health. Black and white, 21 min.

Atmospheric Pressure. Produced by Encyclopaedia Britannica Films, Inc. Black and white, 11 min.

The Great Adventure. Produced by Arne Sucksdorff, Sweden; distributed by Louis de Rochemont Associates. Black and white, 75 min.

27 Dec., Afternoon

Epidemiology and Clinical Aspects of Coccidioidomycosis. Produced by the U.S. Public Health Service and Veterans Administration. Color, 20 min.

Dynamic Measurement. Produced by Consolidated Engineering Corporation; distributed by Modern Talking Picture Service, Inc. Color, 27 min.

The Forest Tent Caterpillar. Produced by National Film Board of Canada. Color, 18 min.

First a Physician. Produced by E. I. duPont de Nemours & Company, with the cooperation of the American College of Radiology. Color, 27 min.

The Search: M.I.T. (Automation). Produced by Young America Films, Inc. Black and white, 27 min.

Stress and the Adaptation Syndrome. Produced by Research & Scientific Films, Inc., and Campus Film Productions, Inc., with collaboration of Hans Selye, University of Montreal; written by Norman P. Schenker, Research & Scientific Films, Inc., and Leo L. Leveridge, Pfizer Laboratories; sponsored by Pfizer Laboratories. Color, 35 min.

Man Against a Fungus. Produced by National Film Board of Canada. Color, 35 min.

The Search: Criminology Research. Produced by Young America Films, Inc., with the collaboration of the Graduate School of Criminology, University of California. Black and white, 25 min.

28 Dec., Morning

Same as 27 Dec., afternoon.

28 Dec., Afternoon

Same as 27 Dec., morning.

29 Dec., Morning

Same as 26 Dec., afternoon.

29 Dec., Afternoon

Same as 26 Dec., morning.

30 Dec., Morning

The Rival World. Shell Oil Company. Color, 27 min.

This Is Color. Produced by the Interchemical Corporation; distributed by Modern Talking Picture Service, Inc. Color, 27 min.

The Secrets of the Heart. Produced by MPO Productions for the American Heart Association, and local Heart Chapters, with Irvine H. Page as guide. Black and white, 29 min.

The Search: Criminology Research. Produced by Young America Films, Inc., with the collaboration of the Graduate School of Criminology, University of California. Black and white, 25 min.

The Petrified River: the Story of Uranium. Produced by Union Carbide and Carbon Corporation, in cooperation with the Bureau of Mines, Department of Interior, with the technical assistance of the U.S. Atomic Energy Commission. Color, 28 min.

Meiosis. Produced by Commonwealth Scientific and Industrial Research Organization, Australia; distributed by International Film Bureau, Inc. Color, 12 min.

The Great Adventure. Produced by Arne Sucksdorff, Sweden; distributed by Louis de Rochemont Associates. Black and white, 75 min.

Hotel Headquarters

The Hotel Statler is the official headquarters of the AAAS; it is where the council of the association will meet and where other business sessions will be held. The Press Room—for receipt of authors' abstracts and the only source of press releases—is in the Washington Room on the mezzanine floor, one flight above the lobby.

The Main Registration-Information Center, the Visible Directory of Registrants, the AAAS Office, the AAAS Science Theatre, and the Annual Exposition of Science and Industry are also on the mezzanine floor of the Statler.

The headquarters of the 18 sections and participating societies follow (the societies are grouped in the same sequence as the letters of the sections with which they are affiliated or associated).

Pennsylvania Zone Hotels

Statler. AAAS; Press; Exhibits; AAAS Sections C (Chemistry), F (Zoological Sciences), G (Botanical Sciences), M (Engineering), N (Medical Sciences), Nd (Dentistry), Np (Pharmacy), P (Industrial Science); Alpha Chi Sigma, American Association of Clinical Chemists, Gordon Research Conferences; American Society of Zoologists, International Union for the Study of Social Insects, New York Zoological Society, Society of Systematic Zoology, Society of Vertebrate Paleontology; American Society of Naturalists, Beta Beta Beta Biological Society, Ecological Society of America, Genetics Society of America, Society for the Study of Evolution, Society of General Physiologists; American Society of Plant Physiologists, Botanical Society of America, Mycological Society of America, Torrey Botanical Club; Engineering Manpower Commission; Alpha Epsilon Delta, American Academy of Forensic Sciences, American Association of Hospital Consultants, American Medical Association Committee on Cosmetics, American Physiological Society, American Psychiatric Association, American Public Health Association; American College of Dentists, American Dental Association, International Association for Dental Research; American Association of Colleges of Pharmacy, American College of Apothecaries, American Pharmaceutical Association Scientific Section, American Society of Hospital Pharmacists; American Association of Scientific Workers, American Institute of City Planners, Conference on Scientific Manpower, Honor Society of Phi Kappa Phi, National Academy of Sciences–National Research Council, National Association of Science Writers, National Science Foundation, New York Academy of Sciences, Scientific Manpower Commission, Scientific Research Society of America, Sigma Delta Epsilon, Society of the Sigma Xi, United Chapters of Phi Beta Kappa, U.S. Atomic Energy Commission.

Governor Clinton. AAAS Sections A (Mathematics) and L (History and Philosophy of Science); Association for Computing Machinery; American Philosophical Association, History of Science Society, Philosophy of Science Association, Society for the Advancement of General Systems Theory; Association of Technical Writers and Editors, American Documentation Institute, Conference on Scientific Editorial Problems, Technical Publishing Society.

Sheraton-McAlpin. AAAS Sections H (Anthropology), I (Psychology), K (Social and Economic Sciences), Q (Education); American Institute of Human Paleontology, Society for American Archaeology; American Political Science Association, American Statistical Association, Association for the Psychiatric Treatment of Offenders, Institute for Research on Crime and Delinquency, Na-

tional Academy of Economics and Political Science, Pi Gamma Mu, Society for the Advancement of Criminology; AAAS Cooperative Committee on the Teaching of Science and Mathematics, American Educational Research Association, International Council for Exceptional Children, National Association for Gifted Children, National Association for Research in Science Teaching, National Association of Biology Teachers, National Science Teachers Association; Academy Conference, American Nature Study Society.

Martinique. AAAS Sections B (Physics), E (Geology and Geography), O (Agriculture); American Meteorological Society, Sigma Pi Sigma; Association of American Geographers, Geological Society of America, National Geographic Society, National Speleological Society; American Society of Range Management; American Geophysical Union.

New Yorker. Entomological Society of America.

Uptown Hotels

Alden. AAAS Section D (Astronomy), American Astronomical Society, Astronomical League.

Excelsior.

Henry Hudson. Also recommended for the astronomers.

Registration

Main Registration-Information Center. The AAAS Main Registration-Information Center is located on the mezzanine of the Hotel Statler. It will be open daily 26–30 Dec., 8 A.M. to 8 P.M., except Wednesday evening, 26 Dec. till 9 P.M.; and Saturday evening, 29 Dec. when it will remain open till 11 P.M. to accommodate any nonregistrants who wish to attend the AAAS Smoker.

Badges and General Programs may also be obtained at the supplementary registration desks, but the Main Registration is the only place to receive supplementary literature, maps, and the like. Advance Registrants (who receive programs and badges prior to the meeting) are urged to visit the Main Registration, at any convenient time, to receive these items.

Supplementary registration desks. For the convenience of those attending the 123rd meeting, there are four supplementary registration desks as follows: Hotel Sheraton-McAlpin, 26 Dec., 8 A.M. to 9 P.M., 27–29 Dec., 8 A.M. to 8 P.M.; Hotel New Yorker, 26 Dec., 4 P.M. to 9 P.M., 27–28 Dec., 8 A.M. to 8 P.M.; Hotel Governor Clinton, 26 Dec., 8 A.M. to 9 P.M., 27–28 Dec., 8 A.M. to 8 P.M.; American Museum of Natural History, 26 Dec., 7 P.M. to 10 P.M., 27 Dec., 8:45 A.M. to 6 P.M. Guests at Hotel Martinique will find the Sheraton-McAlpin convenient for registration. Astronomers will register at the Hayden Planetarium Conference Room, 26 Dec., 7:45 to 10 P.M.; and Roosevelt Lecture Hall (fifth floor), American Museum of Natural History, 27 Dec., beginning 8:45 A.M.

Registration fee. The AAAS registration fee is $3 for all; a spouse or child not wishing a separate Program may register for $1, if at the same time. Each registrant receives a receipt, a convention badge, and the General Program-Directory—the only publication with the programs of the 18 AAAS Sections and of the 82 participating organizations. Any person who purchases an advance copy of the General Program-Directory but does not register in advance and who then attends the meeting has agreed to complete his registration—and is expected to do so—at the Main Registration Center, or at one of the four supplementary registration desks, after which he will receive his convention badge and the privileges that go with it.

AAAS convention badge. Every thoughtful person will wish to register and thus pay his share of the expenses of the meeting. The AAAS convention badge will indicate that you are a complete participant in the 123rd convention of the association. The badge should be worn throughout the meeting, because it reminds others to register, it is needed for admission to the AAAS Science Theatre, the AAAS Smoker, and the reception that follows the presidential address, and it helps your friends to find you.

Visible Directory of Registrants. The much-consulted Visible Directory of Registrants, for the maximum convenience of all, is located on the Statler mezzanine, near the Annual Exposition of Science and Industry. The hours it will be open correspond exactly with the hours the Main Registration is open—daily 8 A.M. to 8 P.M. or later (on certain evenings). The registration cards of all registrants are placed in the Visible Directory as soon as possible after registration. The arrangement is alphabetical. The cards of advance registrants are *completely* alphabetized and typed, since they will have been posted in Washington prior to the meeting; all other registration cards are filed to the second or third letter of the surname (Ba, Be, etc.). Members of the press, exhibitor personnel, and guests are included in the Visible Directory—on *blue* cards instead of yellow. Registrants will find the Visible Directory invaluable in determining the convention addresses of friends attending the meeting.

Mail, telegrams, and messages. Mail and telegrams addressed in care of the AAAS will be held at the AAAS Office in the Hotel Statler. Efforts will be made to notify addressees listed in the Visible Directory, but the association assumes no responsibility for the delivery of mail or of telegrams. Telephone and personal messages will be filed alphabetically in the AAAS Office, and the names for whom they are intended will be posted on a bulletin board.

Society meal function tickets. Tickets to the dinners or luncheons of any participating society are obtainable only from representatives of that society, either during preceding sessions of that society, or at the AAAS Information Center.

Facilities for Eating

In addition to the hotel coffee shops and dining rooms, the restaurants and public eating places in New York are so numerous and varied that it is not feasible to list them here. Those who are interested, however, and wish seriously to explore exotic cookery in this cosmopolitan city should consult the New York Classified Telephone Directory, a copy of which is in every hotel room. Under "Restaurants," there are advertisements of places that specialize in Chinese, French, Greek, Hungarian, Italian, Mexican, Polish, Russian, and Spanish dishes —and also seafood establishments.

New York Committees

It would be quite impossible to arrange a large and complex meeting and to carry it through to a conclusion, successful in all respects, if it were not for the devoted services of many local scientists and other members and friends of the association. They merit the unstinted appreciation of all who attend. It is noteworthy that Eugene Holman accepted the general chairmanship of the New York meeting without delay, appointed the local committees promptly, and has kept in close touch with all phases of this year's meeting.

General Chairman

Eugene Holman, chairman of the board, Standard Oil Company (New Jersey).

Executive Secretary

Cecil Morgan, executive assistant to the chairman, Standard Oil Company (New Jersey).

Committee on Exhibits

Albert Bradley, chairman of the board, General Motors Corporation, *chairman.*

W. O. Baker, vice president-research, Bell Telephone Laboratories.

E. W. Engstrom, senior executive vice president, Radio Corporation of America.

Frederic H. Holmes, vice president, The Texas Company.

Jasper H. Kane, vice president-research and development, Chas. Pfizer & Co., Inc.

Alexander Kartveli, vice president-research and development, Republic Aviation Corporation.

A. B. Kinzel, vice president-research, Union Carbide and Carbon Corporation.

G. A. Nesty, vice president, Allied Chemical & Dye Corporation.

E. R. Piore, director of research, International Business Machines Corporation.

E. Duer Reeves, executive vice president, Esso Research and Development Company.

C. Guy Suits, vice president and director of research, General Electric Company.

Robert C. Swain, vice president-research and process development, American Cyanamid Company.

Committee on Finance

W. J. Murray, Jr., chairman of the board, McKesson & Robbins, *chairman.*

Harold Boeschenstein, president, Owens-Corning Fiberglas Corp.

James F. Brownlee, partner, J. H. Whitney & Company.

S. Sloan Colt, chairman of the board, Bankers Trust Company.

Frederick W. Ecker, president, Metropolitan Life Insurance Company.

Horace C. Flanigan, president, Manufacturers Trust Company.

Harold Helm, chairman of the board, Chemical Corn Exchange Bank.

John J. McCloy, chairman of the board, Chase Manhattan Bank.

Committee on Physical Arrangements

Samuel Schenberg, supervisor of science, Board of Education of the City of New York, *cochairman.*

Edward G. Bernard, director, Bureau of Audio-Visual Instruction, Board of Education of the City of New York, *cochairman.*

Herman Campsen, Jr., chairman of physical science, Bronx High School of Science.

Alexander Efron, chairman of physics, Stuyvesant High School.

Harold Nagler, chairman of biology, James Madison High School.

Henry Semat, professor of physics, City College.

George S. Tulloch, professor of biology, Brooklyn College.

Committee on Public Information

Marion Harper, Jr., president, McCann-Erickson Inc., *chairman.*

Leonard H. Goldenson, president, American Broadcasting Company, Paramount Theatres, Inc.

Robert E. Kintner, executive vice president, National Broadcasting Company, Inc.

James A. Linen, publisher, *Time,* The Weekly Newsmagazine.

Daniel E. Mich, editorial director, *Look* magazine.

Malcolm Muir, president, *Newsweek* magazine.

Robert W. Sarnoff, president, National Broadcasting Company, Inc.

J. L. Van Volkenburg, president, Columbia Broadcasting System, Inc.

William L. Wheeler, Jr., secretary, Medical Society of the County of New York.

Mary L. Wolfle, assistant public relations director, Pratt Institute.

Honorary Reception Committee

John C. Adams, president, Hofstra College.

W. P. Anderton, secretary, Medical Society of the State of New York.

Reginald M. Atwater, executive secretary, American Public Health Association.

George S. Avery, Jr., director, Brooklyn Botanic Garden.

John H. Baker, president, National Audubon Society.

Joseph W. Barker, president, Research Corporation.

Henry A. Barton, director, American Institute of Physics.

Samuel Belkin, president, Yeshiva University.

Lloyd V. Berkner, president, Associated Universities, Inc.

Rome A. Betts, executive director, American Heart Association.

Howard T. Bosworth, president, National Tuberculosis Association.

Frank G. Boudreau, president, Milbank Memorial Fund.

Detlev W. Bronk, president, Rockefeller Institute for Medical Research.

Edwin S. Burdell, president, Cooper Union for the Advancement of Science and Art.

Joseph Miles Chamberlain, chairman, American Museum-Hayden Planetarium.

Richard L. Conolly, president, Long Island University.

Clarence E. Davies, secretary, American Society of Mechanical Engineers.

David M. Delo, president, Wagner College.

Edward J. Donovan, president, New York Academy of Medicine.

C. T. Durgin, president, State University of New York Maritime College.

Paul Dawson Eddy, president, Adelphi College.

Paul Fejos, president, Wenner-Gren Foundation for Anthropological Research.

John A. Flynn, C.M., president, St. John's University.

Edward G. Freehafer, director, New York Public Library.

H. Rowan Gaither, Jr., chairman of the board, Ford Foundation.

Buell G. Gallagher, president, City College.

John W. Gardner, president, Carnegie Corporation of New York.

Harry D. Gideonse, president, Brooklyn College.

H. B. Hass, president, Sugar Research Foundation, Inc.

J. A. W. Hetrick, president, New York Medical College.

Charles B. Hitchcock, director, American Geographical Society.

Francis H. Horn, president, Pratt Institute.

S. Paul Johnston, director, Institute of the Aeronautical Sciences.

C. S. Jones, president, Academy of Aeronautics.

Mervin J. Kelly, president, Bell Telephone Laboratories.

C. G. King, executive director, Nutrition Foundation, Inc.

Grayson Kirk, president, Columbia University.

Marcus D. Kogel, dean, Albert Einstein College of Medicine.

E. Paul Lange, secretary, Engineers Joint Council.

Hugh Luckey, dean, Cornell University Medical College.

William Mazer, president, Muscular Dystrophy Associations of America.

Laurence J. McGinley, S.J., president, Fordham University.

Gordon McLintock, superintendent, United States Merchant Marine Academy.

George L. McNew, director, Boyce Thompson Institute for Plant Research.

William A. Medesy, director, Long Island Agricultural and Technical Institute.

John Walden Myer, director, Museum of the City of New York.

Raymond J. Nagle, dean, New York University College of Dentistry.

Carroll V. Newsom, president, New York University.

A. E. Parr, director, American Museum of Natural History.

Augustine Philip, F.S.C., president, Manhattan College.

Thomas Clark Pollock, dean, New York University.

Willard C. Rappleye, dean, Columbia University College of Physicians and Surgeons, and president, Josiah Macy, Jr., Foundation.

William J. Robbins, director, New York Botanical Garden.

Harry Stanley Rogers, president, Polytechnic Institute of Brooklyn.

Charles F. Roos, chairman of the board, Econometric Institute.

Walter S. Root, president, New York Academy of Sciences.

James J. Rorimer, director, Metropolitan Museum of Art.

Richard L. Rosenthal, president, Richard and Hinda Rosenthal Foundation.

Mefford R. Runyon, executive vice president, American Cancer Society.

Dean Rusk, president, Rockefeller Foundation.

John M. Russell, executive director, John and Mary R. Markle Foundation.

Edgar C. Schenck, director, Brooklyn Museum.

Donal Sheehan, dean, New York University College of Medicine.

George N. Shuster, president, Hunter College.

Charles H. Silver, president, Board of Education of the City of New York.

Hans Simons, president, New School for Social Research.

Frank T. Sisco, director, Engineering Foundation.

Alfred P. Sloan, Jr., president, Alfred P. Sloan Foundation.

Harold Taylor, president, Sarah Lawrence College.

John Tee-Van, director, New York Zoological Society.

John J. Theobald, president, Queens College.

Austin J. Tobin, executive director, Port of New York Authority.

R. W. G. Vail, director, New York Historical Society.

F. J. Van Antwerpen, secretary, American Institute of Chemical Engineers.

William H. Wisely, executive secretary, American Society of Civil Engineers.

Eleanor R. Witkus, executive secretary, Torrey Botanical Club.

Arthur G. Zupko, dean, Brooklyn College of Pharmacy.

AAAS Public Information Service

Each person who will deliver an address or present a paper at the New York meeting is requested to provide the association's Public Information Service with 100 copies of a nontechnical abstract of his paper. One hundred copies of *complete* manuscripts are also required of papers presented by (i) officers of the association; (ii) officers and invited speakers who appear on the programs of the participating societies; and (iii) authors whose papers are particularly newsworthy. Most authors already have recognized the necessity of this procedure and have sent their material to the association's director of public information, Sidney S. Negus, Medical College of Virginia, Richmond. If you are an author of an address or paper and have not done this, please send to Negus, *to arrive in Richmond on or before 15 Dec.*, 100 copies of your nontechnical abstract. If it is impossible for you to send this material to Richmond to arrive by 15 Dec. (*and mails are much slower in the pre-Christmas period*), then mail all your material to Negus—or deliver it to him in person—at the AAAS Press Room, Washington Room, on the mezzanine of the Hotel Statler, before or during the convention. As an aid to the association's Public Information Service, please send copies of your abstract to your local newspapers with the time indicated when it is to be presented in New York.

The necessity for the general public to be kept informed of the results of the scientific research which it supports, directly and indirectly, is quite evident. Organized science and the individual scientist must have the understanding and support of all. It is, of course, equally important that the advances of science be publicized with accuracy and clarity without sensationalism. Progress in this direction in recent years has been most gratifying, thanks largely to members of the National Association of Science Writers, other accredited science reporters, managing editors of American newspapers, and program managers of radio and television stations.

It is in the interest of accuracy and completeness that science writers frequently wish to discuss various research results with investigators. If you are asked to cooperate in this respect or to participate in a press conference, please do so not only for your own protection but for the benefit of science in general. Scores of science writers will be covering this meeting. News stories filed by the representatives of all the wire services will be published and broadcast throughout the entire civilized world. At no other scientific meeting are the facilities for the dissemination of the most recent findings in all branches of science so complete as they are at the great, diversified meetings of the AAAS.

This year, not only is the association fortunate in the continued services of Sidney S. Negus, chairman of the department of biochemistry, Medical College of Virginia, Richmond, but also in its Local Committee on Public Information, headed by Marion Harper, Jr., president of McCann-Erickson, Inc.

Local Travel Directions

At the 123rd meeting, the numerous public rooms of the five hotels have made it possible for almost all the sessions to be held in one compact area, with no hotel more than two blocks from the Statler, and most of them within one block of the headquarters hotel. The sessions at the American Museum of Natural History are most conveniently reached by the Eighth Avenue Subway.

To American Museum of Natural History and Hayden Planetarium: From the Hotel New Yorker or from the street, enter the Eighth Avenue Subway station at 34 St. and Eighth Ave., which is one block west of Seventh Ave., or two blocks west of Broadway. Take only an *uptown local* train labeled AA-Washington Heights. The rear cars will be most convenient for direct entrance into the museum. Avoid all other trains since expresses skip the museum and others turn east into Queens at Columbus Circle. Get off at 81 Street—American Museum of Natural History (the preceding station is 72 Street). Running time is 15 minutes. The 79 St. exit leads directly into Roosevelt Hall, where either elevators or stairs may be used to reach adjacent halls; the 81 St. exit to the street is close to the planetarium. To return to the hotel zone, reverse the route taken, taking any *downtown* train. Get off at 34 Street (the preceding station is 42 Street).

Tours and Points of Interest

At this meeting, there will be no formal tours sponsored by the AAAS as a whole, but the New York Zoological Society will conduct guided tours at the Bronx Zoo, and certain participating societies have planned tours and field trips, which will be found in their programs.

Points of Special Interest

The Map and Directory of New York—available to all registrants and distributed only from the Main Registration-Information Center, on the mezzanine, Hotel Statler—displays and lists all principal points of interest on Manhattan Island. The following are of special interest.

American Geographical Society (Broadway at 156 St.). Open daily to visitors interested in geographical research and reference facilities. Hours 9 A.M. to 5 P.M. No admission charge.

American Museum of Natural History (Central Park West at 79 St.). Open week days 10 A.M. to 5 P.M.; Sunday 1 to 5 P.M. No admission charge.

Boyce Thompson Institute for Plant Research (Yonkers, New York). Open daily 8:30 A.M. to 5 P.M. No admission charge. Tours or appointments with staff arranged upon request.

Brooklyn Botanic Garden (1000 Washington Ave., Brooklyn). Open daily 9 A.M. to 5 P.M. No admission charge.

Empire State Building Observatories (34 St. and Fifth Ave.). Open daily 9:30 A.M. to midnight. Admission charge of $1.30, tax included, *reduced to 90 cents for AAAS registrants*; apply at Main Registration-Information Center for special tickets.

Hayden Planetarium (81 St. near Cen-

tral Park West). Demonstrations 26–29 Dec., inclusive at 11 A.M. and 1, 2, 3, 4, 5, and 8:30 P.M. Admission 65 cents for adults during the day, 95 cents at night; 40 cents for children at all times. (Members of the American Astronomical Society and of AAAS section D, and their wives, wearing their AAAS convention badges, will be special guests.)

Metropolitan Museum of Art (Fifth Ave. at 82 St.). Open week days 10 A.M. to 5 P.M.; Sunday 1 to 5 P.M. No admission charge.

Museum of Modern Art (11 W. 53 St.). Open week days 11 A.M. to 6 P.M.; Sunday 1 to 7 P.M. *Admission charge of 60 cents reduced to 35 cents for AAAS registrants wearing convention badge.*

Museum of the City of New York (Fifth Ave. and 103–104 Sts.). Open week days 10 A.M. to 5 P.M.; Sunday 1 to 5 P.M. No admission charge.

New York Botanical Garden (Bronx Park). Christmas exhibits in both Conservatory and Museum Building. Conservatory open daily 10 A.M. to 4:30 P.M.; *no admission charge for AAAS registrants wearing convention badge.* Museum open daily 10 A.M. to 5 P.M.; no admission charge. Open house for botanists and all who are interested, all day 26 Dec.

New York Historical Society (170 Central Park West). The society will welcome any of the attendance who may wish to visit the library and museum in search of the early history of science in America.

New York Public Library (Fifth Ave. at 42 St.). Central building open week days 9 A.M. to 10 P.M.; Sunday 1 to 10 P.M. Science division reading room open Thursday, 9 A.M. to 10 P.M., other week days 9 A.M. to 6 P.M., Sunday 1 to 6 P.M.

New York Zoological Society-Bronx Zoo (185 St. and Southern Boulevard). Special guided tours daily, 27–31 Dec., beginning at 11 A.M. for zoologists and other interested scientists.

Rockefeller Center (50 Rockefeller Plaza). Open daily 9 A.M. to 9 P.M. Guided tour, which includes the observation roof, leaves every 15 minutes. Admission charge of $1.50 *reduced to $1.20 for AAAS registrants*; apply at Main Registration-Information Center for special tickets.

St. Patrick's Cathedral (Fifth Ave. and 50–51 Sts.). Special "Science Sunday" service, 30 Dec., 10 A.M.; Sermon by Rev. Laurence J. McGinley, S.J., president, Fordham University.

Annual Exposition of Science and Industry

The AAAS Annual Exposition of Science and Industry, which dates back to 1924 (still earlier with certain pioneer exhibitors), has long been an important and integral part of the association's annual meeting. It provides an outstanding opportunity for those who use the tools and materials of science to meet those who produce and distribute these essentials. The 1956 edition of the exposition, on the mezzanine of the Hotel Statler, is up to the same high standard of previous years.

The exhibits include the latest and best in scientific books, instruments, and materials; they are on a scale, and with a diversity, not usually possible at the meeting of an individual society or group of societies in a single field of science. In addition to this "core" of the exposition, a variety of organizations have special exhibits, and there are *technical* exhibits by large firms representative of the basic industries of the nation. Prominent concerns in the chemical, pharmaceutical, and other industries are sharing with the attending scientists some of their impressive technological accomplishments. The exposition should not be missed by anyone who attends the 123rd meeting.

The exposition is open to (i) all registrants attending the meeting and (ii) adults who have applied for, and received, complimentary tickets of admission.

The hours of the exposition are as follows: Wednesday, 26 Dec., 7 to 10 P.M.; Thursday, 27 Dec., 9 A.M. to 6 P.M.; Friday, 28 Dec., 9 A.M. to 6 P.M.; Saturday, 29 Dec., 9 A.M. to 6 P.M. and 8 to 10 P.M.; Sunday, 30 Dec., 10 A.M. to 2 P.M.

AAAS New Member Service—Science—The Scientific Monthly

Booth 54. Whether or not one is a member of the American Association for the Advancement of Science, every person attending this meeting is cordially invited to visit the AAAS booth for information concerning the association and its activities. Beyond the satisfaction of strengthening its work for science, for scientists, and for society by one's membership, there are demonstrable personal advantages in joining the association.

Since its founding, in 1848, the association has admitted to membership not only professional scientists but also other men and women who have a general interest in science, who wish to keep informed of the progress of science, and who would like to support the high purposes of the one organization that represents *all* science. The New Member Service will be pleased to accommodate those who wish to join the association as of 1 January. Those already members conveniently can nominate others for membership.

Included in the annual dues of $6.50 (for 1957), each member has a choice of a year of *Science*, the professional scientist's newsweekly, or *The Scientific Monthly* (or *both* for an additional $3.50). Free sample copies of these two publications will be distributed and all not familiar with both magazines should visit this booth, where symposium volumes and AAAS membership insignia are also on display. Prospective advertisers may obtain sample copies of the magazines and rate cards.

AAAS Traveling High School Science Libraries

Booth 53. The AAAS administers this experimental traveling library program, which is financed by a grant from the National Science Foundation. The exhibit consists of the 200 books comprising the traveling libraries that are being circulated to 104 high schools throughout the United States in order to interest young people in science, to assist those interested in the choice of a scientific career, and to demonstrate to high-school and community librarians the kinds of science and mathematics books that should be added to their collections in order to satisfy the interests of young people. A list of the books is available free of charge, and an annotated catalog of the traveling libraries may be purchased for 25 cents.

Now in its second year of operation, the program already has proved that it is fulfilling its objectives, and hundreds of school community libraries are basing new acquisitions on the list of books. Summer institutes for high-school science teachers sponsored by the NSF are using the traveling libraries to provide collateral and recreational reading.

Academic Press, Inc.

Booth 24. Academic Press, Inc., publishers, will display the complete set of *Physical Techniques in Biological Research,* edited by Gerald Oster and Arthur W. Pollister. Also exhibited will be *Advances in Chemical Engineering,* volume I; Michael Heidelberger's *Immunization, Physical Methods in Chemical Analysis,* volume III, edited by W. G. Berl; *Solid State Physics,* volumes I–III, edited by F. Seitz and D. Turnbull; and *Rheology: Theory and Applications,* volume I, edited by F. R. Eirich. Sample volumes of some newly reprinted sets, produced by Johnson Reprint Corporation, will include the *Journal of Biological Chemistry, Electronics, American Mathematical Monthly,* and *Reviews of Modern Physics.*

Aero Service Corporation

Booth 74. A new look at the world is presented in the series of new plastic relief maps at Aero Service Corporation's exhibit. Colorful, lightweight, three-dimensional maps of Canada, the United States, South America, Europe and the World will be shown, along with

new relief maps of California, New Jersey, Pennsylvania and Wisconsin. Aero's portfolio of 12 U.S. Geological Survey quadrangles in plastic relief, showing representative geologic formations, will also be displayed. These new maps are lithographed in as many as 12 colors on durable Vinylite, then vacuum formed to show mountains, valleys, and drainage patterns. The map's surface is plastic-coated to protect its colors; fingerprints or dust wipe off readily, and the markable, easily cleaned surface permits the use of marking crayons. Generally, 2000 to 3000 geographic names are shown on each map. The maps are large; the United States map, for example, is 64 by 40 inches with a scale of 1 inch = 75 miles; the World map measures 61 by 42 inches, scale 1 inch = 434 miles; South America is 41 by 54 inches, scale 1 inch = 110 miles. Produced by Aero Service, a worldwide aerial mapping and exploration company, these new relief maps are stimulating teaching tools, useful in many curriculum areas.

Allied Chemical & Dye Corporation

Booths 5 and 6. National Aniline Division of Allied Chemical and Dye Corporation—the Pharmaceutical Sales Department—will present a new display that features color photomicrographs illustrating applications of some of the widely used biological stains sold by the company. The display will also call attention to the other types of products offered, which include pharmaceutical chemicals, *p*H indicators, oxidation-reduction indicators, diazo salts, and staining solutions. Another section of the Allied Chemical display will show recent developments in Baker & Adamson reagent and fine chemicals, marketed by the company's General Chemical Division.

American Tobacco Company, Inc.

Booths 39 and 40. The exhibit of the Research Laboratory of the American Tobacco Company will feature a picture display in full color of the growing and processing of tobacco from the seed to the cigarette. Representatives from the Research Laboratory will be in attendance at the exhibit, and technical literature will be available for distribution.

Association of American University Presses

Booth 27. Each university press represented in the exhibit is a separate publishing company producing technical, medical, and scholarly works as well as other books of vital interest. This joint exhibit enables you to see books from a number of the university presses and, if you so desire, to order them direct from the booth or from the publishing press. A checklist of all the books on display is available at the booth.

Becton, Dickinson and Company

Booth 11. The exhibit of Becton, Dickinson and Company will consist of laboratory instruments, syringes, needles, disposable blood-donor sets, vacutainers, and allied products.

Biological Abstracts

Booth 34. *Biological Abstracts* will feature a more complete coverage of the world's biological literature and a greatly improved abstracting and indexing service. The annual subject indexes will be up-to-date for the first time in years. At least 40,000 abstracts, more abstracts of the Russian literature, better pinpointing of abstracts of biochemical interest, and other improvements will enhance the value of this nonprofit, cooperative service to biologists in 1957. Because the biological literature is so diversified, and published in so many journals throughout the world, it would be impossible for any individual to keep posted on the significant contributions in even a single field. That is why *Biological Abstracts* is maintained by biologists themselves and generally considered an essential instrument in both teaching and research. The brief, yet informative, abstracts enable subscribers to follow all the recent developments in a minimum of time. Representatives will be in attendance to answer questions. Constructive criticism from users will be welcomed.

C. A. Brinkmann & Company, Inc.

Booths 55 and 56. This year's exhibit of the Brinkmann Company will feature some newly introduced pieces of equipment such as Ultra thermostats, Zeiss spectrophotometer, the Brinkmann Micro Cine set-up for regular and time-lapse cinematography, an ultrasonic interferometer for liquids, improved models of analytical and micro balances (Sartorius) and various types of photomicrographic apparatus, exposure meters and microscopes for transmitted and reflected light illumination. Also on display will be a Steinheil universal spectrograph for the visible, ultraviolet, and near infrared. This apparatus permits instant change-over from one type of optics to another which feature makes it a highly useful tool for spectrographic research where a truly versatile piece of equipment is needed.

Cambridge University Press

Booth 43.

Carolina Biological Supply Company

Booths 61 and 62. Carolina Biological Supply Company will have on display our latest development in stacking-type culture bowls which have been designed especially for use in the biological laboratory. In addition, we will have cultures, specimens, prepared slides, Plast-O-Mounts, and the latest laboratory equipment. We will have a staff of professional biologists in attendance to assist you with any of your technical problems. Our latest catalogue is now available to all in the teaching profession without charge. If you are not on our mailing list, be sure to notify our representative.

The Coca-Cola Company

Booths 31 and 32. Ice-cold Coca-Cola will be served through the courtesy and cooperation of the Coca-Cola Bottling Company of New York, Inc., and the Coca-Cola Company.

P. F. Collier & Son Corporation

Booth 28. The Collier exhibit will feature among other general works the new 20-volume *Collier's Encyclopedia.* This currently edited and conscientiously revised new general reference work is recommended by educators and librarians for use in junior and senior high schools and colleges. It is second to none in authoritativeness, readability, recency of coverage, or price. Additional features are a 400,000-entry comprehensive index, plus a unique 10,000-volume integrated bibliography. This new *Collier's Encyclopedia* is particularly outstanding for its articles on contemporary biography and modern science. More than 3000 pages are devoted to scientific subjects and areas. Avail yourself of a new free booklet entitled "Enriching the general science curriculum with *Collier's Encyclopedia.*"

Denoyer-Geppert Company

Booth 42. Denoyer-Geppert Company will exhibit a wide variety of visual teaching appliances for the biological sciences and related subjects. Unbreakable plastic models will comprise the largest part of the display, with the D-G life-size dissectible torso and head model as the featured item. Other plastic models on human anatomy will be shown, along with several botany and zoology models and a new series for embryology. In addition to models, the complete group of charts in the Denoyer-Geppert anatomy series will be available for examination. There will also be selections from other series of large, colored wall charts, covering nearly all aspects of biology. A good representation of the collection of nearly 400 charts available through Denoyer-Geppert will be on hand. Plastic embedded specimens will be among the new items shown at the D-G booth. Besides many beautifully finished mounts of individual specimens, there are highly instructive groupings of related subjects and outstanding em-

bryological studies. Samples representing some of the other facets of the D-G line of Biocraft products will be included in the display: skeletons, skull preparations, museum mounts, laboratory manuals and test sheets. Experienced Denoyer-Geppert representatives will be in attendance to answer questions and discuss the application of the various visual aids.

Ealing Corporation

Booths 7 and 8. The Ealing Corporation is exhibiting apparatus manufactured by six different British manufacturers for whom Ealing is the exclusive distributor in the United States. Included are the following. R. & J. Beck, Ltd.; direct-reading spectrometer reading to 1 angstrom; the Hartridge reversion spectrometer for the detection and measurement of carbon saturation in hemoglobin; ultraviolet spectroscope; microspectroscope; reflecting microscope for investigation in the infrared, visible, and ultraviolet; stereoscopic microscopes, and dissecting microscopes. British Drug Houses, Ltd.: chemicals for titration in nonaqueous solvents; oxidation-reduction indicators; microanalytical reagents; spot test outfit; and concentrated volumetric solutions. H. J. Elliott, Ltd.: new Amber Line laboratory glassware; 6-inch reinforced bulb "Beeka" thermometers; stirring thermometers; differential thermometers; and low Actinic glassware. Griffin & George, Ltd.: Courtauld atomic models with elastically distortable valency angles and scaled at 0.8 inch = 1 angstrom; measuring microscope for both horizontal and vertical use covering an area of 232 square centimeters and reading to 0.01 millimeter on both scales; and a cathetometer with a usable 100-centimeter range reading to 0.01 millimeter. W. G. Pye & Co., Ltd.: self-contained "Scalamp" galvanometers; universal *p*H meter; miniature *p*H meter weighing only 4½ pounds; automatic titrator; precision vernier potentiometer; and portable potentiometer. Royal Worcester Porcelain Company, Ltd.: three-piece funnels in nine sizes that can be disassembled and thoroughly cleaned and inspected; Royal Worcester pure sintered impervious alumina ware for use at temperatures up to 2000°C and in chemical applications requiring special properties.

Educational Testing Service

Booth 50. The services of the Educational Testing Service include tests, testing programs, research and services for selection, guidance, scholarship competitions, placement, and educational evaluation. ETS develops tests for direct sale to qualified users in schools, colleges, business, governmental agencies, and professional associations; administers nationwide testing programs; builds programs tailored to special needs; conducts fundamental research in measurement; and provides professional advisory services.

Encyclopaedia Britannica, Inc.

Booth 63. This leading reference work with its 188-year history has been completely revised in an intensive effort of the last 13 years, representing an investment of $4,000,000. Illustrated in color, it contains 38,149,128 words, many of which have been either revised or rewritten. There are approximately 539,107 index references.

Ercona Corporation—Carl Zeiss Jena

Booth 14. The Ercona Corporation, American agency for the world-renowned Carl Zeiss Jena Optical Works, will exhibit and demonstrate optical instruments for scientific research and technological laboratories. Our display will feature research and laboratory microscopes with accessory equipment for phase-contrast, dark-field, and polarization microscopy and photomicrography, and stereomicroscopes, micromanipulators, refractometers, polarimeters, and interferometers. We will also exhibit the Siemens & Halske recording camera for time lapse photomicrography and cinemicrography. Our technical personnel will be on hand for consultation.

Esso Research and Engineering Company

Booths 51 and 52. The United States patent system is a keystone in the structure of American business industry. Through its incentive to research, it is a dynamic and beneficial force in our way of living. The system has helped bring into our life hosts of new and useful products, and has helped create whole new industries. The Esso Research and Engineering Company exhibit pays tribute to the U.S. patent system and features a typical example of an invention that it helped to stimulate—butyl synthetic rubber. Butyl, created from oil, occupied an important position during World War II and since then has branched out into scores of significant new applications. In photographs and displays, the exhibit documents the butyl research story, from the discovery and basic patents through its recent development as a new and unique raw material for passenger-car tires.

Gaumard Company, Inc.

Booth 36. Gaumard Company, Inc., exhibits flexible and plastic three-dimensional teaching models. Both biological and clinical models are shown. Some models follow the usual pattern of design, albeit in most advanced materials; others are unique in design and execution. For instance, the miniature plastic skeleton (27 inches) is the only model of its kind—though reduced in size, it gives all the essential data of osteology and musculature in the human being. The plastic model of the vertebral column and nervous system presents in a strikingly simple form the interrelation of the central nervous system and the autonomic system and their topographical relations to the vertebral column and spinal cord. This model has already attracted the interest of leading neurologists and teachers. The transparent phantom model, though primarily of interest to the obstetrician, is a clear example of the advanced design of Gaumard's models—this is the only model of its kind which permits the close study of the birth mechanism by a large number of students at the same time. Last, but not least, the miniature torso model brings to the younger student of biology the essentials of human anatomy in a form not done before.

General Electric Research Laboratory

Booths 59 and 60.

General Motors Corporation

Booths 45 and 46. The Centri-Filmer —a mechanical device for spinning liquid vaccines, serums, or plasma into a microscopically thin film for sterilization by ultraviolet light—was developed by General Motors research staff to aid medical science. The project, undertaken as a public service, was suggested by the staff of Chicago's Michael Reese Research Foundation, who needed a dependable apparatus to produce a thin, unbroken liquid film in which harmful bacteria could be destroyed by ultraviolet light. Today it is being used by a large pharmaceutical company for polio vaccine production. Under supervision of Michael Reese Foundation, it also has been used to purify blood plasma, ACTH for treatment of rheumatic arthritis, hoof-and-mouth disease serum for Mexican cattle, and a rabies vaccine. Medical researchers believe it will open new avenues for future vaccine development. Three other contributions to the technical enrichment of medical science offered as a public service by GM research staff are as follows: The Dodrill-GMR mechanical heart, a pump that substitutes for the human heart when a patient undergoes heart surgery (in 1952 the National Association of Science Writers listed it as one of the top ten scientific developments of that year); (ii) The electrostethograph, a sensitive pickup for detecting the heart's faint, low frequency sounds, too faint for the human ear or a physician's stethoscope, to detect; and (iii) the photoelectric oxyhemograph, which monitors the blood oyxgen count of a surgery patient and gives the anesthetist

an instant reading of the patient's anesthetic condition.

Graf-Apsco Company

Booth 66. If you have any microscope troubles, it would be well to stop at Booth No. 66 of the Graf-Apsco Company, "America's leading microscope repair house." Also exhibited are new Graf-Apsco microscopes with exclusive features designed into the stand to keep the instrument in good working order indefinitely. If you do not know what to do with your obsolete microscope, the Graf-Apsco Co. will buy it for cash or accept it in trade.

William J. Hacker & Co., Inc.

Booth 9. The William J. Hacker exhibit will include the following Reichert instruments: the research microscope Zetopan, the outstanding, most advanced research instrument, with reflected and transmitted light and dual illumination, for biology, fluorescence microscopy, examination of opaque specimens, photomicrography, and cinephotomicrography; the research metallograph and universal camera microscope "Me F" (inverted type) with 4- by 5-inch built-in camera, with five alternate light sources for reflected and transmitted light and dual illumination, for metallography, biology, fluorescence microscopy, and related fields—an instrument of unlimited versatility; the stereoscopic microscope series Mak, with special cross-motion adjustment for easy examination of material; the original Kofler hot (or cooling) stage for observation of the melting process of substances under polarized light; the original Kofler hot (or cooling) bench for quick identification of organic substances by determination of their melting points within seconds; and the Micro-Viewscope, a projection microscope with built-in screen. The following instruments will be shown for the first time: the Perth-O-Meter, new surface-finish tester, with electronic tracer system which automatically indicates and records roughness of plane, convex, and concave surfaces or arbor holes within seconds; and the new portable *Profilux,* optical profile projector and comparator, for quick and accurate control of machined parts.

Harvard Apparatus Company, Inc.

Booth 33. The Harvard Apparatus Company, Inc., a nonprofit enterprise, will display apparatus of interest to both the teacher and investigator in physiology. In addition to showing our standard line of respiration pumps, stimulators, ergographs, clamps, and so forth, we shall exhibit for the first time our new interchangeable motorized transmissions designed to be interchangeable with kymographs, continuous paper recorders, and infusion pumps. These plug-in units are a complete motorized 5000-to-1 gear-shift package. The products manufactured by the Harvard Apparatus Company are not available through distributors or agents, but are sold directly from our factory to educational institutions, research laboratories, and persons engaged in research in medicine.

D. C. Heath and Company

Booth 64. The D. C. Heath and Company exhibit will feature the following: *Biology* by Relis Brown, a brand-new college textbook for the beginning biology course; *Biology* by Kroeber, Wolff, and Weaver, a new high-school biology text; *Heath Elementary Science* series by Herman and Nina Schneider, a popular series of science textbooks for the elementary schools; *Chemistry in Action,* third edition, by Rawlins and Struble, a chemistry text for secondary schools. In addition, we are showing numerous other science textbooks for use in high schools and in colleges.

International Business Machines Corporation Research Center, Poughkeepsie

Mezzanine area A.

Chas. J. Lane Corp.

Booths 3 and 4. Chas. J. Lane Corp. of New York City will display a large selection of museum cases at the 1956 AAAS Exposition of Science and Industry. Included in their exhibit will be herbarium cases for the storage of botany specimens, entomology cases for the storage of insect specimens, skin cases for the storage of bird and animal skins, and cases for the storage of geology and paleontology specimens. In addition to these cases, a line of Visi-Shelf filing equipment will also be displayed. This revolutionary record-filing equipment makes possible the holding of twice as many records in the same space, or the same amount of records in half the space that would be occupied by standard filing equipment. Records filed in the Visi-Shelf are arranged from left to right, allowing increased visibility and greater accessibility. This equipment is available in different sizes in a variety of colors. Literature can be obtained at the exhibit. For further details, write Chas. J. Lane Corp., 105 Chambers Street, New York 7, N. Y.

Library of Science

Booth 10. The Library of Science was organized in 1955 to bring to working scientists, as well as to highly informed laymen, the enduring books in science which exemplify the unity of scientific thought and inquiry. Books of all publishers are made available, including important classics and imported editions, always at substantial savings to members. Among the distinguished authors whose works have recently been distributed are George Sarton, Albert Einstein, Fred Hoyle, George Polya, Theodosius Dobzhansky, Louis De Broglie, Ralph Linton, and J. Robert Oppenheimer. One of the important current selections is the new four-volume set, edited by James R. Newman, *The World of Mathematics.* It is shown in the Library of Science's exhibit, along with other recent selections available.

Linguaphone Institute

Booth 15. Linguaphone Institute, producer of "World's Standard" conversational home-study courses in 34 languages, proudly presents its new revised material in leading languages. Available in a choice of speeds on unbreakable, fidelity discs, they are the ideal way in which to attain full reading and conversational fluency in a foreign language with a minimum expenditure of time. Advanced units are also available. Also on exhibit in the Linguaphone booth are the Dormiphonic instruments for relaxful learning developed by Linguaphone's research affiliate. The Dormiphone phonograph and the unique Dormiphone memory trainer are designed to help speed up the learning of a language or the memorization of specialized material. Free trial lessons and full demonstration of the Dormiphone phonograph and memory trainer, as well as of the Linguaphone method, are available without obligation.

Lourdes Instrument Corp.

Booths 72 and 73. Lourdes Instrument Corp. will display a variety of new designs in high-speed centrifuges, as well as their all purpose Multi-Mixer homogenizer. You are cordially invited to review another Lourdes' contribution to the world of science; the model LR superspeed refrigerated centrifuge, available with three rotors as follows: (i) 9-inch angle rotor with 400-cubic-centimeter capacity and speeds up to 16,000 revolutions per minute; (ii) 11-inch angle rotor with 1500-cubic-centimeter capacity and speeds to 11,000 revolutions per minute; (iii) swinging-cup rotor for zonal separation with 96-cubic-centimeter capacity, speeds to 12,000 revolutions per minute and forces to 21,500 times gravity. In addition see the models AA, AB, AT and AX centrifuges, all of which offer 400-cubic-centimeter capacity, speeds to 16,500 revolutions per minute and forces to 34,800 times gravity. Also on display will be the models SL and L with 1500-cubic-centimeter capacity, speeds to 11,000 revolutions per minute and forces 5 times greater than comparable volume centrifuges. The Lourdes' all-purpose Multi-Mixer, adaptable for a wider range of sealed homogenizing within stainless-steel containers, centrifuge test tubes, centrifuge bottles, and glass Mason jars will also be on display. Other Multi-Mixer adaptations include a swinging blade-scraper homogenizer assembly, a

tissue-grinding flexible coupling assembly, a Jacobs chuck assembly, and a continuous-flow, temperature-control container.

Microcard Corporation

Booth 23. The Microcard Corporation will have an exhibit of its product. A description follows: Microcards are normally 3- by 5-inch cards on special photographic paper bearing from 40 to 60 or more pages of microcopy and having a heading in full size type for rapid filing and retrieval. They are read by an easily operated and compact reading machine that magnifies the image to original size or larger on the screen. Microcards are very inexpensive and are practical in runs of 5 to 500 copies. They provide at least a 95 percent space saving and are ideally suited for the storage of reference material. They may be indexed in any desired manner. Among present applications are reproduction of laboratory manuals for intraplant use, replacement of back issues of technical periodicals in company libraries, reproduction and dissemination of test data or specifications, and duplication of basic technical library. Microcards can reproduce practically all forms of legible material. The manufacture of these cards is handled by the Microcard Corporation, West Salem, Wis.

Muscular Dystrophy Associations of America, Inc.

Mezzanine area. This exhibit illustrates all phases of muscular dystrophy and the measures taken to combat it. Spotlighted are the physical manifestations of the disease, both clinically, as it cripples the victim, and histologically, as normal muscle structure deteriorates. A series of eight stop-action pictures which light up in sequence shows how the disease impairs the patient's performance of a routine movement, getting up from the floor.

Miles Reproducer Company, Inc.

Booth 67. Case histories, lectures, and dictation may now be recorded at a 60-foot radius with Walkie-Recordall, an 8-pound self-powered, battery recorder-transcriber. It operates in or out of the closed briefcase, indoors or outdoors, while stationary, walking, riding or flying. It records in noisy places as interferences do not block recordings. The voice-activated, self-start-stop feature automatically starts and stops the recording from microphone or telephone, thus eliminating supervision and the recording of silent periods. While facilities for transcribing are available, transcription may be eliminated due to ease of handling identifiable, compact, indexed recordings without the delay of rewinding. Up to 8 hours of permanent recordings may be accumulated at intervals on an "endless" belt costing 25 cents.

National Geographic Society

Booths 70 and 71. The exhibit of the National Geographic Society will feature the *National Geographic Magazine* and the *Geographic School Bulletins*. Also on display will be maps, books, pictures, and other special educational materials of the society. An automatic projector will screen a continuous selection of natural color slides. The slides cover National Geographic field assignments and expeditions and were selected from illustrations by staff photographers of the *National Geographic Magazine*.

National Science Foundation

Mezzanine area. The National Science Foundation, an agency of the United States Government, was established in 1950 to promote the progress of science; to advance the national health, prosperity, and welfare; and to secure the national defense. Activities of the foundation include: (i) initiating and supporting basic scientific research through grants for research projects, for construction of facilities, for conferences and symposia, and for international travel; (ii) awarding predoctoral and postdoctoral fellowships; (iii) supporting programs for improving the quality of science teaching at the high-school and undergraduate-college level; (iv) fostering the interchange of scientific information among scientists in the United States and foreign countries; (v) providing a central clearing house for information concerning scientific and technical personnel; (vi) undertaking studies of the nation's present and anticipated scientific activities to assist the Federal Government in making policy decisions concerning scientific research and education in the sciences; and (vii) cooperating in international scientific research activities.

New York State Employment Service

Mezzanine area. The Engineering and Science Placement Unit of the New York State Employment Service will supply information about the labor market and about services available through the New York State Employment Service's Professional Office. For 15 years, industry and manpower have made this office their central hiring headquarters, and it is common procedure for employers throughout the country to call on the assistance of the Professional Office whenever they recruit in the New York City area. Staff members from the Professional Office will be available for consultation.

New York Telephone Company and Bell Telephone Laboratories, Inc.

Booths 47 and 48. This display shows some of the core materials used in magnetic amplifiers and some of the magnetic amplifiers that have been built from them. The 400 cycle per second hysteresis loops are shown to illustrate the differences between alloy variations in core materials and the effects of air gap. A servomechanism is shown which uses only magnetic amplifiers for activating a portion of the loops. The amplifier is cast in epoxy resin and was one of the first designs to use silicon diodes. The third panel displays a matrix of the magnetic amplifier which performs a binary-to-decimal translation. A four-digit binary "word" is fed into the magnetic amplifier as currents in four signal leads. The output of a magnetic amplifier is a voltage on one of ten output leads. This output is displayed on a neon tube that houses formed electrodes. This provides a readable display to the operator of a binary computer.

Office of Naval Research

Mezzanine area. Since its establishment 10 years ago, the Office of Naval Research has supported scientific research in nearly every major scientific field. Its dynamic hydrobiological research program, including studies in marine, estuarine, and fresh-water environments, is designed to identify, characterize, and wherever possible, to provide a basis for overcoming hydrobiological problems of concern to the Navy. During the past decade marine, estuarine and fresh-water biological research has become increasingly important because of rapid technological advances in the development and use of underwater equipment and operational techniques. The exhibit shows some of the hydrobiological problems of concern to the Navy: how marine plants and organisms can interfere with effective sonar operations by fouling and noise; bioluminescence, or biologically produced light that often permits easy detection of vessels at night; damage to wooden port structures and ship hulls and metallic substances subject to corrosion and deterioration caused by marine organisms; dangers caused by various types of venomous and toxic marine organisms to underwater swimmers and survivors of ship and plane disasters in the sea. A vigorous program of hydrobiological research is enabling the Navy to solve many of these problems and to perform its mission of protecting our country on and under the seas.

Olympus Optical Instrument Company

Booth 2. Olympus microscopes have for many years been of excellent quality both optically and mechanically. Our new streamlined models, however, have been much improved in every respect. You will find them beautiful as well as convenient to manipulate, all controls being located below the stage. Of the two major manufacturers of microscopes in Japan, the Olympus Optical Com-

pany is known as the pioneer of the microscope industry in that country. They make about 60 percent of all microscopes manufactured in Japan, their nearest competitor making about 20 percent while the remaining 20 percent is made by about 12 small optical companies. When you purchase an Olympus microscope, you can do so with confidence, knowing that it is backed by one of the world's largest makers of microscopes. We invite you to examine and compare one of the world's finest microscopes. The low cost of these instruments will be another surprise for you.

Oxford University Press, Inc.

Booth 38. Oxford University Press will display books and materials in the field of science. The highlight of our exhibit is our new book by John A. Moore, *Principles of Zoology.* This textbook places special emphasis on the principles of genetics, biochemistry, embryology, human physiology, and evolution. It is designed primarily for first year zoology courses and for use as a text in teaching zoology in the general biology course. However, Moore's highly readable yet authoritative style makes this a work that will have invaluable appeal both to scientists in other fields and to the lay reader. Enhancing the textual material are "Suggested readings" and approximately 200 illustrations, nearly all original. We invite you to leaf through this modern zoology book and all other Oxford scientific books on display.

Pergamon Press

Booth 65. Pergamon Press are publishers of international research journals such as the *Journal of Applied Radiation, Isotopes and Nuclear Medicine,* the *Journal of Nuclear Energy* (which now includes a complete translation of *Atomnaya Energiya,* the Russian journal of atomic energy), the *Journal of Inorganic and Nuclear Chemistry,* and some dozen other scientific journals. Pergamon also publish books in the fields of science and technology—and an important publication in the past year has been the *Progress in Nuclear Energy* series based on the Geneva Conference on the Peaceful Uses of Atomic Energy. Two recently inaugurated series of monographs are the *International Series of Monographs on Nuclear Energy* and the *International Series of Monographs on Inorganic and Nuclear Chemistry.* A division has just been started which will concern itself solely with the publication of symposia. Forthcoming titles include: "Second annual seaweed symposia," Trondheim, Norway, July 1955; "Conference on chemical aeronomy" sponsored by the Geophysics Research Directorate, Harvard University, June 1956; "Conference on cloud physics," Woods Hole, Massachusetts, September 1955, also sponsored by the Geophysics Research Directorate.

Phipps & Bird, Inc.

Booth 1. Interested in the basic sciences? Then you are sure to find equipment of interest in P&B's booth. Anything from freeze-drying to pipette-drying; psychology, physiology and biology —or general laboratory equipment. P&B will attempt to have a most versatile display for your pleasure. We will have a qualified instrument engineer present who will be ready at all times to consult with you on your past, present, or perhaps future instrument problems.

Polaroid Corporation

Booths 16, 17, and 18. Polaroid Corporation presents the new Polaroid land projection film, which produces a black and white positive transparency ready for projection 3 minutes after the photograph is taken. Visitors to the booth can see oscillographs, photomicrographs and pictures of themselves, all made on the spot, processed in the camera and then projected on a screen. A feature of the system is the Polaroid copymaker—a convenient device for laboratory, classroom, or office for making Polaroid transparencies or paper prints of documents, charts, other photographs, or sections from books and manuscripts. The Polaroid land projection film produces slides in two sizes—3¼ by 4 inches to fit standard lantern slide projectors, and 2¼ by 2¼ inches to fit a new 500-watt Polaroid projector. With a speed of 1000 (ASA equivalent exposure index) and high resolution and sharpness, the film when projected makes images of extraordinary brilliance and detail. A new communications tool, this system provides a cheap, convenient, and easy method for telling a story to a group. It is expected that wide application of the system will be made in fields such as teaching, engineering presentations, and industrial training.

Psychological Corporation

Booth 26. The Psychological Corporation is a professional consulting and publishing organization in the field of applied psychology. Its services are made available to its clients and customers in a number of forms. Among these are psychological test materials, marketing and opinion research, industrial consulting, evaluation and counseling, testing programs, and consultation. The continuing concern of the staff of the corporation is to maintain it as an effective economic enterprise. This depends on the performance of the professional staff and the collaboration of skilled nonprofessional employees. The combined effort is directed toward the maintenance of high quality standards in present work, the development of new commercially acceptable services, and the demonstration of the truly important contribution that applied psychology can make in many areas. At our exhibit we hope to have the opportunity to describe our activities in more detail to our fellow scientists.

Ronald Press Company

Booth 35. The Ronald Press Company invites members of the AAAS meeting in New York to visit Booth 35 to pick up free convention packets. The packets include travel timetables, city maps, and other information of local interest. Visitors' attention is also invited to the display of selected Ronald books in the fields of biological and botanical sciences, chemistry, conservation, engineering, forestry, geology and geography, history of science and technology, mathematics, philosophy, physics and astronomy, psychology and psychiatry, and sociology. Representing the Ronald Press Company at the New York meeting are John A. Behnke, vice president; and Alfred H. Renshaw, field representative.

Schwarz Laboratories, Inc.

Booth 29. Schwarz Laboratories is the oldest and largest producer in the world of nucleic acid and its related derivatives. As a leading manufacturer of yeast biochemicals, Schwarz Laboratories will be represented by members of its staff to answer questions about the more than 180 products of biochemical and medical importance now made by the company. The exhibit will include nucleic acid compounds, purines and pyrimidines, adenosine phosphates, nucleosides and nucleotides, sugars and sugar phosphates, glutathione compounds, sulfhydryl reagents, deoxynucleosides, optically standardized amino acids and kit, carbon-14, sulfur-35, and phosphorus-32 radiochemicals, and clinical preparations. Featured will be Schwarz preparations of importance in sulfhydryl studies, nucleotide and peptide synthesis, whole-blood preservation, cancer research, and in investigations in nutrition, metabolic and enzyme functions, tissue culture, and cardiac and vascular ailments.

The Science Library

Booths 19, 20, and 21. The Science Library is administered by the AAAS as an additional service to publishers of books, both exhibitors and nonexhibitors. It has become an integral part of each year's Annual Exposition of Science and Industry. In the Science Library, books of all publishers participating are grouped by fields of science —a convenience both to the visitor who is restricting his inspection of books to

a single category and to the one who wishes to browse. Among the publishers represented in the Science Library are American Association for the Advancement of Science; Addison-Wesley Publishing Company, Inc.; American Book Company; Annual Reviews, Inc.; R. R. Bowker Company; William Byrd Press, Inc.; John de Graff Inc.; E. P. Dutton & Co., Inc.; Emerson Books, Inc.; W. H. Freeman and Company; Galois Institute of Mathematics and Art; Paul B. Hoeber, Inc.; Henry Holt and Company; Houghton Mifflin Company; Interscience Publishers, Inc.; Iowa State College Press; Johns Hopkins Press; Lantern Press, Inc.; Little, Brown & Company, Inc.; Josiah Macy, Jr., Foundation; Prentice-Hall, Inc.; Reinhold Publishing Corporation; Row, Peterson and Company; W. B Saunders Company; Simon and Schuster, Inc.; University of Minnesota Press; University of North Carolina Press; University of Pittsburgh Press; D. Van Nostrand Company, Inc.; John Wiley & Sons, Inc.; World Book Company; Yale University Press.

Rayoscope Company

Booth 30. The Rayoscope is a rather new and efficient microprojector and its many uses will be demonstrated. Special emphasis will be placed on projection of living specimens for long periods of time on a screen at a distance so that groups of observers can see simultaneously. Customers are urged to bring their own specimen slides which they would like to project to large classes. You will thus be given an opportunity to make your own test of the effectiveness of microprojection.

Smith, Kline & French Laboratories

Area B. Smith, Kline & French Laboratories will have a series of photomurals with accompanying text to illustrate various aspects of the research and development program at Smith, Kline & French Laboratories. Particular emphasis is placed on company policies designed to give the research scientist an active voice in management without sacrificing his progress in his chosen field of research. For example, through company policy, the scientist is allotted free time for his personal research. He is encouraged to participate actively in scientific meetings and to publish the results of his experiments. At the same time, his representation on policy-making committees provides liaison between scientist and administrator and assures the scientist of frequent opportunities to express his views and to influence company policy.

Ivan Sorvall, Inc.

Booths 12 and 13. Ivan Sorvall, Inc., Norwalk, Conn., will display new stainless-steel rotors for their Servall small-, medium-, and large-capacity angle centrifuges. The famed SS-1 and SS-1A superspeed angle centrifuges, known worldwide as the "workhorse of the modern laboratory," will be shown along with the Servall superspeed refrigerated centrifuge. The Servall Porter-Blum microtome, automatic pipettes, and high-speed Omni-Mixer will be the other Servall instruments on display. The following LKB instruments will be shown: column electrophoresis apparatus, composite column for chromatography, paper electrophoresis equipment, filter-paper column, Polarolyzer, conductivity bridge, and Sjostrand ultramicrotome. The completely new Radi-Rac fraction collector for time, volumetric, and drop count methods, featuring collection of effluents in radii, circles and spirals, will be demonstrated for the first time in the United States.

Special Libraries Association, New York Chapter

Booth 22. The New York Chapter of the Special Libraries Association will exhibit materials to show what a special library is, what it does, and how it can assist scientists.

Stauffer Chemical Company

Booth 37.

United Nations

Mezzanine area.

United Scientific Co.

Booth 41. Many new Unitron microscopes for research, education and industry—including some exhibited for the first time—will be on display and in operation at the Unitron booth. Research workers will be particularly interested in the new inverted models which are of special value in the study of plankton and chemical reactions: the new Unitron inverted research model MIC with provision for 35-millimeter photography, and the universal camera microscope for bright-field, phase, and dark-field with built-in cameras for 3¼- by 4¼-inch, 35-millimeter, and 60-second Polaroid photography. With the inverted models, jars of specimen fluid may be placed directly on the microscope stage and examined at magnifications from 25 to 2000×. Educators will find many new, inexpensive models for classroom use, including laboratory, phase, autoillumination and stereoscopic types which formerly were priced out of the range of restricted school budgets. Biologists will have an opportunity to see for themselves how Unitron phase microscopes make living and other transparent specimens visible without staining. These remarkable instruments make the latest development in microscopy available for as little as $99 for a complete instrument. Other Unitron instruments to be shown include polarizing, stereoscopic, dissecting, binocular and metallurgical microscopes, the Unitron photomicrography set ACA, and Unitron astronomical telescopes.

Veterans Administration

Mezzanine area. This exhibit, entitled "Genesis of the rat skeleton," presents a comprehensive microscopic demonstration of the establishment of ossification centers in the rat. Ossification normally begins in the rat embryo during the 17th day after conception and proceeds so rapidly that within 1 week all diaphysial centers are established, and within an additional 3 weeks all epiphyseal centers are present. The photographed, alizarin-stained, cleared specimens are superior to radiograms. The rapidity and exactitude of the chronology of the establishment of ossification centers is demonstrated.

Walter Reed Army Institute of Research

Mezzanine area. The exhibit of the Walter Reed Army Institute of Research is entitled "Opportunities for allied scientists in the U.S. Army Medical Service," and will consist of color transparencies depicting the areas of utilization and opportunity of the Allied Science Branch of the Medical Service Corps. The exhibit will show that its members are regular and reserve Army officers trained in scientific and professional fields allied to medicine; that, working in their own specialties, they possess a combination of skills vital to the modern concept of medicine and that the expert services which they provide are indispensable as a supporting element of the Army's medical team.

W. M. Welch Manufacturing Company

Booths 57 and 58. The W. M. Welch Manufacturing Company will exhibit laboratory instruments for physics, chemistry, and biology departments including stainless-steel balances, high-vacuum pumps, electrical measuring instruments, electronics-teaching devices, Densichron for measuring optical density, color saturation, paper chromatograms, and so forth. Several additional pieces will be shown: mathematics teaching aids, microscopes, biological models, and preserved specimens. Several charts and sets of charts will be shown for teaching physics, physiology and biology.

Wild Heerbrugg Instruments, Inc.

Booth 49.

William Guild's Science Center

Mezzanine area.