entiated tissues. Consequently, many more laboratories are practicing the organ culture method now than were using it a few years ago.

Why We Follow Fashion

The motives that prompt us to follow fashions in research are various and not always estimable. Let us consider first some of the reasons why a new technique "catches on." The obvious and legitimate reason—that it is likely to provide an answer to many people's current problems—naturally accounts for much of its sudden popularity, but not for all. Some techniques become fashionable partly because they are difficult, expensive, or (better still) both, and this gives them a certain snob value; they are, as it were, the mink coats of research. Other techniques become fashionable for exactly the opposite reason—because they are so cheap and simple that anyone can use them, and yet they are *new*, and that in itself confers upon them a certain prestige.

When an important new discovery is made, it usually presents the broad outlines of a new picture, but the details have yet to be filled in. Very few of us are capable of drawing the broad outline, but if we are competent scientists we are perfectly capable of filling in the details, and this we rush to do, for a number of different reasons. Some do it out of passionate curiosity, because they long to see what the finished picture will be like; others do it because they are short of ideas, and the new work has disclosed some line of investigation that they are well qualified to follow. These are both very sound reasons. But less worthy motives sometimes operate. The field is new, and so prestige is to be gained from working in it; but what is even more important, being new, it is likely to attract money from granting bodies.

And this, I think, brings us to a rather pernicious aspect of fashion in research. In general, the waves of interest in something fresh that constantly sweep through our world are vital to its well-being, and without them research would indeed be stagnant and dreary. But rushing after new things merely because they are new (or what is more commonly termed "jumping on the band wagon") is another matter; it leads to the abandonment of existing lines of work that ought to be carried much farther, and even to contempt for the realities of nature, as in the disdain for structure that was such a regrettable fashion in cell biology a few years ago.

So where do we stand in this matter—is fashion in cell biology to be deplored or encouraged? Whichever way you decide to answer this question, the fact remains that hundreds of us have converged on Paris from all over the world for the sole purpose of watching what I am sure will be a magnificent display of all the latest modes—of course I mean in cell biology!

AAAS New York Meeting

New York meeting information; Annual Exposition of Science and Industry; concluding section and society programs.

Raymond L. Taylor

In more than 112 years, the Association has met no more than seven times in any one city, and, indeed, only five cities have been host that often (New York, Boston, Philadelphia, Washington, and Chicago). This year's 127th meeting will be the eighth New York meeting.

Every meeting in New York has been a large one, and it is possible that this Christmas week the record-breaking New York meeting of 1949 will be exceeded in number of registrants. That meeting was held in the four Pennsylvania-zone hotels. Fortunately, this year's meeting in the Grand Central zone has more capacity, both in session rooms and in sleeping accommodations at uniform, moderate rates. Indicators of heavy attendance have been advance registrations—about twice as many as last year—and hotel reservations, which have been heavy, with a larger number of wives than usual attending. The national meeting of the American Astronomical Society will be in a downtown hotel along with other participating societies, instead of uptown, as in 1956. An officer of the American Society of Zoologists has estimated that this will be perhaps their largest and most comprehensive meeting to date. Exclusive of several multisessioned symposia, that society's sessions for short papers were increased from 10 to 19.

The original 103 booths of the Annual Exposition of Science and Industry were sold out during the summer. Fortunately, the Biltmore Hotel was able to accelerate the remodeling of two session rooms on the same floor as the exposition, and thereby made space available for booths 104 to 119.

The preparations for any large scientific meeting—even if it is a recurrent yearly event, and one with a basic pattern—are difficult fully to appreciate except by those who have been involved. The annual national meeting of the American Association for the Advancement of Science is particularly complex, uniquely interdisciplinary, and variable with respect to the number and identity of the many participating societies. Typically, all 18 AAAS sections have programs, often symposia one to six sessions in length; some 40 to 50 of the 245 affiliated societies will meet with the Association and sponsor programs varying from single sessions or social events to full-scale national meetings with concurrent sessions extending over four or five days. Several affiliates regularly arrange regional meetings or sponsor special two- to five-session

symposia. Another 40 to 50 societies are official cosponsors of the sectional or societal programs of others. Altogether, the AAAS meeting may have more than 300 sessions that range from highly specialized to broad and general ones—arranged, however, so that there is a minimum of conflict for their potential audiences.

The decision of the Board of Directors on the site of the meeting is always made some 2 to 5 years in advance. After a survey of the available physical facilities, basic decisions for the meeting and its local committees are made a year ahead. Occasionally, however, a meeting in a given city may be postponed if it seems unlikely that new facilities will be completed on schedule. This occurred when the Denver meeting was postponed from 1959 until 1961—until the Denver Hilton and other facilities would be completed. Or, almost unprecedentedly, a meeting may have to be changed within the scheduled year, as occurred in the case of this year's meeting.

It was not until early February, 1960, that the 127th meeting was moved from Philadelphia to New York because accommodations in Philadelphia would have been too inconvenient [*Science* **131**, 489 (1960)]. Fortunately, hotels in New York's Grand Central zone were able to accommodate the Association.

Some of the sectional programs are virtually complete early in the spring, but others, especially those with sessions for contributed papers, are not ready until early October.

The preliminary announcement of the New York meeting [*Science* **131**, 1616 (27 May 1960)] indicated the general scope of this year's convention of the Association. Two months later, additional program notes appeared with an account of hotel headquarters [*Science* **132**, 228 (22 July 1960)]. The synopses of the programs, which began to appear in *Science* on 28 Oct. and have appeared in each issue since, have provided additional information, but only the General Program, which should reach advance registrants by first-class mail within the next week, can furnish full information on the scope and quality of this year's meeting.

There are events scheduled by the Association as a whole, including two sessions reserved for the AAAS General Symposium, "Moving Frontiers of Science," a special address on the challenge to science of conditions in the world today, by Sir Charles P. Snow, the AAAS Presidential Address and Reception, two meetings of the Council and other business sessions, and the AAAS Smoker for all registrants. On other days there are coffee hours and smokers for the science teachers, for geologists, and for others. There are General Sessions sponsored by committees of the Association, a Junior Scientists Assembly especially for science-minded high-school students, and the distinguished evening addresses or lectures sponsored by the Society of the Sigma Xi and the United Chapters of Phi Beta Kappa (jointly), the Tau Beta Pi Association, and the National Geographic Society.

The large-scale exhibits of the Annual Exposition of Science and Industry and the programs of the AAAS Science Theatre—both, necessarily, only for registrants—are in themselves worth a trip to New York. Optical companies, instrument makers, supply houses, publishers of books, maps, and encyclopedias, and others who provide the tools and supplies scientists and teachers use, collectively, have invested a large sum for the opportunity to meet those who use their products. No one who attends the meetings should fail to visit the Exposition.

An outline of the highlights of the meeting and other pertinent information follows.

Women's Events

Because so many women—professional scientists and others—will attend the meeting, a Committee on Women's Events has been appointed, chaired by Mrs. Eunice Thomas Miner, executive director of the New York Academy of Sciences. The entire mezzanine of the Commodore has been reserved for ladies; coffee will be served, and a special luncheon has been arranged for 30 Dec., at which Edith H. Quimby (College of Physicians and Surgeons, Columbia University) will speak, on "Radiation Hazards and What is Being Done about Them." This luncheon is in addition to the regular luncheon of Sigma Delta Epsilon for all women in science on 28 Dec., at which Dorothy Quiggle (Petroleum Research Laboratories, Pennsylvania State University) will speak, on "Petroleum—A Catalyst for Progress." The joint program of Sigma Delta Epsilon and the American Council on Women in Science is scheduled for the afternoon of 27 Dec. An opening address by Mary Louise Robbins (George Washington University School of Medicine) will be followed by two concurrent panels, moderated by John R. Cortelyou (DePaul University) and Margaret Mead (American Museum of Natural History), respectively, and by a concluding session.

Science in Communist China

A four-part symposium on the sciences in Communist China will be held on 26–27 December. The symposium is a joint program of the Conference on Scientific Communication and the AAAS. It is cosponsored by the National Science Foundation, American Chemical Society, American Geological Institute, American Geophysical Union, American Institute of Biological Sciences, American Institute of Physics, American Mathematical Society, American Meteorological Society, Engineers Joint Council, Federation of American Societies for Experimental Biology, and Social Science Research Council. George R. Harrison, dean of the school of science, Massachusetts Institute of Technology, will preside.

Part I, Mathematics and the Physical Sciences. 26 Dec., morning. "Mathematics," Marshall Stone, University of Chicago. "Nuclear physics," Ta-you-Wu, National Research Council, Ottawa, and Robert T. Beyer, Brown University. "Chemistry," Arthur Yu, Thiokol Chemical Corp., Trenton, N.J. "Geology," Edward C. T. Chao, U.S. Geological Survey. "Mining and metallurgy," Kung-Ping Wang, U.S. Bureau of Mines. "Geophysics of the solid earth," J. Tuzo Wilson, University of Toronto.

Part II, Meteorology, Oceanography, and the Engineering Sciences, 26 Dec., afternoon. "Meteorology, hydrology, and oceanography," Malcolm Rigby, American Meteorological Society. "Introduction to engineering and electrical engineering," T. C. Tsao, Columbia University. "Civil and hydraulic engineering," Lewis L. T. Au, Amman and Whitney, New York, N.Y. "Mechanical engineering," Edward K. Nieh, Ebasco Services, New York, N.Y. "Chemical engineering," L. C. Pan, Chemical Construction Corp., New York, N.Y. "Electronics and computing," Yao T. Li, Massachusetts Institute

of Technology, and Way-Dong Woo, Newton, Mass.

Part III, Astronomy and the Biological and Medical Sciences. 27 Dec., morning. "Astronomy," Frank Bradshaw Wood, University of Pennsylvania. "Botanical sciences," Hui-Lin Li, University of Pennsylvania. "Zoological sciences," Tien-Hsi-Cheng, Pennsylvania State University. "Genetics, and plant and animal breeding," C. C. Li, University of Pittsburgh. "Physiology," Robert K. S. Lim, Miles-Ames Research Laboratory, Elkhart, Ind., and G. H. Wang, University of Wisconsin. "Pharmacology," E. Leong Way, University of California School of Medicine. "Medicine and public health," William Y. Chen, Coffman Medical Center, Hagerstown, Md.

Part IV, Agriculture and the Social Sciences. 27 Dec., afternoon. "Agricultural science in Communist China," Ralph W. Phillips, Arlington, Va., and Leslie T. C. Kuo, U.S. Department of Agriculture, Washington, D.C. "Organization and development of science," John M. H. Lindbeck, Harvard University. "Science, scientists, and politics," Theodore Chen, University of Southern California. "Education and scientific manpower," Leo A. Orleans, Library of Congress. "Anthropology, linguistics, and archeology," Francis L. K. Hsu, Northwestern University. "Geography," Harold Wiens, Yale University.

AAAS Special Sessions

One of the characteristic and most important features of the annual meetings of the Association is the series of outstanding general addresses by distinguished authorities, sponsored by the Association or by organizations that meet regularly with it. These special events are open to the general public of the city in which the meeting is held.

AAAS Special Lecture; 27 Dec., evening. "The challenge to science of world conditions today," Sir Charles P. Snow, London, England, visiting professor of English, University of California, Berkeley. The discussants will be Theodore M. Hesburgh, president of the University of Notre Dame, and William O. Baker, vice president-research, Bell Telephone Laboratories. Warren Weaver, vice president, Alfred P. Sloan Foundation, will preside.

AAAS Presidential Address; 28 Dec. evening. "The indispensable tools of science," by Paul E. Klopsteg, retiring president of the AAAS. Chauncey D. Leake, president of the AAAS, will preside. Before the address, Eger V. Murphree, general chairman of the New York meeting, will speak briefly. After the address there will be an informal AAAS Presidential Reception in the adjacent foyer and ballroom areas. All registrants and members of the local committees are invited to attend.

Joint annual address of the Society of the Sigma Xi and the United Chapters of Phi Beta Kappa; 29 Dec., evening. "Scientists and laymen," Polykarp Kusch, professor of physics, Columbia University.

Annual address of The Tau Beta Phi Association; 29 Dec., evening. "The increasing significance of energy in an expanding world," Walker L. Cisler, president of the Detroit Edison Company and president of the American Society of Mechanical Engineers.

After the Sigma Xi–Phi Beta Kappa and the Tau Beta Phi addresses on Thursday evening, the AAAS smoker for all registrants will be held in the ballroom area of the Commodore Hotel.

Annual lecture and film of the National Geographic Society; 30 Dec., evening. "Finding the world's earliest man," Matthew W. Stirling, research associate, Smithsonian Institution, and member of the National Geographic Society's committee for research and exploration.

AAAS General Symposium

At a joint meeting in the spring of 1956, the Committee on AAAS Meetings and the secretaries of the AAAS sections decided that at each annual meeting there should be one or more general sessions for the Association as a whole. The title "Moving Frontiers of Science" was adopted for these sessions, which consist of reports of research trends and findings in specialized fields that are of interest to all scientists.

Part I, 26 Dec., evening. "Recent work on meteorites," Edward Anders, University of Chicago; "Development of present concepts of the organization of the brain," H. W. Magoun, University of California, Los Angeles. Thomas Park, president elect of the AAAS, will preside.

Part II, 28 Dec., afternoon. "The molecular basis of vision," George Wald, Harvard University; "Recent developments and the current status of information theory," Herman H. Goldstine, Lamb Estate Research Center, International Business Machines Corporation. Thomas Park will preside.

AAAS Conferences

In addition to the Academy Conference, several conferences have become recurrent events at AAAS meetings. These conferences are open to all who are interested. Academy Conference, 26 and 27 Dec. Conference on Scientific Communication, 26 and 27 Dec. Conference on Scientific Manpower, 27 Dec.

AAAS General Sessions

Science in the Promotion of Human Welfare. Establishment of the AAAS committee on Science in the Promotion of Human Welfare was authorized by the AAAS Council at the Washington meeting in 1958. Members of the committee are Barry Commoner, chairman; Robert B. Brode; Harrison Brown; T. C. Byerly; Laurence K. Frank; H. Jack Geiger; Frank W. Notestein; Margaret Mead (ex officio); and Dael Wolfle (ex officio).

"The Scientist's Role in the Community: New Responsibilities in the Nuclear Age"; 26 Dec., afternoon. Margaret Mead will preside. "Public reaction to a proposed nuclear installation: the role of the scientific community," Edward Baylor, Woods Hole Oceanographic Institution. "Experiences in public education in the New York area: the Scientists' Committee for Radiation Information," Jules Hirsch, Rockefeller Institute. "A community effort to get the facts: the St. Louis Citizens' Committee for Nuclear Information," Barry Commoner, Washington University. "The consumer's interest in radiation," Irving Michaelson, Consumer's Union, Mount Vernon, N.Y. "What the individual scientist can do," David Barry, Kansas State University. The discussants will be Judson Hardy, Division of Radiological Health, Department of Health, Education, and Welfare, and Victor Cohn, *Minneapolis Tribune.*

"Psychological and Sociological Implications of Nuclear Arms," 28 Dec., morning, arranged by Barry Commoner. Harold Lief will preside. "Disarmament—the bargaining problem," Ken-

neth E. Boulding, University of Michigan. "The motivational and emotional aspects of the disarmament problem," Jerome D. Frank, Johns Hopkins University. "The nature of current weapons systems," Ralph E. Lapp, Arlington, Va. "The cognitive aspects of the present dilemma and certain requirements for its solution," Charles Osgood, University of Illinois.

"Open Hearings on Scientists' Responsibilities," two sessions, 28 and 30 Dec., afternoon, arranged by Barry Commoner. This is an open meeting at which various aspects of scientists' responsibilities regarding social problems arising from scientific developments will be discussed. All registrants are invited to participate. Members of the Committee on Science in the Promotion of Human Welfare will be present.

Progress in Teacher Certification in Science; 28 Dec., morning. Panel discussion; John R. Mayor, AAAS, will preside. Panel members: Louise Combs, Kentucky State Department of Education; H. Bentley Glass, Johns Hopkins University; A. John Holden, Jr., State Commissioner of Education, Vermont; Wayland W. Osborn, Iowa State Department of Public Instruction; William P. Viall, AAAS.

Science Education in Elementary Schools and Junior High Schools; 29 Dec., afternoon. Arranged by John R. Mayor. Thornton Page, chairman of the AAAS Cooperative Committee, will preside. "Science education in the elementary and junior high schools from the point of view of a scientist," Thomas S. Hall, Washington University. "Some considerations at the elementary level," Jacqueline Mallinson, Western Michigan University. "Some considerations at the junior high school level," Abe S. Fischler, Harvard University.

Interdisciplinary Symposia; 28 Dec., morning. Three interdisciplinary symposia, in the physical sciences, the biological sciences, and the social sciences, will be held simultaneously. The programs have been announced in *Science* (28 Oct., p. 1259; 4 Nov., pp. 1318 and 1320).

AAAS Science Theatre

The AAAS Science Theatre, a permanent feature of the Association's annual meeting, presents each year a selection of the latest domestic and foreign scientific films, throughout the meeting period. Note that, in the following schedule, programs are repeated at different times to increase the opportunities for those attending the sessions of the 127th meeting to see particular films. The Association is greatly indebted to all those who made these pictures and lent them for showing, and to the American Scientific Film Association.

The Science Theatre may be reached by going through the Annual Exposition of Science and Industry on the ballroom floor of the Biltmore Hotel. Admission is restricted to those who are wearing the AAAS Convention Badge.

Hours of the Science Theatre. Tuesday to Thursday, 27–29 Dec., 10 A.M. to 6 P.M.; Friday, 30 Dec., 9 A.M. to 3:30 P.M.

27 December, 10 A.M. to 2 P.M.

Tiros—Weather Satellite. Produced by Radio Corporation of America.

Schlieren Techniques. Produced by Peter de Normanville.

Unheard Melodies. Produced by Donald H. Andrews, Johns Hopkins University, under the auspices of the Foundation for Integrated Education.

A Light in Nature. Produced by Shell International Petroleum Company.

The Living Soil. Produced by Shell International Petroleum Company.

Intra-oral TV Camera. Produced by the TV Section, Audio-Visual Division, University of Texas Dental Branch.

The Biology and Control of Domestic Mosquitoes. Produced by the Communicable Disease Center, U.S. Public Health Service.

Science and Space. Produced by the National Academy of Sciences.

Universe. Produced by the National Film Board of Canada.

Upright Vision Through Inverting Spectacles. Produced by the Department for Experimental Psychology, University of Innsbruck.

The Encyclopaedia Cinematographica. Produced by Ing G. Wolf, University of Göttingen.

27 December, 2 to 6 P.M.

Ace In The Hole. Produced by Air Force Ballistic Missile Division (ARDC).

Trapping of Free Radicals at Low Temperatures. Produced by the National Bureau of Standards.

Photographic Instrumentation. Produced by the Naval Ordnance Laboratory.

Eumenes, Mason-Bees. Produced by Service du Film de Recherche Scientifique.

The Biology of Atta, the Ants Which Grow Mushrooms. Produced by Service du Film de Recherche Scientifique.

Morphological Modification of Peking Ducks by Injections of Deoxyribonucleic Acids. Produced by Service du Film de Recherche Scientifique.

Medical Genetics. Produced by Milner-Fenwick Inc.

The Flaming Sky. Produced by the National Academy of Sciences.

The Marine Snow—The Origin of Oil. Produced by Sozo Okado, Tokyo.

The Seven Bridges of Koenigsberg. Produced by Films/Mathematics.

The Encyclopaedia Cinematographica. Produced by Ing G. Wolf, University of Göttingen.

28 December, 10 A.M. to 2 P.M.

Similarities in Wave Behavior. Produced by Bell Telephone Laboratories.

The Revealing Eye. Produced by Shell International Petroleum Company.

Biological Action of High Pressures. Produced by Service du Film de Recherche Scientifique.

Dynamics of the Developing Chick Otocyst. Produced by Northwestern University Medical School and Chicago Wesley Memorial Hospital.

Dynamic Valvular Pathology—The Aortic Valve. Produced by Richard P. Kelley, Fairfield Goedale, Benjamin Castleman, and J. Gordon Scannell, of Massachusetts General Hospital.

Germfree Animals in Medical Research. Produced by Communicable Disease Center, Audiovisual Section, for the National Institute of Allergy and Infectious Diseases.

Virus to Mr. Virus. Produced by DOHO Chemical Corp.

Challenge of the Oceans. Produced by the National Academy of Sciences.

Project Echo. Produced by the National Aeronautics and Space Administration.

T-Plus Infinity. Produced by the Air Force Ballistic Missile Division (ARDC).

The Encyclopaedia Cinematographica. Produced by Ing G. Wolf, University of Göttingen.

28 December, 2 to 6 P.M.

Same as 27 Dec., 10 A.M. to 2 P.M.

29 December, 10 A.M. to 2 P.M.

Same as 27 Dec., 2 to 6 P.M.

29 December, 2 to 6 P.M.

Same as 28 Dec., 10 A.M. to 2 P.M.

30 December, 9 A.M. to 1 P.M.

The Encyclopaedia Cinematographica. Produced by Ing. G. Wolf, University of Göttingen.

Schlieren Techniques. Produced by Peter de Normanville.

Voice Reproduction. Produced by J. W. Varossieau, Utrecht, Netherlands.

Unheard Melodies. Produced by Donald H. Andrews, Johns Hopkins University, under the auspices of the Foundation for Integrated Education.

Trapping of Free Radicals at Low Temperatures. Produced by the National Bureau of Standards.

Photographic Instrumentation. Produced by the Naval Ordnance Laboratory.

The Revealing Eye. Produced by Shell International Petroleum Company.

The Marine Snow—The Origin of Oil. Produced by Sozo Okado, Tokyo, Japan.

Dynamic Valvular Pathology—The Aortic Valve. Produced by Richard P. Kelley, Fairfield Goedale, Benjamin Castleman, and J. Gordon Scannell, of Massachusetts General Hospital.

Anatomy of the Cell. Produced by Dr. Bessis, Institut de Cinematographie Scientifique.

Science of the Sea. Produced by International Film Bureau, Inc.

30 December, 1 to 3:30 P.M.

Gas-Cooled Reactor Experiment. Produced by Lookout Mountain Laboratory for the Idaho Operations Office, U.S. Atomic Energy Commission.

Voice Reproduction. Produced by J. W. Varossieau, Utrecht, Netherlands.

Under Way. Produced by the U.S. Maritime Administration and the U.S. Atomic Energy Commission.

Shackles for the Giant. Produced by the Mississippi River Commission, Corps of Engineers, U.S. Army.

The Encyclopaedia Cinematographica. Produced by Ing. G. Wolf, University of Göttingen.

AAAS Business Sessions

The Council of the Association will meet 27 Dec. at 4 P.M. in the West Ballroom of the Commodore Hotel. A second session of the Council is scheduled for 30 Dec. at 9 A.M. in the same room. All members of the Council have been notified, 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 Commodore Hotel mail desk, addressed to Dael Wolfle.

There will be a joint luncheon and planning session of all section officers and the Committee on AAAS meetings on Wednesday, 28 Dec., at noon. Dael Wolfle and Raymond L. Taylor, luncheon cochairmen.

Registration

Main Registration–Information Center. One AAAS Main Registration–Information Center is in the lobby of the Commodore Hotel; a second is in the lobby of the Biltmore Hotel. Both will be open as follows: 26 Dec., 8 A.M. to 10 P.M.; 27–29 Dec., 8 A.M. to 8 P.M.; 30 Dec., 8 A.M. to 6 P.M.

Badges and General Programs may be obtained at the supplementary registration desks, but supplementary literature, maps, and the like will be available only at the Main Registration Centers. Advance registrants (who will have received programs and badges prior to the meeting) are urged to visit a Main Registration Center at any time to obtain these additional items.

Supplementary Registration Desks. For the convenience of those attending the 127th meeting, there are two supplementary registration desks, at the Roosevelt and Belmont Plaza hotels. These will be open as follows: *Roosevelt*: 26 Dec., 8:30 A.M. to 8:30 P.M.; 27–28 Dec., 8 A.M. to 8 P.M.; 29 Dec., 8 A.M. to 6 P.M. *Belmont Plaza*: 26 Dec., 4 P.M. to 10 P.M.; 27–28 Dec., 9 A.M. to 8 P.M.; 29 Dec., 9 A.M. to 6 P.M.

Registration Fee. The AAAS registration fee, which, intentionally, has been kept at a minimum, is $3; a spouse or child of senior high school age who does not want a separate Program may register for $1, if he registers at the same time as the accompanying regular registrant. Each regular registrant receives a receipt, a Convention Badge, and the General Program—the only publication containing the programs of the 18 AAAS sections and of the 94 participating organizations. Any person who purchases an advance copy of the General Program but does not register in advance and who then attends the meeting has agreed to complete his registration by paying $1—and is expected to do so—at the Main Registration Center, or at one of the two supplementary registration desks, after which he receives his Convention Badge and the privileges that go with it.

Every thoughtful person will want to register and thus pay his share of the expenses of the meeting. The AAAS Convention Badge indicates that you are participating fully in this 127th convention of the Association. The badge should be worn throughout the meeting because (i) it reminds others to register; (ii) it is needed for admission to the Annual Exposition of Science and Industry, the AAAS Science Theatre, the AAAS Smoker, and the AAAS Reception that follows the presidential address; and (iii) it helps your friends to find you.

Visible Directory of Registrants. The Visible Directory of Registrants, through necessity, is located within the Annual Exposition of Science and Industry, on the ballroom (19th) floor of the Biltmore Hotel. It is open only when the exhibits are open—namely: 26 Dec., 7 to 10 P.M.; 27–29 Dec., 10 A.M. to 6 P.M.; 30 Dec., 9 A.M. to 4 P.M.

The registration cards of all registrants are placed in the Visible Directory soon after registration. The arrangement is alphabetical. The cards of advance registrants are completely alphabetized and typed, since they are posted prior to the meeting; all other registration cards are filed to the second or third letter of the surname (Ba, Be, and so forth). Members of the press, exhibitor personnel, and guests are also listed 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 and meeting.

Mail, Telegrams, and Messages. Mail and telegrams addressed in care of the AAAS will be held at the AAAS Office on the ballroom (19th) floor of the Biltmore Hotel. Telephone and personal messages will also be filed alphabetically in the AAAS Office, and the names of those for whom they are intended will be posted on a bulletin board near the Visible Directory. The Association assumes no responsibility for the delivery of mail or telegrams.

Society Meal Function Tickets. Tickets to the dinners or luncheons of any

section or any participating society may be obtained only from its representatives, either during preceding sessions, at tables in the hotel lobbies, or at the supplementary Registration Desks.

Local Travel Directions

At this 127th meeting, since the five hotels used are all within a few blocks of one another, no travel directions are necessary except, perhaps, to reach the points of interest listed below. For these, if necessary, ask at the AAAS Information Centers in the Commodore and Biltmore hotels.

Tours and Points of Interest

At this meeting there will be no formal tours sponsored by the AAAS, but certain sections and participating societies have planned tours and field trips, as noted in their programs.

The Map and Directory of New York—available to all registrants and distributed only from the Main Registration–Information Centers in the Commodore and Biltmore Hotels—displays and lists all principal points of interest in Manhattan. The following are of interest.

American Geographical Society (Broadway at 156th St.) Open weekdays to visitors interested in geographical research and reference facilities. Hours 9 A.M. to 4:45 P.M. Free.

American Museum of Natural History (Central Park West at 79th St.). Open weekdays, 10 A.M. to 5 P.M.; Sunday, 1 to 5 P.M. Free.

Boyce Thompson Institute for Plant Research (Yonkers, N.Y.). Open daily, 8:30 A.M. to 5 P.M. Free. Tours or appointments with staff arranged upon request.

Brooklyn Botanic Garden (1000 Washington Ave., Brooklyn). Open daily, 9 A.M. to 5 P.M.; greenhouses, 10 A.M. to 4 P.M.; Sundays, noon to 4 P.M. Free. Directions for reaching Research Laboratories, Kitchawan, Westchester County, by automobile (from New York City): follow the West Side elevated highway to Henry Hudson Parkway and Saw Mill River Parkway; at Hawthorne Circle take Taconic Parkway toward Albany for about 7 miles; at route 134, turn right and drive east about 2 miles; watch for a large sign on the left reading "Kitchawan Research Laboratory of the Brooklyn Botanic Garden."

Empire State Building Observatories (34th St. and 5th Ave.). Open daily, 9:30 A.M. to midnight. Admission charge, $1.30, tax included, reduced to $1.00 for AAAS registrants; apply at Main Registration–Information Centers for special tickets.

Solomon R. Guggenheim Museum (1071 5th Ave.). Open Tuesdays through Saturdays, 10 A.M. to 6 P.M.; Wednesday evenings until 9; Sundays and holidays, noon to 6 P.M. Closed Mondays. Admission $0.50.

Hayden Planetarium (81st St. near Central Park West). Demonstrations 26–29 Dec. at 11 A.M. and 1, 2, 3, 4, 5, and 8:30 P.M. (Individual members of the American Astronomical Society and of AAAS Section D, and their wives, wearing their AAAS Convention Badges, will be specially admitted at group rates: $0.80 for adults during the day, $1.00 at night; $0.35 for children at all times.)

Metropolitan Museum of Art (5th Ave. at 82nd St.). Open Tuesday through Saturday, 10 A.M. to 5 P.M.; Sunday, 1 to 5 P.M.; closed Monday. Free.

Museum of Modern Art (11 W. 53rd St.). Open weekdays, 11 A.M. to 6 P.M.; Sunday, 1 to 7 P.M. Admission charge for AAAS registrants wearing Convention Badge, $0.50.

Museum of the City of New York (5th Ave. and 104th St.). Open weekdays, except Monday, 10 A.M. to 5 P.M.; Sunday and holidays, 1 to 5 P.M. Free. Closed on Christmas Day.

New York Botanical Garden (Bronx Park). Christmas exhibits in both the Conservatory and the 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. Free. Open House all day on 26 Dec.

New York Historical Society (170 Central Park West). The society will welcome any of the AAAS registrants who wish to visit the library and museum to study the early history of science in America. The library is open to the public from 10 A.M. to 5 P.M. Monday through Saturday; the museum is open every day except Monday from 1 P.M. to 5 P.M. (Saturday, 10 A.M. to 5 P.M.)

New York Public Library (5th Ave. at 42nd St.). Central building open weekdays, 9 A.M. to 10 P.M.; Sunday, 1 to 10 P.M. Science Division Reading Room open Monday and 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 (Bronx Park). Special guided tours daily from 27 through 31 Dec., beginning at 11 A.M., for zoologists and other interested scientists.

Rockefeller Center (30 Rockefeller Plaza). Open daily, 9:30 A.M. to 9:00 P.M. Guided tour, which includes the observation roof, leaves every 15 minutes. Admission charge, $1.20 for AAAS registrants; apply at Main Registration–Information Center for special tickets.

United Nations (1st Ave., 42nd to 48th Sts.). Guided tour daily, 9 A.M. to 4:45 P.M. Charge $1; students, $0.50.

AAAS Public Information Service

The necessity for the general public to be kept informed, whenever feasible, of the results of the scientific research and development which it supports, directly or indirectly, is evident. Organized science and the individual scientist must have the understanding and support of intelligent citizens in all walks of life if they are to contribute effectively to the over-all advance of American democracy. It is, of course, equally important that information for the public concerning advances in science be disseminated clearly and accurately and without sensationalism. Progress in this direction in recent years has been in most instances outstanding, 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.

One of the four objectives of the AAAS is to try to increase public understanding and appreciation of the importance and promise of the methods of science in human progress. For this reason, and to protect authors of papers from being misquoted by the press, the Association maintains a public information service for each of its annual meetings. Sidney S. Negus, Medical College of Virginia, Richmond, has been director of this service for most meetings since 1938.

During the meeting, in the interest of accuracy and completeness, 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 great scientific convention from the Press Room in the Commodore Hotel. News stories filed by them will be published and broadcast throughout the world. The assistance of authors in helping to make these stories accurate is earnestly solicited by the Association.

This year, the AAAS is fortunate in having the continued services of Dr. Negus and also the services of its Local Committee on Public Information, headed by Marion Harper, Jr., president of McCann-Erickson, Inc.

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 Eger V. Murphree 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

Eger V. Murphree, president, Esso Research and Engineering Company.

Committee on Exhibits

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

Douglas H. Ewing, vice president, research and engineering, Radio Corporation of America, and director, Industrial Reactor Laboratories.

Harold Gershinowitz, president and director, Shell Development Company.

Lawrence R. Hafstad, vice president and director of research staff, General Motors Company.

S. W. Herwald, vice president, research and development, Westinghouse Electric Company.

Augustus B. Kinzel, vice president of research, Union Carbide Corporation.

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

Richard O. Roblin, vice president for research, American Cyanamid Company.

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

Max Tishler, president, Merck Sharp & Dohme Research Laboratories.

Committee on Finance

Frank A. Howard, chairman of the board, Sloan-Kettering Institute for Cancer Research, *chairman.*

John T. Connor, president, Merck and Company.

Frederic G. Donnor, chairman of the board, General Motors Company.

James B. Fisk, president, Bell Telephone Laboratories.

Harold H. Helm, chairman of the board, Chemical Bank New York Trust Company.

Birny Mason, Jr., president, Union Carbide Corporation.

Andre Meyer, senior partner, Lazard Freres & Compagnie.

Dale E. Sharp, president, Morgan Guaranty Trust Company of New York.

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

Leo D. Welch, chairman of the board, Standard Oil Company (New Jersey).

Committee on Physical Arrangements

Harry A. Charipper, head, department of biology, New York University, *cochairman.*

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

H. G. Albaum, Brooklyn College.

L. G. Barth, Columbia University.

Edward J. Bernard, Board of Education of the City of New York.

Harold H. Clum, Hunter College.

A. M. Crosman, New York University.

Alice Elftman, Hunter College.

Donald E. Fitzpatrick, Queens College.

James Forbes, Fordham University.

Carroll W. Grant, Brooklyn College.

Richard P. Hall, New York University.

Teru Hayashi, Columbia University.

Toge Johansson, Queens College.

Darwin S. Levine, Board of Education of the City of New York.

Louis Levine, College of the City of New York.

Arthur W. Pollister, Columbia University.

Don D. Ritchie, Barnard College.

Edwin S. Schange, New York Academy of Sciences.

Simon Share, Queens College.

Charles D. Siegel, New York University.

Morris Winokur, College of the City of New York.

Wilson W. Woodcock, Hunter College.

Committee on Public Information

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

Leonard H. Goldenson, president, ABS and Paramount Theatres.

Robert Kintner, president, National Broadcasting Company.

James A. Linen, president, Time, Inc.

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

Malcolm Muir, chairman of the board, editor-in-chief, *Newsweek.*

Robert W. Sarnoff, chairman of the board, National Broadcasting Company.

Frank Stanton, president, Columbia Broadcasting System.

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

Committee on Women's Events

Mrs. Eunice Thomas Miner, executive director, New York Academy of Sciences, *chairman.*

Mrs. Frank G. Boudreau.

Dr. Pauline Newman.

Mrs. Ross F. Nigrelli.

Mrs. James A. Oliver.

Mrs. Luigi Provasoli.

Mrs. Bret Ratner.

Mrs. Harry L. Shapiro.

Mrs. Horace W. Stunkard.

Mrs. John Tee-Van.

Honorary Reception Committee

Eger V. Murphree, *chairman.*

John C. Adams, president, Hofstra College.

David W. Allee, acting president and dean, Long Island Agricultural and Technical Institute.

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

Samuel Belkin, president, Yeshiva University.

Charles A. Berger, president, Torrey Botanical Club.

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

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

Frank G. Boudreau, president, Milbank Memorial Fund.

Detlev M. Bronk, president, Rockefeller Institute.

Thomas S. Buechner, director, Brooklyn Museum.

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

Richard L. Conolly, president, Long Island University.

Howard R. Craig, director, New York Academy of Medicine.

John E. Deitrick, dean, Cornell University College of Medicine.

Herbert DeYoung, president, National Tuberculosis Association.

Paul Dawson Eddy, president, Adelphi College.

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

James B. Fisk, president, Bell Telephone Laboratories.

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

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

Buell G. Gallagher, president, City College.

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

Harry D. Gideonse, president, Brooklyn College.

Richard H. Heindel, president, Wagner Lutheran College.

James J. Heslin, director, New York Historical Society.

J. W. Hinkley, president, Research Corporation.

Charles B. Hitchcock, director, American Geographical Society.

Elmer Hutchisson, director, American Institute of Physics.

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

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

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

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

M. J. Kopac, president, New York Academy of Sciences.

Nathan W. Levin, acting president, New School for Social Research.

Berwyn F. Mattison, executive secretary, American Public Health Association.

William Mazer, president, Muscular Dystrophy Associations of America.

Laurence J. McGinley, president, Fordham University.

Gordon McLintock, superintendent, U.S. Merchant Marine Academy.

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

Morris Meister, president, Bronx Community College.

H. Hanston Merritt, vice president and dean, College of Physicians and Surgeons, Columbia University.

Ralph R. Miller, director, Museum of the City of New York.

Harold C. Moore, president, State University of New York Maritime College.

Robert A. Moore, president and dean, State University of New York Downstate Medical Center.

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

Carroll V. Newsom, president, New York University.

Irving S. Olds, chairman of trustees, Cooper Union for the Advancement of Science and Art.

James A. Oliver, director, American Museum of Natural History.

Robert F. Oxnam, president, Pratt Institute.

Augustine Philip, president, Manhattan College.

Thomas Clark Pollock, dean, Washington Square College of Arts and Science, New York University.

Willard C. Rappleye, president, Josiah Macy, Jr. Foundation.

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

Dean Rusk, president, Rockefeller Foundation.

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

George N. Shuster, president, Hunter College.

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

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

Ralph E. Snyder, president and dean, New York Medical College.

William C. Steere, director, New York Botanical Garden.

Harold W. Stoke, president, Queens College.

John Tee-Van, general director, New York Zoological Society–Bronx Zoo.

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

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

Herbert T. Wagner, executive director, Medical Society of the State of New York.

Ernst Weber, president, Polytechnic Institute of Brooklyn.

L. K. Wheelock, secretary, Engineers Joint Council.

Walter L. Willig, president, Staten Island Community College.

Harold K. Work, director, Engineering Foundation.

S. Bernard Wortis, dean, New York University College of Medicine.

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

Annual Exposition of Science and Industry

The large-scale AAAS Annual Exposition of Science and Industry will be located on the 19th floor of the Biltmore Hotel. The exposition will be open only to registrants. The exhibits are of interest to adult professional scientists and are not intended for young people. Accordingly, admission is restricted to registrants; anyone 16 years of age or older may register. The hours of the exposition are as follows: 26 Dec., 7 to 10 P.M.; 27–29 Dec., 10 A.M. to 6 P.M.; 30 Dec., 9 A.M. to 4 P.M.

AAAS New Member Service—Science, AAAS Publications

Foyer. 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 as of 1 January. Those already members conveniently can nominate others for membership.

Included in the annual dues of $8.50 (for 1961), each member receives the new, enlarged *Science*—the scientific newsweekly. Free sample copies will be distributed, and all not familiar with this leading journal of science should visit this booth where symposium volumes and AAAS membership insignia are also on display. Prospective advertisers may obtain sample copies of the magazine and the rate card.

AAAS Science Library Program

Booth 98. The AAAS administers this experimental loan library program with the financial support of the National Science Foundation to encourage the improvement of science and mathematics instruction, to stimulate the enlargement of the science collections of school libraries, and to interest more young people in choosing science careers. It has two phases: the *Traveling High School Science Library* of 200 titles which has been in circulation since the fall of 1955, and the *Traveling Elementary School Science Library* of 160 books inaugurated in the fall of 1959. The high school program currently serves 1700 schools and the elementary program 800 schools. Both collections will be exhibited and annotated lists of the books will be available. Another feature of the exhibit is the master set of over 500 paperbound science books upon which the popular annotated list, *An Inexpensive Science Library*, has been based, and which stimulates reading by high school students, college undergraduates, and nonspecialists adults.

As an aid to schools purchasing science and mathematics books under the provisions of Title III of the National Defense Education Act of 1958, the AAAS has published, with the collaboration of subject-matter specialists, *The AAAS Science Book List* and *The Science Book List for Children*. This represents the first time comprehensive recommended lists of books for schools and public libraries, prepared by scientists, have been made available. They are rapidly being adopted as standards by the several states. The lists are available for free distribution to registrants.

AIBS—Biological Sciences Curriculum Study

Booth 57. The major responsibilities of the BSCS are to design a coordinated and modern curriculum in biology, to recommend an appropriate placement of the science with respect to other courses of study, and to design special courses for exceptional students at all levels. To achieve such a realization, the BSCS has been organized with a policy-making committee and several working committees. These are identified on a panel of the exhibit. Part of the BSCS program involved various groups of biologists and teachers who, during the past summer, produced preliminary versions of high school biology texts and laboratory books designed to present biology from three new and different points of view. These materials are presently being tested in 105 high schools throughout the United States and are indicated on a map. Another feature of the exhibit consists of a series of Kodachromes illustrating the activities of the Biological Sciences Curriculum Study. A set of the new volumes will be available for inspection at the exhibit.

AIBS—Biological Sciences Film Series

Booth 71. The AIBS Secondary School Biological Sciences Film Series is a major effort to produce a complete, contemporary biology course, which will consist of 120 half-hour, direct-teaching films—divided into ten subject area parts of 12 films each—with closely correlated study guides and teacher manuals. It is directed primarily at the tenth grade. While designed as a complete course which could be used as such, it is intended also to provide material for the many and varied needs of individual teachers and is thus available in single films or any combination of films. Far from replacing a teacher, the individual films, used selectively, could help a teacher strengthen his course by aiding him in areas in which he may be weak, by providing content from the forefront of the biological sciences not included in current texts, and by bringing into his classroom many things otherwise difficult or impossible to show. These include visits to outstanding biologists and their laboratories, close-up views of living organisms and activities usually seen only by a few researchers, and demonstrations worked out by a large staff of biologists which no one teacher could easily prepare for his class.

American Optical Company

Booths 31 and 32. American Optical Company, Instrument Division, will have on display and will demonstrate representative models of the Phasestar and Microstar laboratory microscopes. Outstanding advantages of these instruments include interchangeable and reversible monocular, binocular, and trinocular bodies; focusable stage with variable Autofocus; wide selection of mechanical stages, including the Micro-Glide stage; dualcone revolving nosepiece; top-quality optics; choice of built-in illuminator or standard base with mirror; and durable, dove-grey epoxy finish. Several Cycloptic stereoscopic microscopes will be shown, together with a remarkable new Stereocamera accessory. The vertical illuminator for the Cycloptic stereoscopic microscopes will be on display. Techniques in proper illumination will be demonstrated with the Ortho-Illuminator. American Optical will also exhibit its new Overhead Delineascope and the Technamation process, a revolutionary projection method that adds motion to still transparencies.

American Society for Pharmacology

Booth 75. The exhibit will illustrate opportunities in a career in pharmacology. Qualified pharmacologists are in critical demand in universities and in governmental and private research laboratories. College students are often unaware of the opportunities which pharmacology offers to students in biological science since this science is taught only at graduate professional schools. A brochure, "A career in pharmacology," prepared by the committee on educational affairs, is distributed nationwide in order to attract the attention of high school and college students through their advisors and science teachers. Additional information regarding departments offering graduate instruction, their programs and goals, and opportunities offered in research training are made available by the committee to interested science students on an individual basis. (Supported by NIH teaching grant 2G-391).

Association of American University Presses

Booth 23. This exhibit presents recent books of the university presses, each of which is a separate publishing organization. Scholarly books in the following fields are on display: biological sciences, medical sciences, physical sciences, mathematics and engineering, social and economic sciences, anthropology and archaeology, and the history and philosophy of science. A checklist of authors, titles, publishers, and prices is available at the AAUP booth. Books may be ordered at the booth or directly from the publishing presses.

Astro-Studios

Booth 91. Space art work, performed for NASA, and Ray Benton's original fluorescent-painted scale model of the moon will comprise the main features of Astro-Studios' exhibit. The model moon is made of epoxy plastic, measures 22 inches in diameter, and was built in 4½ years; it contains over 5000

formations and shows approximately 59 percent of the visible surface. Three hundred pictures of the moon and the Carnegie-Wright globes were used in constructing the model. Several fluorescent models are now in national institutions as permanent exhibitions. Benton will show slides on the development of the model during a session of AAAS Section E, Friday, 30 Dec., at approximately 2:20 P.M.

Atomic Accessories Inc.

Booths 10 and 11. On display will be our new, low-cost educational kits and instrumentation for teaching nuclear science on graduate and undergraduate levels. Kits include: basic GM counting kit, window gas-flow counting kit, scintillation counting kit, and a deluxe kit that permits GM, gas-flow, and scintillation counting. Instruments include: 5-digit all-glow-tube scaler; a miniature well-type gamma scintillation system; window gas-flow counter; a universal tube mount that accepts end-window detectors, gas-flow counters, and six different types of scintillation detectors (alpha, beta, gamma, well-type gamma, fast and slow neutrons); nuclear organic-moderated activation demonstrator, for studying the properties of fast and slow neutrons. Accessories include survey meters, dosimeters, lead shields, planchets, micropipettes, isotopes, plus assorted warning signs, tapes and so on.

Basic Books, Inc.

Booth 34. The exhibit of Basic Books, publishers of volumes in every area of the world of science, features forthcoming and recent titles of unusual interest to AAAS members. Among the authors whose works are represented in the Basic Books exhibit are: Peter B. Medawar, co-winner of the 1960 Nobel prize in physiology and medicine; Jean Rostand; Gardner Murphy; Reginald O. Kapp; Karl Menninger; Jean Piaget; Derek J. de Solla Price; Niko Tinbergen; Richard Carrington; Edwin G. Boring; and Isaac Asimov, whose two-volume *The Intelligent Man's Guide to Science* has just been published. In 1961, Basic Books will launch a new series of science books for young people, the first of which will be written by, among others, O. R. Frisch, Laura Fermi, and Professor Asimov.

Battelle Memorial Institute

Booths 77, 78, and 79. Battelle Memorial Institute, founded through the will of Gordon Battelle, Ohio industrialist, is an endowed foundation dedicated to the advancement of science through the conduct and encouragement of scientific research. Its research encompasses virtually all facets of science and its application. It serves, particularly, the research needs of industry and government. The Battelle exhibit will highlight some of the activities of the institute in various areas of technology. Technical papers, written by Battelle scientists, will be available to visitors on request, without charge.

Bell Telephone System

Booths 58, 59, 60, and 61. The Bell Telephone System exhibit will feature communications by satellites. An actual working demonstration will show how radio signals are bounced off satellites. The antennas are models of those used in the Echo experiments. One is located at Bell Telephone Laboratories, Holmdel, N.J., and the other at the Jet Propulsion Laboratory, Goldstone, Calif. The exhibit illustrates and explains the 50-satellite system which might in the future provide continuous communications between distant points on earth. A model of the active satellite repeater which is currently in development at Bell Telephone Laboratories will be displayed.

Biological Abstracts

Booth 115. Biological Abstracts is an information service that reports the world's biological research results. The exhibit is designed to illustrate that in 1961 nearly 100,000 articles from more than 5000 journals originating in 83 countries will be screened and reported in 24 semimonthly issues in easy-to-read capsule form. Such features as current coverage, continued new areas of documentation research, scope and depth of indexing, and specialized sections for individual biologists are further illustrated.

Buchler Instruments, Inc.

Booths 51 and 52. The following items will be displayed by Buchler Instruments: a complete line of fraction collectors, an ultraviolet monitor, rotary flash-evaporators, paper and agar and immuno electrophoresis equipment plus power supplies, liquid-CO_2-operated freeze-dry equipment, a multiple dialyzer, a chloridometer, and a rotary Evapo-mix.

Cambridge Instrument Co.

Booth 6. Cambridge Instrument Company, Inc., New York City, will exhibit a variety of Cambridge instruments, including the Huxley pattern ultra microtome for cutting ultra-thin sections of tissue and other materials for electron microscopy, spot galvanometers, and other types of reflecting galvanometers, a 6-position skin temperature measuring outfit, pocket dosimeters for personnel monitoring, and the "Minican" temperature recorder, a miniaturized complete temperature recorder only 6½ inches high × 2¾ inches in diameter, which can be sealed in a small container to record temperatures of materials going through temperature processing. The Cambridge engineers in attendance will be glad to give complete information on these instruments and to discuss any instrumentation requirements.

Cambridge University Press

Booth 19. Cambridge University Press has long been a leading publisher in the natural and physical sciences—chemistry, physics, mathematics, biology, botany, zoology. It lists among its authors some of the world's most distinguished scientists, including Sir Charles Snow, Sir Arthur Eddington, Sir James Jeans, George Gamow, Lord Rutherford, Bertrand Russell, A. N. Whitehead, and Sir Charles Sherrington.

Carolina Biological Supply Company

Booth 18. Carolina requests that you plan to stop by Booth 18 for a visit while you are in New York. We will have our new Wolfe microscopes and accessories on display, together with our attractive and accurate Carolina models. Several new products will be introduced and demonstrated for the first time at this Christmas meeting. Our new Powell Laboratories Division opened in Gladstone, Ore., during this past summer, and we are particularly eager to talk with our new neighbors from the West Coast. During the course of 1960 we have added new Slidestrip listings and supplies to this popular line, and our staff members want to get your thoughts as to how we can help make your new year, 1961, the most pleasant of your career.

Central Scientific Company

Booth 114. In the Cenco booth will be the first showing of a 7-foot replica of a DNA structure built from the new Cenco-Petersen molecular models. Also appearing will be an air pollution field test set with an unannounced accessory beryllium and zinc detector. Cenco's high vacuum line will be represented by a single control three-way valve, the

S-14 hyvac single stage pump, a new discharge gage, and a display of couplings and connectors. A number of recently introduced high school physics and chemistry demonstration pieces, including a quantitative kinetic theory apparatus, will also be operating in the booth.

Childrens Press, Inc.

Booth 93. The combined exhibit of the Childrens Press, Melmont Publishers, and Ives concentrates upon the advancement of science among youngsters of elementary school age. Materials displayed include books and filmstrips that deal directly and colorfully with simple science concepts and interpret more sophisticated ideas for older children. The combined display features the large, new 101 *Science Experiments* by Illa Podendorf, science supervisor at the University of Chicago laboratory school, a book designed to teach the elements of the scientific method, from observation and hypothesis to verification, through the practice of simple experiments. The Childrens Press True Books and the filmstrips based upon them, the You Books, and the Melmont Science Books provide a wide foundation of elementary science education that comprehends natural and physical sciences with titles such as: *Time, Space Sounds, Insects, Dinosaurs, Oceans, Atomic Energy, Space Travel,* and *The Science of Mankind.*

Coca-Cola Company

Booth 102. Ice-cold Coca-Cola will be served through the courtesy and cooperation of the Coca-Cola Bottling Co. of New York, Inc., and the Coca-Cola Company.

Collier's Encyclopedia

Booth 67. On display at the Collier booth will be *Collier's Encyclopedia,* Collier's *Harvard Classics,* and *Collier's World Atlas and Book of Facts. Collier's Encyclopedia,* containing more than 25,000 articles by 2500 world-famous authorities, is the most recent, major, indexed encyclopedia. This scholarly reference work is authoritative, readable, up-to-date, and reasonably priced; it is comprehensively indexed (400,000 entries) and has a unique, separate bibliography listing 10,000 books readily available for further reference. It is recommended by the Subscription Books Bulletin and Wilson Catalogs and is on the approved list of every state in the United States and of every province of Canada that maintains an adoption list. The *Harvard Classics* contain the most significant writings of all time, selected by Charles Eliot and a board of eminent scholars. The *Classics* are a valuable aid to the teaching and study of science, literature, drama, history, education, philosophy, and religion; the reading guide and lecture volume make the set especially useful for adult education programs; a complete set of 594 analytic catalog cards is included and a master reference index includes 76,000 author, title, and subject entries. The set can be used as a unit or may be integrated into a library. Replacements are available. The *World Atlas and Book of Facts* is a new edition of the famous "Cosmos" atlas containing more than 400 pages of full-color maps, charts, tables, and a comprehensive index. The superb political, economic, and climatic tables are of particular value in school programs.

Columbia University Press

Booth 62. Recently published books in the biological and physical sciences will be displayed. Particular attention will be directed to the distinguished Columbia Biological Series and to new books on space science, as well as to the new Columbia paperback series. As a special feature, page proofs for the following books scheduled for publication in early 1961 will be available for examination: Simpson, *Principles of Animal Taxonomy*; Borek, *The Atoms within us*; Syniawska, *Russian Scientific Reader*; and Flaherty (Ed.), *Psychophysiological Aspects of Space Flight.* Visit the exhibit for information on new books planned in such fields as oceanography, quantum electronics, neuroendocrinology, and energy of space. Press representatives will welcome any questions regarding our publications and also would like to hear your ideas for new books in your field of interest.

Consultants Bureau Enterprises, Inc.

Booth 5.

Coulter Electronics Inc.

Booths 100 and 101.

Cuisenaire Company of America

Booth 50. Colorful display panels, charts, books, Geo-Boards, and teaching materials will illustrate the use of a new technique for learning mathematics, from kindergarten through college levels. Cuisenaire "Numbers in Color"—a set of colored rods which are a model for the rational numbers—are invaluable in demonstrating and learning many facets of mathematics: all arithmetic operations, algebraic properties, spatial relations, set theory, etc. Developed originally in Belgium, the Cuisenaire method is being accepted rapidly in school systems in the United States and around the world, primarily because of its unique approach to learning. Mathematical concepts are developed as an exciting process of discovery: rote learning is no longer necessary nor desired. Logical and deductive reasoning is encouraged in students of all ages. Although developed for school use, many students and children enjoy and benefit from home use of "Numbers in Color." Literature, newsletters, and descriptive brochures will be available.

Lester A. Dine Company

Booth 20. The sensational Eastman Kodak Startech camera will be shown. A new and special camera designed to simplify the technique of taking a close-up picture in color. This relatively inexpensive camera set-up is so easy to use that even the most novice photographer can immediately begin taking excellent pictures. In addition, there are several accessories which will be of added interest, such as the new copy attachment for copying from a book, stamp, coin, or a sign and the projector-theatre for viewing the slides.

Doubleday & Company, Inc.

Booth 64.

Edmund Scientific Co.

Booth 47. Edmund Scientific Co., will exhibit a large variety of scientific, mathematical, and optical items. Edmund, which is the world's largest mail-order science house, offers thousands of such items, many available nowhere else in the world. Science learning and teaching aids include such classroom items as their Projectolab (developed by Dr. Shaw of Texas), which projects actual experiments in chemistry, physics, and the like, so that large groups can follow the actual processes taking place; ripple-tanks; spectroscopes and kits; and solar energy items of equal interest to the teacher and the science amateur. In addition, there are science construction kits; blacklight kits; rockets; and a diffraction grating replica. Edmund offers many low-cost, do-it-yourself science booklets; titles include: *Fun with Optics, How to Use Your Telescope, Infrared Light and Its Uses,* and *Solar Energy and Solar Furnaces.* Displayed will be the Edmund line of mathematical learning and teaching

aids, ranging from American and Japanese abacuses to computer kits, and including slide rules, calculators, calculus playing cards, radian protractors, and many visualizing devices and books (hardbound and paperback). Edmund also offers a complete line of astronomical and general observation telescopes, recently redesigned and improved; microscopes; and industrial magnifiers and optical items, including lenses, and prisms.

Elgeet Optical Co., Inc.

Booth 99. On exhibit will be a new closed-circuit television system integrating two Elgreet research microscopes with Sylvania and DuMont closed-circuit equipment. Also shown will be the complete line of student, medical, metallurgical and research microscopes being presented by the instrument and apparatus division of the Elgeet Optical Company. A new Zoom microprojector and other scientific, optical, and electronic instruments will be shown.

Encyclopaedia Britannica

Booth 95. This leading reference work, with its almost 200-year history, has been completely revised in an intensive effort of the last 13 years, representing an investment of over $5 million. Illustrated in color, it contains 38,042,000 words and 23,494 illustrations by 5565 contributors from 75 countries and is easily handled through 539,138 index references. The 1960 edition features 7,241,940 word changes, 11,689 page revisions, 1360 brand new articles, and over 2000 new illustrations.

Esso Research and Engineering Co.

Booths 83, 84, 85, and 86. The Esso Research and Engineering exhibit illustrates examples of long-range and applied research on radiation, radioisotopes, gasoline, lubricants, butyl rubber, and polypropylene. The radiation panel features a three-dimensional model of the firm's radiation laboratory and outlines work on radiation-initiated reactions. The radioisotope panel depicts examples of the application of radioisotopes to petroleum research, ranging from improved crude oil production to formulation of a new gasoline. The gasoline exhibit describes six major processes used to manufacture today's complex automotive fuels. An animated display portrays properties built into lubricants through research and features antique physical inspection equipment originally developed and used by George M. Saybolt. Another animated panel shows how our lives have been improved through application of butyl synthetic rubber to home, transportation, and other phases of living. The polypropylene display describes research behind the company's recent entry into the manufacturing and marketing of this versatile new plastic.

Field Enterprises Educational Corporation

Booth 42. *World Book Encyclopedia* will have a display of materials available for science teachers at all levels. Reprints such as *Space Travel* and *Guided Missile, Bee* and *Ant*, teaching aids such as *High School Science, Junior High School Science, Primary Grade Activities, Climate, Weather*, and others will be displayed. Many of these are available without cost. *World Book Encyclopedia* offers material on all phases of science.

General Biological Supply House (Turtox Products)

Booths 29 and 30. Members of our staff will be present to greet our many friends and acquaintances. They will be there to meet you personally and to discuss any special problems you may have. We invite you to inspect the Turtox Biochrome charts which were recently revised. The Typical Giant Mold Colonies (announced in the October issue of *Turtox News*) will also be on display. Try the Turtox Micro-Replica "Peel" technique—be our guest. Your suggestions regarding new teaching aids for the biological sciences are welcome.

General Electric Research Laboratory

Booths 2 and 3. The General Electric Research Laboratory exhibit of items from our basic research program will include: studies of rolling friction; the electrical breakdown of liquid dielectric, a thermal process; thermoplastic recording; the crossed-film cryotron; phonon-assisted electron tunneling; small stresses move antiferromagnetic domains; two-step optical excitation in cadmium sulfide crystals; color centers in large, artificially grown, calcium fluorophosphate crystals; simple observations of magnetic phenomena using high magnetic fields; patterns in plastics—fracture of plexiglas; pyrolitic graphite; and the intermediate state in superconductors.

Gerontology Section, National Heart Institute, and Baltimore City Hospitals

Booth 104. The exhibit, entitled "Directions of present-day research in gerontology," presents research of the Gerontology Branch, National Heart Institute, and the Baltimore City Hospitals, directed toward finding answers to questions concerning age changes occurring in the total man, within a single organ system, and within tissues and cells.

Graf-Apsco Company

Booth 94. The functionally designed Graf-Apsco microscopes are displayed for your examination and use. As America's leading microscope repair house, the aim in designing these instruments was to make them as foolproof as possible. You will be pleasantly surprised to find the usual points of irritation missing and prices unbelievably reasonable. If you have any repair or obsolescence problems, bring them to us. We shall be glad to help you regardless of what make of instrument you might have. In addition to microscopes, we also display a wide assortment of magnifiers and dissecting instruments.

Grolier Society–Americana Corporation

Booth 103. The Grolier-Americana booth will feature the current edition of *The Encyclopedia Americana, The Book of Popular Science*, and science titles from the list of Franklin Watts, Inc. The *Americana* is a standard, scholarly encyclopedia particularly strong in its coverage of the sciences. *The Book of Popular Science* is the only general purpose science reference set correlated with the general science curriculum and published expressly for use in the school library and in general science classrooms at the junior and senior high school level. Franklin Watts, Inc., a division of Grolier Inc., is a principal publisher of children's books and is noted for *The First Book* series. Thirteen Watts titles are included in the AAAS *Science Book List for Children* for elementary schools. Also available at the exhibit will be material correlating Grolier's *The Book of Knowledge* with the elementary curriculum.

Hafner Publishing Company, Inc.

Booth 88.

Harper & Brothers

Booth 80. Adult trade and juvenile books will be exhibited as well as college texts. Featured will be Science Torchbooks (Harper's paperback reprints); the new "Science Today" series (a hardcover line of original titles at paperback prices); juveniles in the science field; and college science texts. Featured catalogs will be "Harper books suitable for purchase under the National Defense Education Act of 1958" and "Harper science books for children."

D. C. Heath and Company

Booth 33. Welcome to the D. C. Heath and Company booth. As usual, Heath exhibits elementary, secondary school, and college science textbooks. At our booth you can examine the physical science study commitee's new text, *Physics*, and accompanying materials—laboratory guide and teacher's manual. For elementary schools we show the 1961 edition of *Heath Science Series* by Herman and Nina Schneider, the most widely used series of elementary science books ever published. For colleges, in addition to our usual offerings, we show a new edition of Brown's *Biology*, now with a laboratory manual, and in chemistry the new Kleinberg *et al. Inorganic Chemistry*. We will much appreciate your visit.

Holt, Rinehart and Winston, Inc.

Booth 66. Be sure to stop at the Holt, Rinehart and Winston exhibit to pick up your free convention notebook. Three representatives will be there to show you our latest science titles and discuss with you your needs in this field. Galley sheets for the following forthcoming titles will be available: *Electricity and Magnetism,* Reuben Benumof; *Optical Crystallography*, F. Donald Bloss; *Current Issues in the Philosophy of Science*, Herbert Feigl and Grover Maxwell; *General Biology* (rev. ed.), Willis Johnson, Richard A. Laubengayer, and Louis E. DeLanney; and *Thermodynamics*, H. H. Sorenson.

Institute for Scientific Information

Booth 15. The Institute for Scientific Information will exhibit several unique approaches to the problem of scientific communication in the space, physical, chemical, pharmaco-medical, and life sciences. Among the services to be featured are: *Current Contents of Space and Physical Sciences*—a new weekly service that enables scientists to locate essential reading in minutes in such fields as missiles and rockets, electronics, mathematics, computers, physics, instrumentation, and other subject areas of interest to physical and space scientists. Also on display will be *Index Chemicus*—a monthly register and index of new chemical compounds that has been acclaimed by chemists throughout the world as a "significant breakthrough in chemical documentation." Rounding out the exhibit will be *Current Contents of Chemical, Pharmaco-Medical and Life Sciences* a comprehensive weekly listing of more than 600 scientific journals with over 130,000 articles per year. This service is starting its fourth year of publication and is now read by more than 10,000 scientists. Backing up these three publications will be the Original Article Tear Sheet Service (OATS) providing 24-hour access to original documents. Review copies of all services will be distributed gratis.

Chas. J. Lane Corp.

Booth 21. Chas. J. Lane Corp. will exhibit their latest model entomological specimen storage case with several types of drawers. This equipment should interest all entomologists.

E. Leitz, Inc.

Booth 17. We will exhibit the new model Leitz Seibert high school type microscope and also the advanced SM model for college laboratory and general student use. The new Leitz Prado microprojector which is ideal for instruction will be shown with both horizontal and vertical projection systems. The advanced semi-research microscope model Labolux IIIa will be demonstrated with phase equipment and with 35 mm photomicrographic accessories. In addition, Leitz research model Ortholux will be demonstrated with plano objectives and 4″ x 5″ photomicrographic camera, including a new polaroid #500 filter holder.

Longmans, Green & Co.

Booth 63. Longmans, Green & Company, Inc., publishers of texts and reference books in all areas of science since 1724, is holding an exhibit of its latest publications. Of special interest are Marshall's *Physiology of Reproduction* (4 volumes), May's *Chemistry of Synthetic Drugs*, and Mellor's *Comprehensive Treatise on Inorganic and Theoretical Chemistry* (16 volumes).

Macalaster Bicknell Company

Booth 65.

McGraw-Hill Book Company

Booth 27. *McGraw-Hill Encyclopedia of Science and Technology*, the most comprehensive reference work of its kind in publishing history, which presents unrivaled coverage and concise, factual, basic data in all areas of the physical, earth, and life sciences, and engineering. 7200 articles by over 2000 noted contributors present, in one convenient source, material which previously would have been contained in hundreds of books, and, in the case of some specialized information, only in periodicals and technical journals. The text is well-illustrated, thoroughly cross-referenced, contains extensive bibliographies, and includes a 548-page index volume with over 100,000 entries. Also on display will be a wide selection of our college- and professional-level technical and scientific books and catalogs for your perusal.

Merck & Co., Inc.

Booth 41. Merck & Co., Inc., will exhibit the new Seventh Edition of The Merck Index. First published in 1889, The Merck Index is a complete encyclopedia of virtually all chemicals and drugs, published as a service to the professions on a nonprofit basis. The Seventh Edition contains approximately 10,000 monographs describing individual substances, including more than 3300 structural formulas. An outstanding feature of the new book is a separate and greatly expanded cross-index section of more than 30,000 names. This enables the user of the book to locate a particular chemical description by page number regardless of whether he knows only the generic name, brand name, or systematic chemical name for a substance. A special section lists more than 400 organic "Name" reactions with original and reviewed references, together with a description and structural representation of each reaction. As an outstanding encyclopedia of chemicals and drugs, the new Seventh Edition of The Merck Index is recommended for consideration by anyone interested in chemical compounds for any reason.

Mettler Instrument Corporation

Booth 87. The Mettler Instrument Corporation will exhibit a complete line of analytical balances and pre-

cision scales. Special emphasis will be devoted to those models which are most suitable for scientific investigation. Attention will also be given to balances which are regularly used in classrooms for instruction purposes. Mettler personnel will be on hand to demonstrate these balances and help you with your weighing problems.

Microbiological Associates, Inc.

Booth 43. Microbiological Associates, Inc., will feature tissue cultures, synthetic media, serums, diagnostic reagents, and also teaching aids allied to tissue culture and the propagation of viruses. A number of serially propagated and primary mammalian cell cultures, derived from both normal and malignant tissue, will be on hand for microscopic observation. An educational theme will prevail and representatives will be present to discuss and demonstrate visual teaching aids now available such as fixed slide preparations and prototype biological kits for in vitro laboratory exercises. Suggestions and comments of educators from colleges and secondary schools are invited. Technical descriptive literature and reference bibliographies covering fluorescent reagents, typing bacteriophages, viral diagnostic materials, etc., available on request.

Miles Reproducer Company, Inc.

Booth 72. On display will be the newest "Walkie-Recordall," a self-powered, briefcase recorder-reproducer, which records at a radius of 60 feet, minimizing background noises. There are no wires or plugs. It is ideal for recording lectures, conferences, staff meetings, and case histories, or for dictating under the noisiest of conditions in cars or planes. Although facilities for transcription are available, transcribing may be eliminated because the nonmagnetic recordings are permanent and cost as little as 3¢ per hour. They are indexed and may be mailed or filed. A featherweight file holds up to 100 belts—3 to 8 hours playing time— and can be carried in your pocket. The Recordall starts recording automatically, and without supervision, as soon as it is activated by a voice or telephone; further, it stops automatically within approximately 5 seconds of cessation of the sound. It also can be used as an intercom; a single unit may serve an entire organization when used with Miles' remote desk stations. There is no other recorder like it anywhere.

Mistaire Laboratories

Booth 28. Microscopic illusions are shown, produced by light, shadows, linear perspective, restricted angles, and focal levels. Several approaches act as checks to three-dimensional microstructure, using models, outline drawings, photomicrographs, and simple mathematical comparisons. Sphere division into four identical parts is presented by new, as well as traditional, methods. Basic tetrad and spore forms, with their growth patterns, give a basis for comparison with actual structure, from mother cell division through tetrad to spore. This will simplify spore analysis, including details. Beautiful fern spore photomicrographs and the book, *Spores - Ferns - Microscopic Illusions Analyzed*, will be exhibited.

C. V. Mosby Company

Booth 1.

Muscular Dystrophy Associations of America, Inc.

Booth 12. A three-panel educational exhibit presents factual information on muscle and muscular dystrophy. The left-hand panel demonstrates, by means of color transparencies and text, the early symptoms of MD in its two most common types—the pseudohypertrophic MD of childhood and the facio-scapular-humeral type which generally afflicts adults. The center panel shows the scope of MDAA's program: Patient services, clinics, and research. It includes a photo of the MDAA-sponsored Institute for Muscle Disease, a laboratory complex devoted exclusively to the study of muscle and its pathologies. The third panel consists of a true-or-false quiz which tests the viewer on his knowledge of muscle and muscular dystrophy, giving both questions and answers by means of an automatic flashing light sequence.

National Geographic Society

Booths 68 and 69. 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.

National Science Foundation

Booths 37 and 38. The National Science Foundation, an independent agency of the Federal Government, has as its primary functions the promotion of basic research, the improvement of training and education in the sciences, and the more effective dissemination of scientific information. Support of basic research includes grants for investigation in all areas of science, mathematics, and engineering, as well as support for specialized research facilities and for modernization of graduate research laboratories. Training and education programs cover those aimed at the teacher, the graduate student and advanced scholar, the undergraduate and high school student, and at course-content improvement (fellowships, institutes, etc.) Under the dissemination-of-scientific-information-category are programs for support of translation efforts, and for development of improved indexing and abstracting services, information and storage retrieval techniques, and rapid publishing and distribution methods. Other activities include making surveys of the national research and development effort and maintenance of the National Register of Scientific and Technical Personnel. The exhibit illustrates those activities of interest to AAAS members.

National Scientific Personnel Bureau, Inc.

Booth 82. National Scientific Personnel Bureau, Inc., of Washington, D.C., invites all prospective employers and employees, who are categorically concerned with placement and/or evaluation of scientific personnel including physical and life scientists and engineers, to visit booth No. 82 at the 1960 AAAS Exposition of Science and Industry. A staff, including members of the committees on life and/or physical sciences, will be on hand throughout the convention to welcome, to arrange interviews, to interview, to list employers, to register employees, and to meet all who seek the personalized service of a professional organization which specializes in service to scientific and engineering, organizational and institutional personnel, and in service to industry, colleges and universities, hospitals, and governments. Literature including brochures will be available. NSPB Inc. is providing an attractive booth in modern decor, its theme being scientific manpower and industrial science. Appointments for interviews are being currently arranged at NSPB Inc.'s executive office: 1029 Vermont Avenue, NW, Washington 5, D.C.

National Society for Medical Research

Booth 73. The NSMR exhibit will highlight the reasons that the scientific

community opposes federal regulation of research in biology and medicine. Under the guise of "providing for humane treatment of animals used in experiments by recipients of U.S. Government grants," four identical bills were introduced in the 86th Congress that would stifle the advancement of biology and medicine in the United States. Congress adjourned in August before the bills could be acted upon. One of the sponsors indicated that he would reintroduce the bill in the 87th Congress. Copies of the publication entitled "Nine Reasons Why the Scientific Community Opposes Federal Regulation of Research in Biology and Medicine" will be available for distribution at the exhibit.

New American Library

Booth 4. This special display of inexpensive Mentor and Signet paperbound books includes 59 titles in the AAAS *An Inexpensive Science Library* for 1960. The AAAS list is a basic book selection guide recommended by the Council of Chief State School Officers, the National Science Teachers Association, and many state departments of education for purchase of books under the provisions of the National Defense Education Act. Many of these books have been selected by the NSF-sponsored traveling science teachers for the basic reference collections in their lecture and demonstration program in high schools in many states for the 1960-61 school year.

New York Scientific Supply Co.

Booth 89. We will display visual aids, including new fiberglas plastic biological models, new Nyssco biological charts, student make-it-yourself bioplastic molds for making biological models, geology hammers, skeletal preparations, the latest transistorized ratemeter, electronic kits, and laboratory apparatus for biology, physics, and chemistry. Convention visitors are cordially invited to visit our building at 28 W. 30 St., which is within walking distance of the exhibit area.

Office of Naval Research

Booth 14. The Office of Naval Research supports a broad program of scientific research essential to develop future naval capabilities. The panel included in this year's AAAS meeting describes the general nature of the ONR contract research program. About 80 percent of this work, much of which is basic research, is conducted under contract with universities and nonprofit research organizations. The contract research program is supported and administered by the research group. It has the following divisions—biological sciences, psychological sciences, earth sciences, physical sciences, mathematical sciences, and material sciences. Research of a more applied nature is directed by the Naval Analysis and Applications Groups. Since its inception in 1946, ONR has represented the Navy in science, coordinated naval scientific research, maintained liaison with the scientific community both in this country and abroad, and cooperated with other government agencies in furthering basic research.

Philosophical Library, Inc.

Booth 90. The Philosophical Library will feature a number of their most recent scientific and technical publications, especially *Aerospace Dictionary*, edited by Frank Gaynor and Wernher von Braun; *Neutron Detection*, by W. D. Allen; and *Electronic Business Machines*, edited by J. H. Levenson.

Prentice-Hall, Inc.

Booth 13. Prentice-Hall, Inc., will exhibit all of its major 1960 science and technical books. Many outstanding P-H backlist publications will also be available for your examination. There are many highly acclaimed works which you will find informative and helpful. The Prentice-Hall representative will be glad to answer your questions and requests.

Quaracell Products, Inc.

Booth 16. We have available a specially designed line of apparatus for qualitative and graduative column chromatography, employing highly adaptable gradient systems. We have further developed our high precision quartz cells for commercial spectrophotometers. Experience in the manufacture of cells of all kinds enables us to meet all requirements in regard to highest precision, and to cooperate in a directive manner in solving scientific and industrial problems. After repeated detailed experiments, we have succeeded in developing the fusing (not cementing) of cells showing an unlimited resistance to acids. These cells are matched in sets of two, four, six, etc., to the extent that we file optical data on the transmission characteristics of every matched cell sold. Should an additional single cell for replacement be needed, it may be obtained prematched to the previously purchased cells. Within the scope of technical possibilities, we are able to produce every kind of cell on the basis of your instructions and drawings.

Reinhold Publishing Corp.

Booth 70. The book division of Reinhold Publishing Corp. will exhibit all its current textbooks and science titles on biology, chemistry, space technology, electronics, food science, and many other subjects. A highlight of the exhibition will be advance galleys of the *Encyclopedia of Biological Sciences*, a 1000-page, large format, 1-volume work edited by Peter Gray of the University of Pittsburgh, and scheduled for early 1961 publication. The *Encyclopedia* contains over 1000 articles written by international authorities who specialize in the various fields of biology. Representatives of both the college textbook and technical departments will be on hand at the booth, and complete catalogs and descriptive literature of Reinhold books will be distributed free of charge.

RePP Industries, Inc.

Booth 8. RePP Industries introduces a new line of automatic freeze-drying equipment: The Sublimators 15, 40, and 100. The Sublimator 15 will be displayed in actual operation, demonstrating the unique compactness and efficiency of this new freeze-drying system. RePP Sublimators represent a significant advance over traditional freeze-dryer designs. Condensing coils are inside the same vacuum drum as the material to be freeze-dried. The need for a separate condensing chamber is eliminated while, at the same time, drying efficiency is increased through short path molecular distillation. All Sublimator models are provided with a tray cover lifting device which insures sterile bulk-drying operations. For stoppering vials under the original vacuum, heavy-wall aluminum plates are incorporated into the vacuum drum. An externally-mounted motor powers the stoppering plates via a Teflon rotary seal, without loss of vacuum within the drying chamber. Up to 5000 10-ml capacity vials can be stoppered at one time in the Sublimator 100.

Riseman Development Laboratory

Booth 111. Riseman Development Laboratory will exhibit the blood parameter analyzer model A. This instrument permits rapid and accurate de-

terminations of pH, pCO_2 and pO_2 in blood and other biological samples. Also exhibited will be the RDL 2-channel pH meter, as well as the various electrodes which can be used with the instrument, including sodium and potassium electrodes. Both instruments contain a number of unusual features. pH can be read to 0.001 pH units directly, and without interpolation continuously over a range of 10 pH units. The special chopper-amplifier circuitry not only eliminates instrument drift, but also provides a very high level of hum rejection, thus eliminating the usual shielding and grounding problems. Special attention has been paid to simplicity of operation, reliability, and ease of maintenance. The blood parameter analyzer model A allows determination of pCO_2 and pO_2 directly in millimeters of Hg, eliminating the need for constructing and reading calibration charts. The instrument is especially useful in applications where determinations must be made quickly, or where a large number of successive samples must be run.

Paul Rosenthal

Booth 113. Microscopes will be displayed, including the new Stereo-Zoom wide field type. A new photomicrographic attachment with Polaroid land camera back for pictures-in-10-seconds-photomicrographs will be demonstrated; an exposure meter for photomicrography will be shown. Special flat bottom tissue culture depression slides, with and without drainage channels which are adaptable to phase contrast microscopy, will also be shown. Further, an entire new line of microscope illuminators, such as 100-watt and 300-watt zirconium arc lamps and a 150-watt mercury arc lamp, all featuring high intensity, excellent optical performance, and resolution, will be exhibited.

Schuco Scientific

Booth 92. Schuco Scientific will have on display the world renowned Si-Ro-Flex ultramicrotome developed by Dr. Farrant of Australia; the Schuco-Linson pipette which fills and dispenses automatically with a turn of the stopcock; the Heto-Uniterm, a complete line of heating and circulating thermostats; Schuco polyvinyl chloride valves and stopcocks with Teflon liners; Esco rubber vial and test tube holders; the Chemap-Vibro mixer, a new type of stirring unit; Volutec, a complete line of reagents for chromatography and electrophoresis, stains and indicators; the famous Cooke, Troughton, and Simms microscopes, featuring the Cooke-MacArthur hand microscope; Schuco refrigerated, continuous-flow, electrophoresis apparatus; the Townsen & Mercer Sortationer, Strip Action Still, and thermostat baths.

Schwarz BioResearch, Inc.

Booth 96. The rear of the Schwarz BioResearch booth will feature products of special interest to teachers; these include a series of kits for classroom demonstrations. One of these, the new firefly kit, includes all material necessary for demonstrating bioluminescence. Schwarz will also give actual demonstrations of bioluminescence and of the latest method for measuring adenosine triphosphate, using firefly tails. A third demonstration will illustrate the unique properties of Thiogel, a thiolated gelatin, made exclusively by Schwarz. Demonstrations will be given every hour that the exhibit is open. Members of the Schwarz technical staff will be available to discuss specialized problems and needs with visitors to the booth. Price lists and other printed information will be available.

Science Library

Booths 53, 54, and 55. 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; Academic Press, Inc.; Addison-Wesley Publishing Co., Inc.; Annual Reviews, Inc.; Association Press; Teachers College, Columbia University; E. P. Dutton & Co., Inc.; Emerson Brooks, Inc.; W. H. Freeman and Co.; Grove Press, Inc.; Harper & Brothers; Houghton Mifflin Company; Institute for Scientific Information; Interscience Publishers, Inc; Iowa State University Press; Longmans, Green & Co., Inc.; New American Library of World Literature; Oxford University Press; Pergamon Press, Inc.; Reinhold Publishing Corp.; Charles Scribner's Sons; Technology Press of M.I.T.; Viking Press, Inc.; Year Book Publishers, Inc.; Little, Brown & Co.

Science Materials Center, Inc.

Booth 35. The Science Materials Center exhibit offers a unique line of science equipment for use by young people in school or at home. Marketed under the name of Portable Laboratories, these products are designed by scientists and educators in consultation with Hyman Ruchlis, educational director of the center and former chairman of the New York Federation of Science Teachers. Of particular interest in the display are five exclusive new Labs: Science of Photography Lab, Crystal Models Lab, Space Geometrics Lab, Automat (automation machines model making sets), and the five Heat Engines, working models. The complete portable laboratory line is on display.

Scientific Industries, Inc.

Booth 22. The main feature of our booth will be the first public showing of our new Antidromic electrophoresis apparatus. By combining timed movement of paper with high voltage on lengths up to 200 mm, hitherto difficult or impossible separations are clearly achieved. Proteins, for example, are easily separated into widely spaced bands. The new Natelson pH meter with digital readout and accuracy to 0.01 pH will be demonstrated. Microelectrodes and special cuvettes allow tests on 0.1 ml. Other unique laboratory apparatus that will be operating include our Microgasometer for blood gas analysis, Ultra buret combining ultra micro-readings with high capacity, Vortex test tube mixers for quick mixing of open tubes, rotators for tubes and micro-diffusion bottles, and automatic syringe attachments for pipetting or other repeated dispensing of the same volume.

Scientists' Committee for Radiation Information, AAAS Committee on Science in the Promotion of Human Welfare, U.S. Public Health Service, and New York City and State Health Departments

Booth 110. The scientific community has increasingly expressed recognition of its public education responsibilities in areas where science impinges on public policy. The Scientists' Committee for Radiation Information, com-

posed of physicians and research scientists in the New York area, is engaged in attempting to fulfill these responsibilities as they apply to the issue of the biological effects of ionizing radiation. The purpose of the exhibit is to demonstrate what scientists may do in their own communities to help meet the public need for information and to help clarify perplexing problems. Exhibit panels will convey the need for scientists to play a civic role in voluntary organizations, the range of activities that one characteristic group has developed to communicate radiation information, and the types of factual sources available to the nonspecialist scientist in speaking with the public. Sample literature from public and private sources, bibliographies, and descriptions of information programs will be distributed.

Sigma Press, Publishers

Booth 74. The display of the Sigma Press, Publishers will consist of the following publications: *Abbreviations of Basic Medical Physiology; Neuroanatomy,* a self-study review; *A Graphic Review of Histology;* pharmacology and general chemistry Sigma Cards; and other items published between the writing of this description and the Exposition. The parent organization, Medical and Technical Summaries, Inc., is a research and development body made up of prominent scientists and educators who are combining their efforts to produce academically oriented and acceptable educational aids for individuals taking basic science, medical, or technical courses in secondary schools, colleges, graduate schools, and industry. In addition to the above publications, the display will include pamphlets describing the company's aims and objectives.

Ivan Sorvall, Inc.

Booth 49. Automation is the key word at Booth 49 where Ivan Sorvall, Inc., will display their Servall centrifuges and laboratory instruments. Shown in operation will be the "Szent-Gyorgyi & Blum" 8-Tube continuous flow centrifuge for uninterrupted processing of large quantities of solution at high speeds; also shown will be the type SS-3 pushbutton superspeed (the first automatic unit in its range), the enclosed type SS-4 superspeed, and the RC-2 Servall automatic superspeed Refrigerated centrifuge—all three of unmatched versatility; a large capacity type GSA high-speed rotor, the "Sharp" particle counting rotor, the field aligning swinging bucket rotor and a new 24-compartment high speed rotor. On display will be the well-known smaller Servall table model centrifuges, the Servall Omni-Mixer with a new micro homogenizer attachment, and the Servall "Porter-Blum" microtome for electron and light microscopy. A number of LKB chromatography and electrophoresis instruments will be shown.

Special Libraries Association, New York Chapter

Booth 56.

Technical Controls, Inc.

Booth 76. Technical Controls, Inc. of New Rochelle, N.Y. (established 1945) welcomes this opportunity to display in booth 76 their newly improved electronic "zone comparator" which automatically measures the diameters of zones of inhibition produced in microbiological assays of antibiotics. The T.C.I. zone comparator is equipped to handle plastic or glass petri dishes with 4, 5, or 6 zones or large Pyrex glass dishes with 54 zones each, moving them automatically from zone to zone. The T.C.I. "zone comparator" is furnished with a numeral counter as standard equipment. As optional features, an electrical printing counter or a digital shaft converter are available. A card or tape punch can be connected to produce input for data processing equipment for computation of test results and statistical analysis. Users of the T.C.I. "zone comparators" report a 25 percent improvement in accuracy of zone readings over manual practice, plus a substantial reduction in personal requirements.

Tobacco Industry Research Committee

Booth 24. Information is presented on the nature and extent of the scientific research program developed and directed by the scientific advisory board to the Tobacco Industry Research Committee. The research program, covering all phases of tobacco use and health, contains three main areas of investigation within which are the specific fields of research. These areas and specific fields are described. Grants-in-aid have been awarded thus far to more than 90 scientists in over 60 institutions, and, to date, recipients have published over 100 papers on their research in medical and scientific journals.

Tri-R Instruments

Booth 40. Tri-R Instruments, Jamaica, N.Y., will demonstrate the Tri-R electronic thermometer, a thermistor type instrument, with various ranges, probes, and accessories, for rapid, accurate and remote temperature indication. Also on display will be their Teflon tissue homogenizers for grinding minute quantities of tissue. Their compact magnetic stirrer and their automatic egg punch for opening embryonated eggs will be shown.

United States Atomic Energy Commission

Booth 81. The Atomic Energy Commission's division of biology and medicine invites you to visit its booth this year and to inquire about its training and education program. The Commission engages in a variety of activities directed toward increasing the number of scientists and engineers trained in nuclear science and technology. These activities include sponsorship of special training schools, provision of direct assistance to individuals and institutions, and participation in cooperative arrangements with educational and industrial groups. Through one of the programs, high school science teachers are offered courses in radiobiology at universities in training institutes, under the joint support of the National Science Foundation and AEC. As an adjunct to the program, the AEC furnishes each teacher with a radioisotope demonstration kit for his use in the course, which he retains to take back with him to his own high school. One of these kits, a combination scaler and count-rate meter with high voltage supply and other basic pieces of equipment, is on display at the AEC booth this year.

Universal Scientific Company, Inc.

Booth 44. Universal Scientific Company, Inc., of Vincennes, Ind., will display its electrical and electronics educational equipment, designed for use in science studies. This equipment will be demonstrated continuously in our booth, showing the manner in which an instructor can expediently convey complex electrodynamic phenomena to students and showing that, as a result, students may be inspired to creative thinking. With this equipment, a student may study at his own rate of speed and the progress of a more talented student is not retarded by a less interested student.

University of Chicago Press

Booth 9. The University of Chicago Press exhibit will feature the recently published three-volume set, *Evolution After Darwin*, the papers and proceedings of the University of Chicago centennial celebration held in November 1959. Also on display will be the noted *Photographic Lunar Atlas*, as well as many recent books and journals published by the press.

University of Michigan Press

Booth 26. Ann Arbor Science Paperbacks (soft-cover versions of the books in the well-known Ann Arbor Science Library) will be featured by the University of Michigan Press at booth 26. These ten paperbacks preserve the text and illustrations that made the originals a notable addition to the literature of popular science, yet they are priced within the reach of every buyer. Anatol Rapoport's new work, *Fights, Games, and Debates*, will also be on view at the Michigan booth. This book will interest all readers concerned with the ways in which science makes it possible for us to understand and control human conflict. Other new Michigan titles will include W. R. Taylor's definitive *Marine Algae of the Eastern Tropical and Subtropical Coasts of the Americas*, Charles Lipson and L. V. Colwell's *Handbook of Mechanical Wear*, and M. G. Bekker's *Off-the-Road Locomotion*. Michigan's important backlist titles, catalogs, and circulars will be available at the booth.

D. Van Nostrand Company Inc.

Booth 97. D. Van Nostrand Company, Inc., cordially invites you to see an extensive display of new reference works and textbooks headed by the *International Dictionary of Applied Mathematics*, a monumental one-volume dictionary of terms from 32 fields of engineering and applied science. You will find the biological sciences represented by such books as the *Handbook of Microbiology* by Morris B. Jacobs and Maurice J. Gerstein, *Animal Parasites in Man* by Nicolaas H. Swellengrebel, and the 1960 edition of Cynthia Westcott's standard work, *Plant Disease Handbook*. New books in nuclear science include *Controlled Thermonuclear Reactions* by Samuel Glasstone and Ralph H. Lovberg and *Introduction to Nuclear Science* by Alvin Glassner. In the Principles of Guided Missile Design series, the most recent titles are *Airborne Radar* by Donald J. Povejsil and *Space Flight*, Volume I, by Krafft A. Ehricke.

VirTis Company, Inc.

Booth 7. VirTis exhibits the new mechanically refrigerated Freeze-Mobile. This standard, automatic freeze-dryer, in use in biological research institutions throughout the world, is now supplied in an attractive, white, epoxy-coated, carbon steel cabinet with a convenient, easy-to-read control panel. Accessory vacuum drums have been developed, making the mechanically refrigerated Freeze-Mobile the most versatile laboratory freeze-dryer of its kind. Examples are: A 48-port tubular manifold for drying bacterial and virus cultures in ampules, a centrifugal freeze-drying attachment which permits the safe autofreezing of samples under the influence of the vacuum obtained, and a front-loading two-shelf, tray-drying attachment with electrically heated shelves. Other VirTis instruments on display, of interest to workers in the biological sciences, are the VirTis "45" and "23" Hi-Speed homogenizers, the Extracto-Matic, Filtered Air pipette dryer, and dry ice-cooled freeze dryers and accessories.

Ward's Natural Science Establishment, Inc.

Booth 25. Ward's Natural Science Establishment, Inc., one of America's first scientific supply houses, presents a representative variety of its teaching materials for biology and geology. Center of the display is an illuminated panel utilizing plastic-embedded biological specimens in a unique way. An animal kingdom collection of plastic mounts, conveniently housed in its own carrying and display case, is featured. Mounted skeletons of various animals will be shown. For the geologist, a special display of fluorescent minerals will be featured, plus popular teaching collections of minerals, rocks, and fossils. For all, a projector that can be used interchangeably for microscope slides, 35-mm transparencies, and filmstrips will be demonstrated. Ward's invites all college and high school teachers of biology and geology to visit its display and discuss their teaching needs with representatives of the company.

W. M. Welch Manufacturing Co.

Booth 36. The W. M. Welch Manufacturing Company plans to display selected apparatus used in physics, chemistry, and biology laboratories. These will include those especially adapted to the teaching of science in the secondary schools and colleges, as well as some items specifically designed for special use in research and industrial laboratories. A partial list includes stainless steel balances; quick operating, high vacuum pumps; electrical measuring instruments; electronics teaching devices; Densichron for measuring optical density, color saturation, paper chromatograms, etc.; and new, enlarged mathematics models. Many charts and visual aids for teaching science, mathematics, and physiology, as well as preserved specimens, synthetic skeletons, and other biological models will be shown.

Wild Heerbrugg Instruments, Inc.

Booth 46. On display will be Wild Heerbrugg's M-20 research microscope and M-5 stereo microscope. The M-20 research stand will be shown with the following features: multipurpose phase contrast outfit; trinocular arrangement with photomicrographic camera II on beam splitter tube, with attachable 35-mm film magazine and Polaroid roll film back; Wild's Cinetube for cinemicrography; Camera Lucida for binocular focusing of drawing pad; incident light attachment for observation of opaque objects; universal lamp for highest light intensities in the visible and ultraviolet range; and polarizing microscope. The M-5 stereo-microscope has the following features: 5X to 200X magnification range, long-working distance; powerful illumination device for incident and transmitted light; polarizing attachments; and photomicrographic attachments.

John Wiley & Sons, Inc.

Booth 39. John Wiley and Sons, Inc., is pleased to be at the AAAS Exposition of Science and Industry once again. Our representatives look forward to meeting and talking with you at our booth, where we will display a wide selection of our college and professional level, technical and scientific publications. We hope that you will drop by the booth for a few moments of browsing and a pleasant chat.

Concluding Section and Society Programs

Section and society programs in education are presented here, and programs of some organizations not affiliated with any section. Programs in mathematics,

physics, chemistry, astronomy, geology and geography, the biological sciences, anthropology, psychology, the social and economic sciences, medicine, dentistry, pharmacy, the history and philosophy of science, engineering, agriculture, and industrial science have been previously announced [*Science* **132**, 1259 (28 Oct. 1960); **132**, 1318 (4 Nov. 1960); **132**, 1403 (11 Nov. 1960); **132**, 1501 (18 Nov. 1960); **132**, 1558 (25 Nov. 1960)].

Education

Section Q. Two-session program, held jointly with the Council for Exceptional Children, arranged by Katherine D. Lynch, Bureau for Children with Retarded Mental Development, New York City Public Schools, who will preside; 26 and 27 Dec.

Session I, 26 Dec. Papers will be presented on etiological and diagnostic aspects of the retarded child (Margaret J. Giannini, Clinic for Mentally Retarded Children, New York Medical College); pseudoretardation—clinical implications (Lawrence T. Taft, Developmental Evaluation Clinic, Albert Einstein College of Medicine); the educational evaluation of the exceptional child (Elsa Haussermann, Division of Pediatric Psychiatry, Jewish Hospital, Brooklyn, N.Y.); three "R's" in clinical evaluation: recognition, refinement, and remedy [William Calvin Barger, Bureau of Child Guidance, New York City Public Schools, and Essex County (N.J.) Guidance Center].

Session II, 27 Dec. Papers will be presented on trends and problems in special education (Raphael F. Simches, Bureau for Handicapped Children, Albany, N.Y.); research in special education in the United States (Romaine P. Mackie, Office of Education, Department of Health, Education, and Welfare, Washington, D.C.); the effect of group training of four- and five-year-old children who are mentally retarded (I. Ignacy Goldberg, Mental Retardation Project, Teachers College, Columbia University).

There will be a session for contributed papers, arranged by Herbert A. Smith, University of Kansas, who will preside; 29 Dec.

Also scheduled for 29 Dec. are the vice-presidential address, "Implications of Project Talent for the Scientific Study of Education," by John C. Flanagan, vice president of Section Q, and a business meeting. Herbert A. Smith will preside at the address, Flanagan at the business meeting.

Symposium, joint session of Section Q, the American Educational Research Association, and the National Association for Research in Science Teaching: "Data Processing Machines and Educational Research," arranged by William W. Cooley, Harvard University, with Kenneth E. Anderson, University of Kansas, presiding; 29 Dec. Papers will be presented on university data processing centers (Albert E. Beaton, Littauer Statistical Laboratory, Harvard University); data processing in large-scale research projects (John C. Flanagan, American Institute for Research, Pittsburgh, Pa.); applications of modern data processing at the Office of Education (Howard F. Hjelm, Cooperative Research Program, Office of Education, Washington, D.C.); research methodology and modern data processing (William W. Cooley).

Symposium, joint program of Section Q and the American Educational Research Association: "Some Implications of Project Talent for the Identification and Development of Future Scientists," arranged by David G. Ryans, University of Texas, with John C. Flanagan presiding; 30 Dec. Papers will be presented on motivation for science careers for the future, on identifying scientists, and on developing future scientists, by John T. Dailey, Marion F. Shaycoft, and Isadore Goldberg, respectively, all of American Institute for Research and University of Pittsburgh, Project Talent, Washington, D.C. After presentation of the papers there will be a panel discussion by the three speakers and the presiding officer.

On 30 Dec. there will be three sessions for contributed papers, arranged by Herbert A. Smith, with Joseph Novak (Purdue University), P. G. Johnson (Cornell University), and Clarence H. Boeck (University of Minnesota), respectively, presiding.

Symposium, joint program of Section Q and the American Educational Research Association: "Interrelated Problems of Automated Teaching and Evaluation," arranged by David G. Ryans, University of Texas, and Robert D. North, Educational Records Bureau, New York, with the latter presiding; 30 Dec. Panel members will be Lewis D. Eigen (Automated Teaching Project, Collegiate School, New York), Charles R. Langmuir (Psychological Corporation, New York), Robert E. Silverman (University College of Arts and Sciences, New York University), and Lloyd N. Morrisett (Carnegie Corporation of New York).

AAAS Cooperative Committee on the Teaching of Science and Mathematics. There will be a program entitled "Science Education in the Elementary and Junior High Schools," arranged by John R. Mayor, AAAS, with Thornton Page, chairman of the AAAS Cooperative Committee, presiding; 29 Dec. The following papers will be presented: "Science education in the elementary and junior high schools from the point of view of a scientist" (Thomas S. Hall, Washington University); "Some considerations at the elementary level" (Jacqueline Mallinson, Western Michigan University); "Some considerations at the junior high school level" (Abe S. Fischler, Harvard University).

American Educational Research Association. The Association has arranged three joint sessions with Section Q, 29 and 30 Dec. (see section Q).

Council for Exceptional Children. The Council has arranged two joint sessions with Section Q, 26 and 27 Dec. (see Section Q).

National Association for Research in Science Teaching. There will be a research symposium, arranged by Nathan S. Washton, Queens College, with Clarence H. Boeck, president of NARST, presiding; 27 Dec. Papers will be presented on research and implications in teaching science in the elementary school (Cyrus W. Barnes, New York University); research and implications in teaching science in the secondary school (Hubert M. Evans, Teachers College, Columbia University); research and implications in teaching science on the college level (Nathan S. Washton).

National Science Teachers Association. An NSTA Activities program will be held 27 Dec., with Robert H. Carleton, executive secretary, presiding. There will be a five-session program, "The New Science—A Teaching Challenge," on 28, 29, and 30 Dec.

Session I, supported by the New York Section, American Chemical Society: "The New Chemistry," with Father Lucien R. Donnelly, Delbarton School, Morristown, N.J., presiding; 28 Dec. The speaker will be Alfred B. Garrett, Ohio State University. Panel members will be Harry Milgrom (Board of Education, New York City), Dorothy Alfke (Pennsylvania State University), David S. Sarner (Temple University), and J. Noel Corbridge (Garden City High School, Garden City, N.Y.).

Session II, cosponsored by Section D–Astronomy: "The New Astronomy," with Ruth E. Cornell, Board of Education, Wilmington, Delaware, presiding; 28 Dec. The speaker will be Wasley S.

Krogdahl, University of Kentucky. Panel members will be Louis T. Cox (Maryland State Teachers College), Albert Piltz (U.S. Office of Education), Annie Sue Brown (Board of Education, Atlanta, Ga.), and Hugh Allen, Jr. (Montclair State College).

Session III, cosponsored by the American Geophysical Union: "The Planet Earth," with Harold E. Tannenbaum, State University of New York, College of Education, presiding; 29 Dec. The speaker will be Hugh Odishaw, executive director, International Geophysical Year, National Academy of Sciences–National Research Council. Panel members will be Mildred T. Ballou (Ball State Teachers College, Muncie, Ind.), Abe S. Fischler (Harvard University), Abraham Raskin (Hunter College), and Ruth M. Stone (Board of Education, Yonkers, N.Y.).

Session IV, cosponsored by the American Meteorological Society: "Recent Developments in Meteorology," with Robert J. Chinnis, University of Pennsylvania, presiding; 29 Dec. The speaker will be Harry Wexler, director of meteorological research, U.S. Weather Bureau. Panel members will be Helen E. Hale (Baltimore County Board of Education), Matthew J. Brennan (U.S. Forest Service), Isadore Halpern (Erasmus Hall High School, Brooklyn, N.Y.), and Paul E. Blackwood (U.S. Office of Education).

Session V, cosponsored by the National Institute of Social and Behavioral Science: "Biology of the Mind," with Margaret J. McKibben, National Science Teachers Association, presiding; 30 Dec. The speaker will be Irwin J. Kopin, Presbyterian Hospital, New York. Panel members will be Alfred D. Beck (Board of Education of the City of New York), Dorothy F. Stone (Rhodes School, New York), Willard J. Jacobson (Teachers College, Columbia University), Celia Stendler (University of Illinois), and Sam S. Blane (Gove Junior High School, Denver, Colo.).

There will be a meeting of the NSTA Executive Committee on 28 Dec. On the same date there will be a presentation of IGY films, with Samuel Schenberg, Board of Education of the City of New York, presiding. The speaker will be Hugh Odishaw.

Science Service. A conference on "Science Youth Activities," with Gordon Fister, Call-Chronicle Newspapers, Allentown, Pa., as chairman, will be held 30 Dec. Watson Davis, Science Service, will welcome the participants. Discussion leaders will be Morris Meister (Bronx Community College), Burrell Wood (Science Service), and Wayne Taylor (Michigan State University). Science teachers and club sponsors, science fair committee members, and Science Talent Search cooperators are especially invited to attend this session and participate in the discussion.

American Nature Study Society. There will be two meetings of the Board of Directors, on 26 and 27 Dec.

There will be a program held jointly by ANSS and the National Association of Biology Teachers entitled "Outdoor Laboratories," arranged by Verne N. Rockcastle, Cornell University, who will preside; 27 Dec. Papers will be presented on outdoor interests and activities of Nature Centers for Young America (John Ripley Forbes, Nature Centers for Young America, New York); the outdoor laboratory and high school science (Charles Roth, Cornell University); Audubon camps and Audubon centers (Carl Buchheister, president, National Audubon Society); interpreting marine and fresh-water life in the national parks (O. L. Wallis, National Park Service).

There will be a session on "Glaciation —Past and Present," arranged by Emery L. Will, State University Teachers College, Oneonta, New York, who will preside; 27 Dec. Papers will be presented on evidences of the Ice Ages in New York and environs (Richard B. Fischer, Cornell University); a photographic report on Collier Glacier 1934–1960 (Ruth E. Hopson, Portland Extension Center, Portland, Ore.); the IGY in Antarctica (Matthew J. Brennan, U.S. Forest Service).

An annual showing of Kodachromes will be held 27 Dec., with John F. Wanamaker, Principia College, presiding.

There will a program on "Pet Nature Projects of Members," arranged by Stanley B. Mulaik, University of Utah, who will preside; 28 Dec. Papers presented will be as follows: "Helping children understand snakes and other odd animals" (Cornelius Denslow, Ethical Culture Mid-town School, New York); "Helps for nature study in unexpected places" (Dorothea Mulaik, University of Utah); "Spiders here and there" (B. J. Kaston, Central Connecticut State College); "The moth ear mystery" (Asher Treat, The City College); "Section of Deam's Indiana revisited" (John W. Klotz, Concordia Senior College, Fort Wayne, Ind.).

The American Nature Study Society and The National Association of Biology Teachers will have a joint field trip to the Brooklyn Botanic Garden on 29 Dec. Leaders will be Charles E. Mohr (Academy of Natural Sciences of Philadelphia), Shirley Miller (National Audubon Society), Frances Miner (Brooklyn Botanic Garden), and George Avery (Brooklyn Botanic Garden).

The annual business meeting and the annual banquet of the American Nature Study Society will be held 29 Dec. The banquet chairman will be John Ripley Forbes. Emery L. Will, president of the society, will preside. The banquet address, "Journey into Summer," will be given by Edwin Way Teale, Hampton, Conn.

Symposium, joint program of the Nature Division, Photographic Society of America, and the American Nature Study Society; "New Approaches, Techniques, Equipment, Uses, and Evaluation of Nature Photography," with Charles E. Mohr presiding; 30 Dec. The following papers will be presented: "Focus on nature" (Jack Englert, Rochester, N.Y.); "From miniatures to mountains with a single lens" (Edwin Way Teale); "Close-up nature photography—spiders and insects" (B. J. Kaston, Central Connecticut State College); "Judges' clinic: What's in this picture, for a naturalist, a teacher, a pictorialist, and an editor?" (George J. Munz, Bergenfield, N.J.; Richard B. Fischer, Cornell University; Richard W. Westwood, Washington, D.C.). There will be a summary, entitled "Using photography to promote conservation," by Charles E. Mohr. Demonstration of photographic equipment will be a feature of the meeting. The public is invited.

On 30 Dec. there will be a program on "Writing, Illustrating, and Publishing for the Nature Audience," arranged by Richard W. Westwood, president of the American Nature Association, who will preside. Panel members will be William Bridges (New York Zoological Society), Alexander H. Smith (University of Michigan), Walter Ferguson (illustrator, Jamaica, Long Island, N.Y.), Gorton Carruth (editor of "Nature Books," Crowell, New York), Kenneth Gosner (Newark Museum), Paul Mason Tilden (editor, *National Parks Magazine*), Gilbert Klingel (author of *The Bay*).

National Association of Biology Teachers. A meeting of the Board of Directors, Membership Committee, and Editorial Board will be held. 26 Dec.

There will be a five-session program

entitled "The Experimental Approach" on 27, 28, and 30 Dec.

Part I, with Paul Klinge of Indiana University, past president of NABT, presiding; 27 Dec. Papers will be presented on the experimental approach to bacteria and disease (Kenneth H. Bush, West Lafayette High School, West Lafayette, Ind., and Florence J. White, North Judson High School, North Judson, Ind.); the experimental approach to photosynthesis (Randolph R. Brown, Niskayuna High School, Niskayuna, N.Y.); the experimental approach to conservation (Robert L. Smith, DeKalb High School, DeKalb, Ill.); the experimental approach to the study of freshwater organisms (Ernest Litweller, Adams High School, South Bend, Ind.).

Part II, with Howard E. Weaver, president of NABT, presiding; 27 Dec. Papers will be presented on the experimental approach to cell and tissue study (William Houser, Roosevelt High School, Des Moines, Iowa); the experimental approach to the endocrine glands (Alfred Novak, AIBS Biological Sciences Curriculum Study, Boulder, Colo.); the experimental approach to radiation (atomic and ultrasound) (Abraham M. Weckstein, Bridegwater Township Public Schools, Raritan, N.J.); the experimental approach to diffusion (Richard H. Lape, Amherst Central High School, Snyder, N.Y.).

Part III, with Addison E. Lee, AIBS Biological Science Curriculum Study, presiding; 28 Dec. The following papers will be presented: "Microbes: their growth, nutrition, and interaction" (Alfred A. Sussman, University of Michigan); "The interdependence of structure and function: A study of motion" (A. Glenn Richards, University of Minnesota); "Animal growth and development" (Florence Moog, Washington University); "Plant growth and development" (Addison E. Lee, University of Texas).

Part IV, with David Sygoda, Andrew Jackson High School, Queens, N.Y., as moderator; 30 Dec. The New York Association of Teachers of the Biological Sciences will present a program of demonstration techniques.

Part V will be a demonstration lesson in biology by Kenneth Bobrowsky, Bronx High School of Science, and students; 30 Dec.

On 28 Dec. there will be a program entitled "Two Biological Sidelights," with Robert L. Smith, DeKalb (Illinois) High School, presiding. The following papers will be presented: "International Union for the Conservation of Nature and of Natural Resources" (E. Laurence Palmer, Cornell University) and "The beginning of an oyster stew" (Byron L. Ashbaugh, Nature Centers for Young America).

The NABT presidential address, "The Countdown," will be given by Howard E. Weaver, University of Illinois, 28 Dec. Paul V. Webster, of Bryan (Ohio) City Schools, will preside. The NABT luncheon, arranged by Mr. and Mrs. John A. Behnke (Ronald Press) with Howard E. Weaver presiding, will be held the same day. After installation of officers, William C. Steere, director of the New York Botanical Garden, will speak on "Biological Problems in the Arctic."

A dinner meeting of the Board of Directors will be held 28 Dec. On 29 Dec. there will be a joint field trip of ANSS and NABT (see the program of ANSS).

On 29 Dec. there will be a program entitled "Biology and Audio-Visual Education," with Richard Fox, audio-visual chairman, NABT, presiding. The following papers will be presented: "Living biology films" (Roman Vishniac, Albert Einstein Medical School); "Our natural resources: Can the biologist meet the demand? A different filmstrip approach" (Martha E. Munzer, Conservation Foundation, New York, N.Y.).

Two-session symposium, joint program of the American Society of Zoologists, the Ecological Society of America, and the National Association of Biology Teachers: "Teaching Animal Behavior"; 30 Dec. (for details, see the program of the American Society of Zoologists).

There will be a coffee hour for all the science teaching societies, sponsored by the W. M. Welch Manufacturing Company, on 27 Dec. On 29 Dec. there will be a Planning Committee meeting of representatives of science teaching societies to plan for the 1961 AAAS meeting in Denver.

Members of the Planning Committee of the science teaching societies for the 1960 meetings are as follows: Phyllis S. Busch (Montclair, N.J., State College), general chairman; Katherine E. Hill (New York University); Robert J. Chinnis (University of Pennsylvania); Ruth E. Cornell (Board of Education, Wilmington, Del.); Father Lucien R. Donnelly (Delbarton School, Morristown, N.J.); Margaret J. McKibben (National Science Teachers Association); Harold E. Tannenbaum (State University of New York, College of Education).

Science in General

Academy Conference. Session on junior academies, arranged by E. W. Gurr, Central High School, Phoenix, Arizona, who will preside; 26 Dec. Papers will be presented on the status of the junior academy movement (Harry J. Bennett, Louisiana State University) and on problems of junior academy organization and operation (Wayne Taylor, Michigan State University). After presentation of the papers there will be a panel discussion on organization, problems, and projected programs of junior academies, followed by open discussion. E. W. Gurr will act as moderator.

There will be a breakfast meeting of the Executive Committee on 27 Dec. On the same date there will be a business meeting and discussion of activities, with John G. Arnold, Jr., Loyola University, presiding.

Panel discussion: "The Utilization of National Science Foundation Grants by the Academies of Science," with Robert C. Miller, president elect of the Academy Conference, presiding; 27 Dec. Papers will be presented on the Nebraska visiting scientist program (James A. Rutledge, University of Nebraska); the collegiate science research conferences program in Texas (Charles LaMotte, A. and M. College of Texas); utilization of National Science Foundation funds by the North Carolina Academy of Science (John A. Yarbrough, Meredith College); the in-service training program in Tennessee (Arlo I. Smith, Southwestern University at Memphis).

The Academy Conference dinner and presidential address will be held 27 Dec., with A. M. Winchester, Stetson University, past president of the Academy Conference, presiding. The address, "The Fate of Our Junior Scientists," will be given by John G. Arnold, Jr., president of the Academy Conference.

Fourteenth Annual Junior Scientists Assembly, with Evelyn Morholt, Fort Hamilton High School, Brooklyn, N.Y., presiding; 27 Dec. A paper will be presented on the image of the scientist, by Donald Barr, School of Engineering, Columbia University. There will then be a panel discussion on "Current Work of Students in Science." Panel members will be John L. Fuller

(Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Me.); two of his students, Judy Dick and Robert Kamen; Donald Barr; and students from the Science Honors Program, School of Engineering, Columbia University. There will be a paper on summer science training programs for secondary school students of high ability, by Conrad E. Ronneberg, National Science Foundation. The last item on the program will be exhibits by students of New York City schools.

Conference on Scientific Manpower. The program of the Conference on Scientific Manpower, "Developing Student Interest in Science and Engineering," will be cosponsored by the Engineering Manpower Commission, Scientific Manpower Commission, National Science Foundation, and Section M–Engineering. Samuel Schenberg, New York City Board of Education, will preside; 27 Dec. Papers will be presented on summer research experiences for high school students (Harold A. Edgerton, Richardson, Bellows, Henry and Company, New York); science aptitudes of high school students (John C. Flanagan, American Institute for Research, Pittsburgh, Pa.); high school backgrounds of science doctorates (M. H. Trytten, National Research Council); the role of science fairs (Phoebe H. Knipling, Arlington County Public Schools, Arlington, Va.); the junior engineering technical society program (Richard T. Fallon, Michigan State University).

Science in the News

Science Advisory Committee and National Goals Reports Emphasize Growing Roles of Government

The President's Science Advisory Committee issued a report last week on basic research and graduate education which states the case for federal support for science in stronger terms than either party platform used, or either presidential candidate used publicly. It was of interest that the paper was issued as an official White House document, bearing the endorsement of President Eisenhower, a man who does not view the prospects of an increasing federal budget or an increasing federal role in national affairs with any pleasure. These circumstances reflect the extent to which even economic conservatives have come to accept the necessity, if not the desirability, of a clear increase in the role and responsibility of the federal government in the coming years.

The one statement in the report printed in italics says this: *"Whether the quantity and quality of basic research and graduate education in the United States will be adequate or inadequate depends primarily upon the Government of the United States. From this responsibility the Federal Government has no escape. Either it will find the policies—and the resources— . . . or no one will."* The report gives no cost estimates: it implies only that it would be impossible to spend too much and that it is necessary to spend a good deal more than is now being spent.

A week later, last Monday, the President's Commission on National Goals published its report, the result of a year-long privately-financed study under the leadership of a committee appointed by the President, and here again the report reflected the acceptance of a major increase of the role of the federal government, particularly in the area of education. In the individual comments, one member, Crawford Greenwalt, president of DuPont, said the report called for "unprecedented increases in government expenditures." He said he was concerned about the sort of tax policies that might result. He stressed the need for tax revisions that would encourage the growth of the economy. But he offered no objection to the "unprecedented increases" in government spending themselves.

At the opposite end of the political spectrum represented on the commission, George Meany, president of the AFL–CIO, complained that the report only "grudgingly recognizes the roles and responsibilities of the federal government." Democrats in general complained that the commission, although intended to be nonpartisan, contained a disproportionate number of Republicans. But to the extent this was true it only strengthened the significance of the paper as a reflection of the leftward shift of American politics as a whole; for the report is a good deal closer to the tone of the Democratic platform than to that of the Republican platform.

The report, for instance, although in somewhat vague language, endorses the proposal pushed through the Senate last year by the Democrats for unrestricted federal aid to education, with the states free, indeed encouraged, to use the money for teachers' salaries. President Eisenhower made it clear that he would veto any such bill if it ever reached him, on the ground that it would lead to federal control of education.

In the general economic sphere the report accepts the idea that "extraordinary measures" to stimulate the economy may be justified, these possibly to include "the greater individual effort and sacrifice exemplified by forced savings and reduced consumption." The circumstances which would impel consideration of such measures would not be an acute depression, but merely the failure of the economy to grow at a substantially faster rate than it has in recent decades. Indeed, the report assumes as a starting point that measures will be put into effect to virtually eliminate recessions and to keep unemployment consistently below 4 percent. The commission does not regard these steps as taking extraordinary measures, but both objectives imply federal intervention in the economy going beyond anything in the past, when recessions have been quite common (we now appear to be in our third in about six years),