studies section, laboratory of biology, National Cancer Institute [*Science* **123**, 20 (1956)]; 2nd AAAS Socio-Psychological prize, to Yehudi A. Cohen, department of psychiatry, Albert Einstein College of Medicine [*Science* **122**, 1261 (1955)]; Scientific Research Society of America–William Procter prize, to Robert R. Williams, chairman, Williams-Waterman Fund for the Combat of Dietary Diseases, Research Corporation [*Science* **122**, 1262 (1955)]; John Scott award, administered by City of Philadelphia Board of Directors of City Trusts, to Edgar S. McFadden, agronomist, Texas Agricultural Experiment Station [*Science* **122**, 1262 (1955)]. (Dr. McFadden died 5 Jan.)

Reports of Sections and Societies, Atlanta Meeting

Physics (Section B)

J. H. Howie as chairman of the local program committee arranged a full and diverse program. On Tuesday afternoon there was a symposium on radiation measurements, with F. L. Mohler presiding. The program included, "Radioisotope measurements in clinical diagnosis" by Marshall Brucer (Oak Ridge), "A medical spectrometer" by Jack Francis (Oak Ridge), and "Fallout measurements" by J. H. Tolan (Georgia Tech).

On Wednesday afternoon there was a symposium on research progress in physics, with Clifford Beck presiding. G. L. Pearson (Bell Telephone Laboratories) described experiments being carried out at the Savannah River Plant to detect neutrinos in the radiation emitted by a high flux reactor. The experiments involved a large volume of radiation-sensitive liquid surrounded by a battery of scintillation counters. There is reason to hope that this elusive elementary particle may at last be observed and measured. Arthur E. Ruark (University of Alabama) described a search for rare particles involving refinements in cloud-chamber techniques. Charles E. Falk (Brookhaven) gave a talk on super-energy accelerators. He described existing accelerators and gave in some detail the plans for the 30-Bev proton synchrotron that is under construction at Brookhaven.

Following a AAAS session on "The crisis in science education," there was, on Thursday afternoon, a symposium on training for careers in physics with Alan T. Waterman presiding. Gerald A. Rosselot (Bendix Corporation), Clifford A. Beck (North Carolina State College), and Josiah Crudup (Brenau College) spoke on careers in industry, scientific research, and education, respectively.

On Friday afternoon, there was a report on the International Conference on Peaceful Uses of Atomic Energy. Detlev Bronk presided, and Clarence E. Larson reviewed the program on the physical sciences, while Shields Warren covered the biological and medical sciences.

There were many other programs of interest to physicists. The American Meteorological Society held a session of miscellaneous contributed papers. There were three sessions on the program for the International Geophysical Year, which attracted large audiences because of the broad scope of scientific research included in this program. The Oak Ridge Institute of Nuclear Studies held a symposium on "Atomic energy and agriculture." There were three sessions on plant and animal metabolism and one on food sterilization.

Section B was cosponsor of a session on the role of physics in premedical education. On Wednesday evening, Section B and Sigma Pi Sigma held an informal dinner for physicists.

FRED L. MOHLER, *Secretary*

Chemistry (Section C)

Those who had the opportunity to attend the AAAS meeting in Atlanta will without doubt report that it was a very good meeting for it gave them the opportunity (i) to acquire new knowledge in their fields of specialization as well as in other areas of science, (ii) to broaden their acquaintance with other scientists, and (iii) to renew acquaintance with fellow-workers in other regions of the country.

Of special interest to chemists were the programs of Section C (Chemistry), the chemists' dinner meeting, a number of the special AAAS symposia, the variety of displays in the exhibit hall, and the interesting programs of the Science Theatre.

The program of Section C included nine sessions, some of which were cosponsored by other sections and by the Georgia Section of the American Chemical Society. One session consisted of contributed papers on a variety of topics, such as the effect of steric factors on the pinacol rearrangement, crystal engineering, the assay of folic acid by a thermophylic bacillus, the *in vitro* action of certain enzyme inhibitors on the blood-clotting mechanism, studies with labeled microbes, and the toxicity of chemicals to marine borers.

Two sessions, arranged by Jules S. Cass, presented recent studies on the patterns of biochemical and histological responses to clinical agents.

One session, arranged by LeRoy A. Woodward, considered the sedimentary kaolins along the southeastern fall line in a series of six papers, and another session, presided over by Wallace R. Brode, heard the annual address of the Scientific Research Society of America and award of the William Procter prize.

Two sessions, arranged by Ellison H. Taylor, were on radiation chemistry and related fields, consisting of a historical introduction, an outline of currently accepted views, and the role of radiation chemistry in radiobiology.

At the dinner meeting, presided over by Eugene P. Cofield, the vice president's address on the chlorination of water by Robert S. Ingols proved to be both interesting and informative.

The final session, arranged by Detlev W. Bronk, consisted of a report on the International Conference on Peaceful Uses of Atomic Energy, with papers by Clarence E. Larson on the physical sciences and by Shields Warren on the biological and medical sciences.

Karl Folkers, chairman of Section C for 1956, has already initiated work on the program for the New York meeting. Now is the time to begin to plan for this meeting. Submitted papers should be sent to Folkers or to Ed. F. Degering, 26 Robinhood Road, Natick, Mass., on or before 1 Sept., 1956.

EDWARD F. DEGERING, *Secretary*

American Association of Clinical Chemists (C2)

The program of the American Association of Clinical Chemists was opened by a symposium, "Recent concepts in clinical chemistry," 26 Dec. This symposium was devoted to the role of the clinical chemist in the hospital and some aspects of recent developments in acid-base balance, lipid metabolism, and blood proteins. Clinical chemistry was defined as the study of the nature of the chemical reactions of the body and the application of this knowledge as an aid in determining the state of well-being and the management of the ill. Speakers for this session were Albert E. Sobel, Joseph H. Gast, Samuel Natelson, D. B. Zilversmit, and Henry G. Kunkel.

At a dinner on Monday evening, an informal discussion of the forthcoming International Congress of Clinical Chemistry to be held in the Hotel New Yorker in New York, 9–14 Sept. 1956, under the sponsorship of the AACC and the announcement of the officers of the congress highlighted the evening. The tentative program of the congress follows: 9 Sept., registration; 10 Sept., scientific session and general mixer; 11 Sept., scientific session and banquet; 12 Sept., all-day outing; 13 Sept., scientific session; 14 Sept., closing session (ending at noon). The congress officers are chairman, Albert E. Sobel; secretary, John G. Reinhold; chairman of scientific program, Harry Sobotka; chairman of scientific exhibits, Charles G. Fox, Jr.; chairman of news service, Joseph Samachson; hospitality and housing committee, Metropolitan New York Section, AACC, chairmen, Harry Goldenberg and Julius Carr, secretary, A. Saifer.

The Tuesday morning session consisted of contributed papers on analytic methods. The use of infrared spectroscopy in clinical chemistry was discussed by D. Beischer, who pointed out the value of this basic tool in diagnostic problems as well as in research. An ultramicro method for the determination of proteins in biological fluids and a number of other interesting papers were presented. The Tuesday afternoon session consisted of contributed papers on metabolism and analytic methods.

ALBERT E. SOBEL, *Program Chairman*

Astronomy (Section D)

Section D had a varied and interesting program, which took place on two afternoons and two evenings. Mornings were left open so as not to conflict with the IGY sessions.

The first afternoon was devoted to a program of four papers by members of the Astronomical League, national organization of amateur societies. Illness prevented Fred L. Whipple from giving his lecture on "Progress in meteor astronomy." In its place Gerald M. Clemence made some brief remarks about the International Astronomical Union, and the secretary showed kodachromes taken on his trip to the recent meeting in Dublin.

The second afternoon was devoted to a program of five papers. Highlight of this session was the report by A. E. Lilley and E. F. McClain (Naval Research Laboratory) that they have been able to measure the red shift of the colliding galaxies in Cygnus A, using the 21-centimeter line of hydrogen in absorption. Their value is in excellent agreement with the result obtained with the 200-inch telescope.

The retiring vice president and chairman of Section D, Clemence, gave his address "Standards of time and frequency" on the evening of 29 Dec. The audience made up in appreciation for what it lacked in numbers. This outstanding address will appear in a forthcoming issue of *Science*.

The program of Section D was concluded with a popular lecture, "Exploring the Milky Way," by the secretary at a meeting of the Atlanta Astronomy Club on the evening of 30 Dec. This was held at the Bradley Observatory of Agnes Scott College in Decatur.

FRANK K. EDMONDSON, *Secretary*

Astronomical League (D1)

Frank K. Edmondson showed and commented on colored pictures taken on his visits to astronomical installations on the Continent, in England, and in Ireland during the summer of 1955, when he attended the meeting of the International Astronomical Union in Dublin. This feature proved to be of great interest to everyone.

Other highlights of the session were provided by R. R. LaPelle's demonstration of the effectiveness of astronomy in motivating the study of science, and by Berry O. Pyron's report on the quantity and the sources of the meteoritic dust arriving daily on the surface of our planet.

CHANDLER H. HOLTON, *Treasurer*

Atlanta Astronomy Club (D2)

After a short business session, members of the Atlanta Astronomy Club, convention delegates, and visitors heard an excellent address on "Exploring the Milky Way" by Frank K. Edmondson (Goethe Link Observatory, Indiana University). By skillful explanation and well-selected slides, Edmondson portrayed the methods of study and the present conception of the form and the spiral structure of our galaxy.

Later W. A. Calder's planetarium and the 30-inch reflector of Bradley Observatory were enjoyed by many, although a bright moon hampered observation. Refreshments were served by the Atlanta Astronomy Club.

CHANDLER H. HOLTON, *Treasurer*

Geology and Geography (Section E)

Two sessions were devoted to papers on geology and geography. A symposium on "Military geology" was also held. This symposium was arranged by Frank C. Whitmore, Jr., of the U.S. Geological Survey. All of the papers were by scientists in Government agencies. W. H. Grant led a field trip to the crystalline rocks near Atlanta. Wallace M. Atwood, Jr., gave the vice-presidential address on the subject of "United States participation in international science."

ROBERT L. NICHOLS, *Secretary*

National Speleological Society (E4)

Thomas C. Barr (Vanderbilt University) reported on the development and morphology of caves in the Cumberland Plateau area of Tennessee. Barr described the work that he and others have been doing in conjunction with the Tennessee Geological Survey. Accompanying his talk was a series of remarkable color slides showing some of the vast caves in Tennessee, particularly the famous Higginbottom Cave.

Charles E. Mohr (Audubon Nature Center, Greenwich, Conn.), who was also the presiding officer at the morning session, delivered a paper on the uses of photography as an aid to speleological research. Mohr emphasized the importance of cave conservation and the way in which records of cave species and various cave minerals can be more easily studied by photographs than be removing specimens from the caves.

The final paper dealt with a report of the investigations that the Speleological Society has been conducting at Floyd Collins Crystal Cave in Kentucky. As a result of the exploration and mapping of this cave system by members of the society,

it has been demonstrated that it is the largest in the world and that it has 32 miles of mapped passages.

In the afternoon a symposium on the distribution and speciation of cave vertebrates was held with the Herpetologists League. The report of this session will be found in their report.

BROTHER G. NICHOLAS,
Program Chairman

Zoological Sciences (Section F)

The 1955 Atlanta meeting presented a stimulating and varied program in the zoological sciences. That portion of it specifically arranged under the auspices of Section F consisted of three classified sessions of contributed papers and a symposium in two sessions. The contributed papers were divided between a Monday afternoon session devoted to ecology and radiobiology with seven papers presented, a Tuesday afternoon session on physiology with six papers, and a Wednesday morning session devoted briefly to protozoology and genetics with 12 papers. The attendance at these sessions fluctuated greatly, depending on the number of competing meetings, being about 40 at the first session, varying between 25 and 6 on Tuesday afternoon, and rising to 40 on Wednesday morning.

The symposium on the "Formation and early development of the embryo" consisted of eight invited papers presented in two sessions on Tuesday morning and Tuesday afternoon. Unfortunately two of these papers, one at each session, had to be omitted because of illness of the authors. This program was built about a theme of importance not previously treated in a general symposium, and the arrangers, R. C. von Borstel, D. B. Metz, and A. Tyler deserve special commendation for imaginative treatment of the theme through their invited speakers. The attendance at the two sessions of the symposium varied between 40 and 100.

Of the excellent symposia planned by other groups, the one that received the most attention by the biologists in attendance was that on the "Species Problem," planned by the Southeastern Biologists and arranged by E. Mayr. It was an extensive and valuable series of papers with new viewpoints on a perennial central theme. The four-session symposium presented by Section N on "Microbiology and medical research" also attracted many biologists, since it presented summaries of much new material on microbiology, physiology, and virus research. This program deserves special commendation since it was presented from exactly the viewpoint suggested by the Arden House memorandum.

The dinner meeting of Section F was held at Atlanta University on Thursday evening. About 70 members enjoyed the dinner. The talk by E. Gordon Carlson on "Mitotic movements of chromosomes" was a valuable summary of his important studies.

Nearly all biologists agreed that this was an important meeting scientifically, even though the total attendance was small. Most agreed that meetings should be held in the South in spite of some difficulties. Many expressed the belief that contributed papers might be omitted in the future but hoped there might be some method for submitting abstracts listed by title.

H. H. PLOUGH, *Secretary*

American Society of Parasitologists (F1)

The meeting of the American Society of Parasitologists, consisting of seven sessions for the presentation of papers and discussion, one session for demonstrations, one session for the presentation of the presidential address, and one session for the annual business meeting, was carried out without deviation from the printed program. Of the 133 papers represented, only two did not materialize. The outstanding paper in the opinion of many was presented by C. P. Read of Johns Hopkins University entitled "Comparative studies on the physiology of trichomonad flagellates."

The average attendance at the various sessions was more than 100, and 140 were at the annual luncheon and business meeting. The only items of business other than routine matters pertaining to efficient running of the society were connected with the selection of a new editorial committee to carry on the work of the *Journal of Parasitology,* with the election of Leon Jacobs of the NIH as the new chairman and Harold Manter of the University of Nebraska and Bernard Travis of Cornell University as associates on the new committee that is to serve through 1960.

A. C. WALTON, *Secretary*

Society of Systematic Zoology (F4)

The 8th annual meeting of the society included a full program, carefully planned to coordinate with other biological programs scheduled at the same time.

As usual, activities centered in the book lounge, where the books on zoology of 90 publishers were on exhibit—virtually a complete set of the books about animals (including biological textbooks) that are in print in America. More than 800 books were in the collection.

In addition to sessions for contributed papers, the annual business meeting, and meetings of the council, the program included a symposium on "The systematic content of general biology courses," the annual breakfast, a tea in the book lounge, and cosponsorship of sessions arranged by other societies.

It was decided to hold the 1956 annual meeting with the AAAS in New York.

R. E. BLACKWELDER, *Secretary*

Mountain Lake Biological Station (FG5)

Former staff members, investigators, and students met for breakfast on 29 Dec. The 51 persons present represented everyone of the 26 years the station has been in operation. Each was introduced and given an opportunity to say a few words. George Sprugel, Jr. (National Science Foundation) announced an NSF grant of $18,000 for the promotion of research at the station during the years 1956, 1957, and 1958. Raymond L. Taylor (AAAS) described briefly the noncredit seminar course on organized science that he will conduct there during the coming summer. Several speakers from national scientific organizations will participate in these discussions.

BRUCE D. REYNOLDS, *Director*

National Association of Biology Teachers (FG6)

The National Association of Biology Teachers sponsored one joint session cosponsored by ANSS and NSTA based on the theme "Science and human resources." Varied topics covered the influence of science on the South, practical methods of introducing radioisotopes to the high-school student, and the problems faced by Negro colleges in their efforts to prepare science teachers.

Two separate programs were planned by NABT. One stressed the coordination of science and education. Variations in teaching biological principles were demonstrated, summer programs for the biology teacher were outlined, and progress reports resulting from the recommendations of the Gainesville Conference on Biology Teaching were given by representatives from ten southern states. The reports showed that the recommendations of the conference, sponsored by NSF and carried out by NABT, were being undertaken by a majority of the states represented.

The second session was centered around the presentation of new ideas to

the biology teacher. These consisted of an illustrated demonstration of techniques for growing fern spores, the teaching values of animals and plants in the laboratory and the field, better use of visual aids, and the use of the project method of training teachers in the biological sciences.

NABT also cosponsored meetings with ANSS, NSTA, NARST, and AAAS.

Highlights of the business sessions were the plans for incorporation, plans for additional conferences on the improvement of biology teaching and the encouraging report made by the secretary-treasurer.

JOHN P. HARROLD, *President Elect*

Botanical Sciences (Section G)

The program of Section G comprised several symposia and sessions for contributed papers, and the annual Botanists' dinner. Two symposia were concerned with two plants of major significance to southern agriculture: tobacco and cotton. The symposium on "The tobacco plant," at which Barry Commoner presided, included papers by W. G. Frankenburg, M. L. Zucker, H. H. Smith, and E. E. Clayton on various biological and biochemical problems encountered in studying this plant. The parallel symposium on "The cotton plant," under the chairmanship of James H. M. Henderson, included papers by Wayne C. Hall, Wanda K. Farr, S. G. Stephens, and J. T. Presley. A third symposium, sponsored by the Southern Section of the American Society of Plant Physiologists and arranged by Aubrey Naylor, discussed current work on algal physiology and biochemistry, with papers presented by L. Provasoli, W. B. Wilson, J. H. Ryther, and T. R. Rice.

A variety of short presentations were heard at two sessions for contributed papers. The symposium sessions were attended by about 50 persons; audiences at the sessions for contributed papers were somewhat smaller. For botanists the high point of the Atlanta meeting was the annual botanists' dinner. This took place at Atlanta University and was notable for the warm hospitality and excellent food provided by our hosts, the remarkable floral decorations arranged by the Georgia Botanical Society, and the memorable vice-presidential address. Our retiring vice president for Section G, L. H. Blinks, spoke on "Flora et fauna potomacensis," and reported on his experiences during a recent stay in the Potomac region. Blinks' incisive observations and his remarkable drawings were warmly appreciated by the nearly 80 botanists present. It is hoped that Blinks can be persuaded to publish this valuable contribution. Much of the success of the dinner was due to the energetic work of our local representative, Robert B. Platt (Emory University).

BARRY COMMONER, *Secretary*

American Phytopathological Society (G1)

Some 500 members were in attendance at the meeting of the American Phytopathological Society. Nearly 200 papers were presented in addition to several invitational papers.

GLENN S. POUND, *Secretary*

American Society of Plant Physiologists, Southern Section (G3)

The Southern Section of the American Society of Plant Physiologists sponsored a symposium, "Implications of current physiological and biochemical research on marine algae," cosponsored by Section G and the Botanical Society of America, Southeastern Section. The four papers read were uniformly excellent. At the session for contributed papers in plant physiology, joint with Section G, the preceding afternoon, the attendance of more than 100 participated actively in the discussions following each paper. Barry Commoner's paper was outstanding.

AUBREY W. NAYLOR, *Program Chairman*

Psychology (Section I)

The program of Section I consisted of five sessions of invited papers and two of submitted papers. All sessions were cosponsored by the Southern Society for Philosophy and Psychology. Two groups of invited papers, one on "Sensory processes" arranged by John F. Hahn and a second on "Brain function" arranged by Harlow W. Ades, were cosponsored by the American Physiological Society.

The other sessions of invited papers included a review of the present status of military psychology arranged by Wilse B. Webb, a series of four papers on learning arranged by Stanford C. Ericksen, and a symposium on primate behavior arranged by Arthur J. Riopelle. Section I joined with Section L to cosponsor a symposium on creativity in science.

WILLIAM D. NEFF, *Secretary*

Social and Economic Sciences (Section K)

Section K held two principal symposia at Atlanta. The first was on "Contemporary patterns in southern population, migration, and urbanization." Papers were read by Homer L. Hitt (Louisiana State University) and Harlan W. Gilmore (Tulane University), the latter based on work in collaboration with Nicholas J. Demerath (Institute for Research in Social Science, University of North Carolina). Barnett O. Williams (University of Georgia) presided.

The second symposium was held jointly with the Southern Political Science Association on the subject of "Political trends in the South." Presentations were made by Lee S. Greene (University of Tennessee) and Jasper B. Shannon (University of Kentucky). Lynwood M. Holland (Emory University) presided.

Section K also cosponsored the session on "Some peaceful uses of atomic energy" with the National Academy of Economics and Political Science, the Oak Ridge Institute of Nuclear Studies, and with the collaboration of Pi Gamma Mu. Speakers at this session were W. Kenneth Davis (Atomic Energy Commission), Shields Warren (New England Deaconess Hospital), and Walker L. Cisler (Detroit Edison Company). Marshall Brucer (Oak Ridge Institute) presided.

A dinner meeting was held by Pi Gamma Mu preceding this session in honor of the speakers on the program of the National Academy of Economics and Political Science and the officers of Section K and the National Academy and also of the Oak Ridge Institute. Benjamin H. Williams (Industrial College of the Armed Forces) presided.

Other sessions in which Section K participated were "Resource development through science" with AAAS Sections P and M and the Southern Association of Science and Industry, and "Socio-economic aspects of orthopedic engineering" with AAAS Sections M and N.

DONALD P. RAY, *Secretary*

History and Philosophy of Science (Section L)

The program of Section L opened on Wednesday afternoon with a symposium on "Sociology of science" arranged by the section secretary and presided over by Chauncey D. Leake. Participants were Philipp Frank, Harold K. Schilling, Paul B. Sears, and Philip Rieff. A section business meeting and luncheon were held Thursday noon, and we were fortunate to have Robert T. Lagemann (Vanderbilt University) as luncheon speaker. Thursday afternoon and evening Raymond J. Seeger presided over symposia that he had arranged on "Science and humanities" (participants were Harcourt Brown, David Hawkins, Raymond S. Stites, William D. Stahlman, and Philipp

Frank) and on "Creativity in science" (participants were Howard Hanson, W. F. G. Swann, and Samuel Eilenberg). The following groups acted as cosponsors for one or more of the symposia: AAAS Section I, Psychology; AAAS Section Q, Education; History of Science Society; Philosophy of Science Association; and the Southern Society for Philosophy and Psychology.

Contributed papers were presented on Friday morning and afternoon, and the final event of the Friday afternoon session was the presentation of Seeger's excellent vice-presidential address "Man and science." Seeger has contributed greatly to the development of the section, both as secretary and as chairman, and we hope that we shall continue to enjoy the benefits of his advice and his interest in the section.

JANE M. OPPENHEIMER, *Secretary*

Society for the Advancement of General Systems Theory (L3)

A symposium, "Entropy," was devoted to the generalization of the entropy concept in irreversible thermodynamics and in information theory. According to the dictum of physics, the universe gradually "runs down," progressing toward states of increasing disorder and leveling down of differences. In contrast, the living world progresses, in individual development and in evolution, toward states of increasing order and heterogeneity. Ludwig von Bertalanffy outlined the advances made in the thermodynamics of irreversible processes, open systems, and steady states, which shed light on this apparent paradox as well as many other problems in physics and biology.

By posing new problems to "Maxie," the Maxwell demon, Anatol Rapoport discussed the questions of how far informational entropy presents a measure of organization and whether a conversion between thermodynamic and informational entropy is legitimate. W. Ross Ashby studied the experimenter and the system investigated as parts of a supersystem, from which unexpected features of the systems studied in science arise. Raoul S. Naroll showed that the principle of allometric growth applies to specialization in primitive tribes as well as to the process of urbanization in modern history, so that it may offer a quantitative measure for social developments.

The temporary committee of the society will continue its function until the election of officers, which will take place by mail ballot early in 1956. A further donation from the Bostrom Foundation, Inc., was gratefully acknowledged. *The Yearbook 1956 of the Society for the Advancement of General Systems Theory* will appear in the first half of 1956. It will contain a collection of papers applying GST in various fields, and will be mailed to the members free of costs.

LUDWIG VON BERTALANFFY, *Executive Secretary, pro tem*

Engineering (Section M)

During the past year, Section M was pleased to welcome two additional technical societies as affiliated members of the section. They are American Institute of Industrial Engineers and National Society for Professional Engineers. These additions form a total of 21 technical societies now affiliated with Section M. Although the total membership in these societies is more than 150,000 engineers, there are only some 3000 engineers that are members of the Association.

One of the main problems of Section M is to develop a closer relationship between engineering and other divisions of science. We feel that the present practice of the annual meetings of the Association does not encourage the participation of the engineers in the activities of the Association. We recommend that serious consideration be given to more joint section meetings and that a greater emphasis be placed on meetings of the Association as a whole.

The engineering program for the 1956 New York meeting is being planned on the topic "Interrelationship of science and engineering," and we invite the cooperation of other sections of the Association in developing this program. Our program chairman will be Irving P. Orens (Newark College of Engineering, Newark, N.J.).

Section M is giving serious consideration to the development of a conference on engineering and science similar in organization and operation to the present Gordon Research Conferences in Chemistry.

Two meetings of the section committee were held in New York during the year. At these meetings, the administrative secretaries of the affiliated societies were invited to attend. The next meeting of the section committee is scheduled for 6 Mar. 1956 in room 1001 Engineering Societies Building, New York, N.Y., at 1 P.M.

At the Atlanta meeting, six sessions were developed in which 19 papers were presented. Two sessions were on "Automation;" two on "Resource development through science," and two on "Socioeconomic aspects of orthopedic engineering." Four sessions were held jointly with Section P, Industrial Sciences. The program was under the direction of Mario J. Goglia (Georgia Institute of Technology). The section presents its thanks to Goglia and his committee for the excellent program developed and for the hospitality extended to our visitors to Atlanta.

FRANK D. CARVIN, *Secretary*

Medical Sciences (Section N)

Section N cosponsored several symposia with other AAAS sections and participating societies. The principal effort of the section, however, was the arrangement of a 2-day symposium on microbiology and medical research. S. E. Luria (University of Illinois), arranged the program. Each of the four sections was devoted to a different aspect of microbiological problems.

The first session was concerned with nutrition and microbiology. In this session, the nutritional responses of bacteria, viruses, animal microorganisms, and mammalian cells were discussed. Harry Eagle (National Institutes of Health), discussed current applications of tissue-culture techniques to the evaluation of potential cancer chemotherapeutic agents. He described media on which certain mammalian cells will grow, which are synthetic with the exception of a small amount of added serum, and presented evidence that would indicate that the serum did not contribute essential protein to the media.

The second session was concerned with problems of metabolism. S. S. Cohen (University of Pennsylvania), described metabolic changes in virus infections and presented interesting observations indicating that certain differences in virus nucleic acids may be accounted for on the basis of the number of the sugar moeities attached to the pyrimidine.

Session three was devoted to radiation effects on bacteria, viruses, and protozoans.

Session four was on infection and chemotherapy. During this session Luria gave his vice-presidential address on the subject "Infectious heredity and its medical applications." I. Tamm (Rockefeller Institute for Medical Research) discussed antiviral chemotherapy, presenting evidence that, although certain viruses can be adversely affected by chemical means, no potent antiviral therapeutic agents are as yet available. Very strong evidence was given, however, to indicate that this is a productive field for future investigations. During this session, the Theobald Smith Award for Medical Sciences was presented to Alan Good (University of Minnesota). Good presented a short résumé of the work for

which he received this recognition. His remarks were on the subject of congenital aglobulinaemia and the contribution such diseases offer in elaborating the mode of action of immunological mechanisms.

ALLAN D. BASS, *Secretary*

American Association of Hospital Consultants (N2)

The symposium on "Place of experimentation in hospital administration" was held 29 Dec. with Jacque B. Norman (hospital consultant, Greenville, S.C.) presiding. Two formal papers were presented by E. M. Bluestone (consultant to Montefiore Hospital, New York) and E. Dwight Barnett (Columbia University). Discussants were John E. Gorrell (National Foundation for Infantile Paralysis) and Louis Block (Division of Hospital and Medical Facilities, U.S. Public Health Service).

The audience, although small, included representatives from the field of hospital administration, both government-owned and community hospitals, pathologists, the U.S. Public Health Service, state agencies administering the Hill-Burton program, schools of hospital administration, and industry.

Bluestone, in a paper on "Philosophic viewpoints on the role of experimentation in hospital administration," pointed out the need for research in the field of hospital administration and operation and brought out forcefully the existing gap between development of laboratory sciences and administrative applications. Bluestone's philosophy was that the two types of research should be carried on simultaneously and definitely correlated together. In this connection he said, "One of the most reprehensible forms of waste in the hospital is waste of clinical material. And just as medical research is a by-product of clinical bedside medicine, so administrative research is a by-product of the unsatisfactory routines that are ever on the minds of forward-looking and conscientious hospital executives."

Barnett, in his paper on "The practical viewpoint of the place of experimentation in hospital administration" cited a number of experimental and research programs that are being conducted today and commented on the value of each and the possible applications of the results obtained. He especially emphasized the large research program being conducted by Columbia University in the field of medical administration. His paper also brought out the need for research programs in this field.

Barnett brought out the possibilities of research for administrators of medical and health programs, possibilities that are unrecognized or undeveloped and could easily be undertaken. Barnett cited activities of the American Hospital Association and others some 4 or 5 years ago in trying to negotiate and start programs in hospital and medical administrative experiments and research. He pointed out the advantage that has come about with the appropriation from the Congress under Public Law 380 of $1.2 million for research in this field.

Both speakers stressed the need for tying in the social phase of health care into this research, pointing out that the ultimate result is better patient care and a higher health level of the community and the country as a whole.

JACQUE B. NORMAN, *Program Chairman*

American Psychiatric Association (N4)

The 2-day meeting of the program of the American Psychiatric Association cosponsored by the American Physiological Society lived up to the formulation set for it. Not only were clinical advances in the new tranquilizing drugs presented on the first day but also basic studies on these drugs. On the second day the problem of alcoholism was presented from these two points of view. One of the highlights of the program was concerned with the mechanism of action of the new drugs. A spirited discussion took place on methods for screening of these new drugs in order to afford leads as to their probable clinical values. Various screening methods were compared and contrasted: condition reflexes on synaptic transmission, seizure latency on serotonin metabolism and on the contractions of the rat uterus.

The meeting on alcoholism discussed notable advances with the use of the tranquilizing drugs on the treatment of alcohol addition as well as rounded discussions of the various facets in the treatment of alcoholism. Again, as on the preceding day, fundamental mechanisms were stressed. Methods of alcohol oxidation, the effect of fructose in accelerating this oxidation, the pathway of alcohol metabolism in the body, the reciprocal influence of alcohol and the endocrine organs, and the action of alcohol on higher nervous activity were discussed. Taken all together this program presented the varied picture of progress occurring in the fields of psychiatry and alcoholism.

HAROLD E. HIMWICH, *Program Chairman*

Dentistry (Section Nd)

Section Nd held two sessions on 28 Dec. Fifty people were present. Both sessions were devoted to 11 papers related to the physiology and secretory mechanism of saliva. The program was arranged by J. F. Volker of the University of Alabama.

C. E. Klapper (University of Alabama) reported studies in desalivated hamsters on a cariogenic diet. All developed caries and the teeth were destroyed in 45 days. When the submaxillary gland was not removed, the caries rate was reduced, indicating a protective effect of mucin.

A study of the secretory mechanism was reported by H. H. Chauncey (Tufts University). Various types of stimuli were applied to the parotid glands with resultant changes in salivary composition. Salivary depression produced a different constituent pattern.

L. Schneyer (University of Alabama) described methods of collecting the secretion of separate salivary glands. He found differences in the viscosity of various glands and estimated the flow in each. In a study of the submucous glands, he found that the flow was affected by the irritation of the collector device and concluded that under ordinary conditions these glands did not contribute appreciably to the total salivary flow.

J. Haldi (Emory University) measured the *p*H of tooth surfaces in desalivated white rats, using an antimony electrode, and compared it with caries activity. He found a definite relationship of both lowered *p*H and lactate to caries activity.

Donald B. Giddon (Tufts University) reported studies of changes in parotid secretion related to psychosomatic stress. Cholinesterase was used as the salivary criterion and comparisons were made to changes in pulse rates and blood pressure. In this study cholinesterase was found to be a better measure of autonomic changes than other available criteria.

From a study of the carbohydrates in saliva, W. Pigman (University of Alabama) found that the reducing power of whole saliva was greater than the sum of all gland secretions. By the use of chromatographic paper, he was unable to demonstrate the presence of sugar. By allowance for possible error of reagents, he estimated that there was not more than 1 milligram percent of glucose in saliva.

J. Reid (University of Alabama) reported electrophoretic and ultracentrifugal studies of human saliva. Individual gland secretions were tested, and differences between the constituent readings of the two methods were found.

W. E. Shafer (Indiana University) reported a study of the relationships between salivary and endocrine gland activity in rats. No relationship was found to the estrogenic cycle. Administration of sex hormones affected the salivary secretion and produced structural changes in the glands. Insulin had no effect, and the cortisones were slightly stimulating.

S. B. Barker (University of Alabama), in a study of thyroidectomized animals and of injections of thyroxin and related compounds, noted definite reactions in various tissues and organs, including the salivary glands.

W. Wynn (Emory University) reported studies of enamel solubility, using lactate buffer solutions. In partially decalcified enamel, he found that the magnesium and calcium carbonates had been removed but that the phosphate ions remained.

G. Hargreave (Tufts University) reported a study of 2500 compounds for glycolysis inhibition. It was found that some simple aldehydes have appreciable inhibitive effects. Out of 114 ketones tested, eight were effective.

Those who desire further information on these papers may obtain abstracts of any or all of them by writing to Dean R. F. Volker, School of Dentistry, University of Alabama.

R. W. BUNTING, *Secretary*

Pharmacy (Section Np)

Section Np had a very successful meeting. The symposia presented were top programs, and the 30 papers presented at the contributed-papers sessions were of excellent quality. A count of the registered attendance shows that 164 individuals attended one or more of the five sessions.

The chief interest as shown by attendance was in the symposium on the "Applications of nucleonics to the health professions" and the panel discussion on "Hazardous household chemicals and agricultural poisons," both of which attracted interest outside the pharmaceutical group in attendance. Marshall Brucer (Oak Ridge Institute of Nuclear Studies) stated that radioactive drugs for medicinal uses—practically unknown 10 years ago—now are being produced on "an assembly-line basis." Radioisotopes are no longer research stunts and in a few instances are now the preferred method of diagnosis and the treatment of choice. Henry Blair (School of Medicine and Dentistry, University of Rochester) discussed in detail the relationship between radiation dose and the shortening of life span. He pointed out that animals exposed to ionizing radiation well above normal levels died of the symptoms of old age at a relatively young age. Howard E. Skipper (Southern Research Institute) indicated clearly the importance of radioactive isotopes in studies on the biochemical aspects of cancer chemotherapy. L. E. Brownell (Fission Products Laboratory, University of Michigan) and G. E. Burch (School of Medicine, Tulane) discussed the sterilization of drugs with gamma rays and the use of radioisotopes in cardiac research, respectively.

The dangers of household chemicals and agricultural poisons to the general public was covered by four experts in the field. B. E. Conley (Committee on Toxicology) said that the growing multiplicity of potentially harmful exposures to chemicals is poorly understood even by physicians and scientists and consequently the problem is more serious than the average person realizes. W. J. Hayes (Toxicology Section, USPHS, Savannah, Georgia) touched on the health problems of agricultural poisons. Veronica L. Conley discussed the harmful effects of chemicals on the skin, and L. M. Petrie discussed the health problems of industrial chemicals.

G. L. Jenkins (Purdue University School of Pharmacy) opened the contributed-papers sessions with a stimulating discussion on the standards of professionalism and how the profession of pharmacy measures up to these standards. The scientific papers were of unusual merit. Robert C. Anderson (Lilly Research Laboratories) reported on the properties of a new antibiotic, cycloserine, which is soon to be placed on the market. First-order drug elimination from the blood stream was discussed by J. V. Swintosky (S.K.F. laboratories). J. P. La Rocca (University of Georgia) reported on an evaluation procedure for sedative properties. J. A. Campbell (University of South Carolina) discussed the effects of pork-rich diets, and J. W. E. Harrisson (Harrisson Research Laboratories) presented the comparative effects of antacids on ulceration.

The hospital pharmacy group sponsored a paper on the cost data of injectables by J. A. Hunter (USPHS Hospital, Detroit, Mich.). Discussions by R. A. Williams (Department of Public Health, Atlanta) and J. W. Boenigh (Medical College of Virginia) on hospital pharmacy programs were also presented.

JOHN E. CHRISTIAN, *Secretary*

Agriculture (Section O)

The Section O program was a four-session symposium on "Atomic energy and agriculture," sponsored jointly by the AAAS and the Oak Ridge Institute of Nuclear Studies. The sessions were concerned with: soil-plant relations; plant metabolism and crop improvement; animal metabolism; and food sterilization. The general chairman of the committee that arranged the symposium was Cyril L. Comar (Oak Ridge Institute of Nuclear Studies). These four sessions were presided over by R. F. Reitemeier (Soil and Water Branch, USDA), H. B. Tukey (department of horticulture, Michigan State University), Homer Patrick (University of Tennessee, Atomic Energy Commission Agricultural Research Program), and H. R. Kraybill (American Meat Institute Foundation, Chicago), and B. F. Trum (U.S. Army Veterinary Corps), respectively.

The speakers were chosen because of their knowledge of isotopes and broad understanding of agricultural problems. The program was especially valuable because it summarized and brought up to date the available information on radioisotopes as they relate to agriculture. The program was also very important to agriculture because of the stimulation of fundamental agricultural research.

In plant science, radioisotopes are contributing to the understanding of basic mechanisms of uptake of nutrient elements. In the soil, radioisotopes have furnished a tool for studies in ion mobility in soils, evaluation of native fertility, fertilizer management and distribution, and growth of roots. In the animal the whole spectrum of studies of nutrient absorption and utilization and the various physiological functions can be carried out through the use of radioisotopes under conditions that allow extrapolation to field conditions. It may also be noted that much of this animal research provides important information for problems of human nutrition and physiology. Radiation processing, through food sterilization offers the potentiality of preserving and shipping good-quality food and drugs to all areas of the world, whether or not refrigeration facilities are available. The economy and efficiency of this process needs further study.

Section O also cosponsored two symposiums of Section G–Botanical Sciences: "The tobacco plant" and "The cotton plant." These sessions involved the chemistry, physiology, pathology, and genetics of the two field crop plants.

One of the highlights of the Section O session was the presentation of the John Scott award to Edgar S. McFadden (Texas Agricultural Experiment Station) "for his origination and development of the first rust-resistant bread wheat." This award was presented to McFadden by Ernest T. Trigg, vice president, City of Philadelphia Board of Directors of City Trusts.

As one might expect, most of the symposium sessions were quite well attended by audiences that ranged from approximately 75 to 200 persons.

F. D. KEIM, *Secretary*

Education (Section Q)

The Section Q meetings were definitely successful, although an unusual number of those who were preparing papers were absent because of illness. However, every session had good attend-

ance, and discussion from the floor was greater than is commonly experienced.

There were two sessions on gifted children and one on handicapped children. This last one was prepared by the International Council on Exceptional Children. There were two sessions in cooperation with the American Educational Research Association—one of these was a symposium on "The role of evaluation." There were four sessions of general papers.

Perhaps the highlight of the meeting was the session that included the vice-presidential address of Carter V. Good, "The role of values in educational research," and an address by B. R. Buckingham on "Permanent educational values in a world of change." Buckingham first attended meetings of Section Q, which was then Section L, in 1915. He was one of the founders of the AERA.

Section Q also cooperated in the symposium on "Recent research in science education," in the symposium "Science and humanities," and in various meetings of the Cooperative Committee.

D. A. WORCESTER, *Secretary*

National Association for Research in Science Teaching (Q5)

The National Association for Research in Science Teaching presented a symposium entitled "Recent research in science education." The program was cosponsored by the National Science Teachers Association, the National Association of Biology Teachers, the Central Association of Science and Mathematics Teachers, the American Educational Research Association, the American Nature Study Society, the International Council for Exceptional Children, AAAS Section Q (Education), and the AAAS Cooperative Committee on the Teaching of Science and Mathematics.

The symposium consisted of six presentations: "Survey of research in elementary-school science education," Clark Hubler; "Implications of research in elementary-school science education," George G. Mallinson; "Survey of research in secondary-school science education," Jacqueline Buck Mallinson; "Implications of research in secondary-school science education," Hubert M. Evans; "Survey of research in college-level general education science," Edward K. Weaver; "Implications of research in college-level general education science," Woolford B. Baker. The meeting was presided over by Waldo W. E. Blanchet. Approximately 170 persons attended the meeting.

GEORGE G. MALLINSON,
Program Chairman

National Science Teachers Association (Q6)

The National Science Teachers Association cooperated with the other science-teaching societies affiliated with the AAAS in their joint conference. At this, its mid-winter regional conference, NSTA sponsored three general sessions with ANSS and NABT. Each society was primarily responsible for the planning of one of the three sessions. The first general session, planned by ANSS was a symposium, "Southern agriculture from 1913 to 1956." The second general session was planned by NSTA. H. F. McDuffie (Homogenous Reactor Project, Oak Ridge National Laboratories), replaced John A. Swartout, who was ill, and presented a paper, "New frontiers in research." "Science and human resources" was the panel presentation of the NABT-planned session. All three general sessions were well attended and enthusiastically received.

The teaching societies were cosponsors of the NARST symposium, "Recent research in science education." NSTA felt privileged to be invited, along with all the other affiliated teaching societies, to cosponsor the AAAS special session, "The crisis in science education." The recognition of the position of science education and science teachers by the AAAS was a high point of the meeting.

"A Christmas interlude," a program of varied musical offerings and a magician's show, presented by the Atlanta Science Teachers Club for the entertainment of the visitors, was an outstanding event of the convention.

Top-flight scientists from industry and education presented lecture-demonstrations on the panel, "Attracting secondary-school students into science." A panel of leaders in education throughout the nation discussed the problem of developing continuity in the elementary-science program in the second concurrent session of Tuesday afternoon.

On Thursday afternoon, three concurrent sessions were devoted to the "Here's how I do it" theme. On the secondary level, all presentations were centered on evaluation of demonstrated classroom activities. In the elementary sessions, demonstrations on scientific toys, jets, the weather, and topics of equal interest were well presented and received.

A field trip to the granite outcrops near Atlanta and tours to industries and to the Communicable Disease Center of the USPHS were among the opportunities offered to the participants by the societies planning the joint conference. More than 300 registrants attended the various meetings and events of the conference.

KATHERINE HERTZKA,
Program Chairman

Academy Conference (X1)

The Academy Conference held its annual meeting on 28 Dec. There were 48 present at the morning session, 26 of whom were official representatives of state and city academies of science. The afternoon session was attended by approximately 70.

At the business meeting presided over by the president, Leland H. Taylor (West Virginia Academy), an amendment to the constitution was made to allow the appointment of standing committees on the Junior Scientists Assembly, Collegiate Academies, Junior Academies of Science and Other Associated Secondary School Activities and Programs.

Clinton L. Baker (Tennessee Academy), archivist, invited all present to make use of the facilities of a booth set up by the Academy Conference in cooperation with the Georgia Academy of Science where friends might meet to discuss mutual academy problems and procedures and to see a display of the publications of all the academies.

John A. Behnke, AAAS, told briefly of the Science Teaching Improvement Program of the AAAS which is being financed by a $300,000 grant from the Carnegie Foundation. He stated that the AAAS would be glad to have someone at each state academy meeting to discuss the program. He announced the decision of the Board of Directors of the AAAS concerning the research funds that revert to the state academies from the AAAS. The funds had been specifically designated to be used for research grants at the secondary-school level. Since many representatives of academies felt that the academies should have the privilege of using the research funds for undergraduate college students, the conference asked the board to reconsider its decision. (A later decision of the board made it possible to use the funds at both college and secondary-school levels.)

Reports from the committees on Junior Scientists Assembly, on Junior Academies of Science, and on Collegiate Academies were presented.

The afternoon program consisted of a panel discussion of "The role of academies of science in the AAAS Science Teaching Improvement Program," and a talk by Clinton L. Baker on "Science fairs as an academy activity." Panel participants were John R. Mayor (STIP, AAAS), Wayne Taylor (University of Texas), and Ralph W. Lefler (Purdue University).

During the reports, discussions, and talks academy representatives were advised to encourage their academies to stimulate scientific education and research, to discover and develop scientific ability in elementary, secondary, and col-

lege students, and to diffuse scientific knowledge. Such purposes could be accomplished more effectively (i) by encouraging university and college science departments to accept responsibility for science teacher training programs and for offering graduate credit *in science* to teachers; (ii) by making possible symposium-type seminars for bringing teachers up to date in sciences; (iii) by promoting better working conditions, higher certification standards, and more adequate salaries for teachers of science; (iv) by encouraging state departments of education to use secondary-school science teachers as consultants; (v) by persuading educational institutions and industries to loan or give equipment no longer used to the schools, and (vi) by promoting the work of junior academies and science fairs to inspire potential future scientists.

The annual conference dinner, with Wayne Taylor officiating as toastmaster, was well attended.

THELMA C. HEATWOLE, *Secretary*

American Nature Study Society (X3)

The 48th annual meeting of the American Nature Study Society began with a panel on "Southern agriculture from 1913 to 1956." Under the able leadership of J. W. Fanning, the panel members were George King, S. G. Chandler, Herbert L. Stoddard, Sr., and Ed Komarek. The discussion began with the contributions of the experiment stations and the extension division, was continued with the part played by forestry and wildlife, and ended with the goal we are aiming toward—the broadening concept of land management with its favorable influence on the economy of the South.

The first afternoon session concerned the philosophy of the Nature Study Idea and its contribution to the school program. E. L. Palmer shared, through movies and recordings, his experiences with some of the early workers at Cornell —the Comstocks, Gage, Bailey, and Jordan. Walter Thurber discussed the contributions of nature study to the elementary and secondary schools, and Stanley Mulaik presented the role of nature study in the general-education program at the college level.

A second afternoon session afforded a galaxy of outstanding nature writers—Roger Tory Peterson, Herbert Zim, Millicent Selsam, Ed. Dodd and Charles Mohr. The theme of this session was "The appeal of the nature writer to all age groups."

The usual friendly, informal atmosphere was evident at the annual showing of kodachromes and the ANSS dinner with its presidential address. The meeting ended with a field trip to study the unusual plant life found on granite outcrops at Mount Arabia and Stone Mountain.

MALVINA TRUSSELL, *President*

Conference on Scientific Editorial Problems (X4)

The fourth conference on scientific editorial problems consisted of four sessions. The first was held on the morning of 28 Dec. and was presided over by C. M. Johnson (Technical Information Division, U.S. Navy Electronics Laboratory, San Diega, Calif.). The keynote address, "Need for improving technical communication in our technological society," was delivered by Saul Herner (Technical Information, Library Planning Group, Atlantic Research Corporation, Alexandria, Va.). The session concluded with Johnson's outline of the program for the subsequent sessions.

The afternoon session of 28 Dec. consisted of two concurrent discussion panels. One panel was presided over by Paul H. Flint (Tufts) and by J. G. Adashko (Ford Instrument Company, Long Island City, N.Y.). The panel discussed scientific and technical writing, scientific and technical editing, and graphic methods in the communication of scientific and technical information. Speakers included Christian Arnold (Penn State College), C. I. Hartley (Hartley Productions, New York), W. W. Heller (Duke University), J. E. Levy (Washington Engineering Services, Bethesda, Md.), H. E. Marschalk (Bureau of Ordnance, U.S. Navy), E. J. Megroth (Painesville, Ohio), and John Wilson (U.S. Naval Ordnance Test Station, China Lake, Calif.).

The other concurrent panel, led by Martin E. Jansson (Naval Research Laboratory), and James W. Perry (Western Reserve University), was devoted to storage and retrieval of scientific and technical information and to management of publications. Short addresses were delivered by Eugene Garfield (Smith, Kline and French Laboratories), "Documentation today, its status and trends"; Samuel N. Alexander (National Bureau of Standards), "Current trends in information-retrieval instrumentation"; and Dwight E. Gray (Library of Congress), "How well is the job of presenting technical information being done?" Both panels were followed by general discussion from the floor.

The third session, Thursday morning, was a continuation of the Wednesday afternoon session. Short addresses by J. R. Gould (Rensselaer Polytechnic Institute) and Wallace R. Brode (National Bureau of Standards), "Responsibilities and limitations of authors, editors, referees, and readers in journal publication," preceded the panel discussion and the general discussion on the floor.

The fourth closing plenary session, Thursday afternoon, was presided over by Johnson. The moderators of the various discussion panels reported on the conclusions of the various panels, and this was followed by a discussion and by a closing address, "The significance of improving technical communication in our technological society," delivered by A. N. Spence (Executive Office, U.S. Department of the Navy).

Plans are being made for the fifth conference on scientific editorial problems to be held in conjunction with the 1956 AAAS meeting in New York.

J. G. ADASHKO, *Program Committee*

International Geophysical Year (X7)

The scientific program of the International Geophysical Year, 1957–58, was presented in a series of three sessions on the mornings of 27–29 Dec. The IGY will transcend the previous international polar years of 1882–83 and 1932–33 in that it covers the whole globe (in contrast to the limited northern latitudes of the polar years), embraces most of the fields of geophysics, and will have the concentrated efforts of scientific organizations of at least 42 nations.

The symposium consisted of 18 papers. Of these, two were concerned with broad international and national aspects of the IGY; three dealt with some regional aspects of the program; and 13 dealt with disciplines and areas of scientific activity: aurora, airglow, cosmic rays, geomagnetism, glaciology, gravity measurements, ionospheric physics, meteorology, oceanography, high-atmosphere rocket studies, seismology, and the satellite program. The scientific papers presented, in general, the status of our knowledge in a particular field of geophysics, the nature of the problems of current interest, and the proposed IGY programs of research and observation, with emphasis on the work planned by scientists of the United States.

Session 1, Joseph Kaplan, presiding; "Earth, sun, and interplanetary medium," F. L. Whipple (Harvard University) (summary presented by A. H. Shapley); "The oceans and the earth," R. R. Revelle (Scripps Institution of Oceanography); "Glaciers and ice fields," W. O. Field (American Geographical Society); "Seismology and the earth's structure," A. P. Crary (Air Force Cambridge Research Center); "The earth's gravity," George P. Woollard (University of Wis-

consin); "International aspects of the IGY program," L. V. Berkner (Associated Universities, Inc.).

Session 2, L. V. Berkner, presiding; "The earth's magnetic field," E. O. Hulburt (Naval Research Laboratory); "The ionosphere," M. G. Morgan (Dartmouth College); "The aurora," C. T. Elvey (University of Alaska); "The Airglow," E. R. Manring (Air Force Cambridge Research Center); "Geophysical aspects of cosmic rays," S. E. Forbush (Carnegie Institution of Washington); "The IGY program of the United States," Joseph Kaplan (University of California).

Session 3, A. H. Shapley, presiding; "Weather and atmosphere," Harry Wexler (U.S. Weather Bureau); "Rocket exploration of the upper atmosphere," J. A. Van Allen (State University of Iowa); "The IGY earth satellite program," H. E. Newell, Jr. (Naval Research Laboratory); "The antarctic IGY program," L. M. Gould (Carleton College); "The equatorial IGY program," R. C. Peavey (National Academy of Sciences) (summary presented by A. H. Shapley); "The northern latitudes IGY program," N. C. Gerson (Air Force Cambridge Research Center).

The symposium was jointly sponsored by the AAAS, AGU, NAS-NRC, and NSF. The program was planned by the following committee: Joseph Kaplan and Hugh Odishaw (cochairmen); W. W. Atwood, Jr., W. A. Baum, J. W. Joyce, G. F. Schilling, A. H. Shapley, Waldo E. Smith, R. L. Taylor.

HUGH ODISHAW, *Executive Secretary, U.S. National Committee-IGY, National Academy of Sciences*

Scientific Research Society of America (X11)

The 7th annual convention of the Scientific Research Society of America (RESA) was held on 29 Dec. Delegates from 12 branches and clubs were registered. The chairman reported that five chapters and one club had been installed during 1955, as follows: Electronic Defense Laboratory, Sequoia Branch (Mountain View, Calif.); General Electric Company, Ithaca Branch (New York); Hughes Laboratories Branch (Culver City, Calif.); International Nickel Co., Inco Development & Research Club (Bayonne, N.J.); Magnolia Petroleum Branch (Dallas, Texas); National Bureau of Standards, Boulder Branch (Colorado).

The annual RESA Address was given by Robert R. Williams on "Chemistry as a supplement to agriculture in meeting world food problems." Williams later received the $1000 William Procter Prize for Scientific Achievement.

DONALD D. PRENTICE, *Director*

Sigma Delta Epsilon (X12)

A tea for all women in science was held on 28 Dec. Approximately 45 members and friends attended. Next year the annual convention will be held with the AAAS in New York.

EMILY T. WOLFF, *President*

New Books

Clays and Clay Minerals. Proceedings of the Second National Conference on Clays and Clay Minerals. University of Missouri, 15–17 October 1953. Ada Swineford and Norman Plummer, Eds. National Academy of Sciences–National Research Council, Washington, 1954. 498 pp. $4.

Portrait of an American Labor Leader, William L. Hutcheson. Saga of the United Brotherhood of Carpenters and Joiners of America, 1881–1954. Maxwell C. Raddock. American Institute of Social Sciences, Inc., New York, 1955. 430 pp. $5.

Laboratory Manual for Introduction to Pharmacy (revision of *Laboratory Manual for Principles and Processes of Pharmacy*). Henry M. Burlage, Joseph B. Burt, L. Wait Rising, and William J. Sheffield, Jr. Blakiston Div., McGraw-Hill, New York, ed. 3, 1956. 271 pp. $4.50.

The Fields of Group Psychotherapy. S. R. Slavson, Ed. International Universities Press, New York, 1956. 338 pp. $6.

Temperature, Its Measurement and Control in Science and Industry. vol. II. Papers presented at the Third Symposium on Temperature, Washington, D.C., 28–30 October 1954. Hugh C. Wolfe, Ed. Reinhold, New York; Chapman & Hall, London, 1955. 467 pp. $12.

Vacuum Valves in Pulse Technique. P. A. Neeteson. Philips' Technical Library, Eindhoven, Netherlands, 1955. 170 pp. $4.50.

A Symposium on Inorganic Nitrogen Metabolism: Function of Metallo-Flavorproteins. Sponsored by McCollum-Pratt Institute of Johns Hopkins University. William D. McElroy and Bentley Glass, Eds. Johns Hopkins Univ. Press, Baltimore, 1956. 728 pp. $10.

Fish Saving. A history of fish processing from ancient to modern times. Charles L. Cutting. Philosophical Library, New York, 1956. 372 pp. $12.

Cancer of the Lung. Pathology, diagnosis, and treatment. Milton B. Rosenblatt and James R. Lisa. Oxford Univ. Press, New York, 1956. 330 pp. $15.

Mesons and Fields. vol. 1, *Fields.* Silvan S. Schweber, Hans A. Bethe, and Frederic De Hoffman. Row, Peterson, Evanston, Ill., 1955. 449 pp. $8.

Advances in Carbohydrate Chemistry. vol. 10. Melville L. Wolfrom, Ed. Academic Press, New York, 1955. 437 pp. $10.50.

Man and Energy. A. R. Ubbelohde. George Braziller, New York, American ed. 1, 1955. 247 pp. $5.

Ministry and Medicine in Human Relations. Iago Galdston, Ed. International Universities Press, New York, 1955. 173 pp. $3.50.

Miscellaneous Publications

(Inquiries concerning these publications should be addressed, not to Science, *but to the publisher or agency sponsoring the publication.)*

Notropis Euryzonus, a New Cyprinid Fish from the Chattahoochee River System of Georgia and Alabama. Tulane Studies in Zoology, vol. 3, No. 5. Royal D. Suttkus. 16 pp. $0.50. *Factors Influencing the Rate of Oxygen Consumption of the Dwarf Crawfish, Cambarellus Shufeldtii (Decapoda, Astacidae).* vol. 3, No. 6. Milton Fingerman. 12 pp. $0.35. Tulane Univ., New Orleans, La., 1955.

The Fishes of the Genus Tetragonurus Risso. Dana-Report No. 41. Carlsberg Foundation's oceanographical expedition round the world 1928–30 and previous "Dana"-expeditions under the leadership of the late professor Johannes Schmidt. Marion Grey. Carlsberg Foundation, Copenhagen, 1955. 75 pp. £1.

Psychologists in Action. Pamphlet No. 229. Elizabeth Ogg. Public Affairs Committee, New York, 1955. 28 pp. $0.25.

Physical Society, London, Yearbook, 1955. Physical Soc., London, 1955. 92 pp. 10s.

Panorama of Progress. Honoring Benjamin Franklin, 1706–1956. *Journal of the Franklin Institute,* vol. 261, No. 1. Franklin Inst., Philadelphia 3, Pa., 1956. 188 pp. $1.

Rockefeller Foundation, Annual Report, 1954. The Foundation, New York, 1955. 439 pp.

Central Laboratories for Scientific and Industrial Research, Hyderabad, India, Annual Report, 1954. The Laboratories, Hyderabad, 1955. 64 pp.

Dania Polyglotta. Répertoire bibliographique annuel des ouvrages, articles, résumés, etc. en langues étrangères parus en Danemark. Dixième année, 1954. Institut Danois des Echanges Internationaux de Publications Scientifiques et Littéraires, Copenhague, 1955. 243 pp.

American College of Hospital Administrators, Roster of Membership, Constitution and Bylaws, 1956. American College of Hospital Administrators, Chicago 11, 1956. 134 pp.

Language in Relation to a Unified Theory of the Structure of Human Behavior. pt. II. Kenneth L. Pike. Summer Inst. of Linguistics, Glendale, Calif., 1955. 85 pp. $2.

Wesleyan University Bulletin, Annual Report Number: 1954–55. Wesleyan Univ. Press, Middletown, Conn., 1955. 62 pp.

ASTM Standards on Plastics. Specifications, methods of testing, nomenclature, definitions. Sponsored by ASTM Committee D-20 on Plastics. American Soc. for Testing Materials, Philadelphia 3, 1955. 790 pp. $5.75.

Factors Related to Frost Action in Soils. Highway Research Bd. Bull. 111. National Acad. of Sciences–National Research Council, Washington, 1955. 110 pp. $2.25.

Self-Help for the Arthritic. A course of home treatment for the commoner types of arthritis. David White. Kimpton, London, 1955. 55 pp. $0.70.

Carnegie Corporation of New York, Annual Report for the Year Ending 30 September 1955. Carnegie Corp., New York, 1955. 92 pp.