

2. Totals as of 31 December 1949.

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|------------------------------|--------|------------------------|--------|
| Paid for 1949 | 33,197 | In good standing | 41,196 |
| Paid through June 1950 | 7,411 | In arrears | 2,592 |
| Life members, etc. | 588 | | |
| | | New for 1950 | 1,159 |
| | | Total membership | 44,947 |

Reports of Sections and Societies¹

The American Mathematical Society (A1)

The 56th annual meeting of the society was held at Columbia University, December 27–29, in conjunction with the annual meetings of The Mathematical Association of America and the AAAS. Residence headquarters were at the Hotel Governor Clinton and registration headquarters in Earl Hall, Columbia University. More than 700 persons registered for the mathematical meetings, including 665 members of the society.

At a joint session of Section A and the society at 2: 00 p.m., Tuesday, December 27, G. T. Whyburn of the University of Virginia gave an address, "The Open Mapping Medium in Topological Analysis," as a retiring vice president of the AAAS. The presiding officer was E. J. McShane, chairman of Section A.

Two invited addresses were given on Wednesday: one at 9: 30 a.m. by S. Chowla of the University of Kansas on "The Riemann Zeta and Allied Functions" and one at 2: 00 p.m. by L. V. Ahlfors of Harvard University on "The Classification of Open Riemann Surfaces." Vice Presidents W. T. Martin and Hassler Whitney presided at these sessions.

The 23rd Josiah Willard Gibbs Lecture entitled, "The Problem of Sensory Prosthesis," was delivered by Norbert Wiener of the Massachusetts Institute of Technology at 4: 30 p.m., Wednesday, December 28. J. L. Walsh, president of the society, presided.

At 10: 00 a.m., Thursday, December 29, President J. L. Walsh conducted the annual business meeting of the American Mathematical Society, at which Secretary J. R. Kline gave his annual report, the officers for 1950 were elected, and the Cole Prize in Algebra was awarded to Richard Brauer of the University of Michigan. Prof. Brauer gave a brief address on the prize-winning paper.

At the 11 section sessions for contributed research papers, 65 papers were presented in person. Fifty-three papers were also presented by title, making a total of 118.

A tea was given for members and guests by Columbia University on Tuesday afternoon. That evening, the Organizing Committee of the International Congress held a meeting. The International Mathematical Congress is to be held in Cambridge, Massachusetts, August 30 to September 6, 1950.

The council of the American Mathematical Society met on Wednesday evening.

A dinner for the three mathematical organizations—the American Mathematical Society, The Mathematical Association of America, and the Institute of Mathematical Statistics—was held on Thursday evening in the dining room of John Jay Hall, Columbia University. The toastmaster, P. A. Smith, introduced the following speakers: George B. Pegram, vice president of Columbia University; J. L. Walsh, president of the society; H. M. MacNeille, executive director of the society; Jerzy Neyman, president of the institute; R. E. Langer, president of the association. M. R. Hestenes offered a resolution of thanks to Columbia University and the Committee on Arrangements adopted it unanimously by a rising vote.

T. R. HOLLCROFT, *Associate Secretary*

Institute of Mathematical Statistics (A2)

The 41st meeting of the institute (its 12th annual meeting) was held December 27–30, with headquarters at the Biltmore Hotel. The 14 sessions, including council and business meetings, were attended to capacity. A broad range of topic was discussed—ten of the sessions having been held jointly with one or more of the following societies: American Statistical Association, American Mathematical Society, Econometric Society, Psychometric Society, Mathematical Association of America, Association for Computing Machinery, American Psychological Association. Besides the various symposia and sessions of invited addresses there were three sessions of contributed papers—one of them joint with the A. S. A. and the Econometric Society—at which a total of 24 papers were presented. In all respects there was active participation by the membership in the program.

Mathematical Association of America (A3)

The 33rd annual meeting of the association was held at Columbia University on Thursday and Friday, December 29–30, 1949. The Board of Governors met on Thursday afternoon. A joint dinner of the mathematical organizations was held at 6: 30 p.m. on Thursday in the dining room of John Jay Hall, Columbia University.

On Friday morning and afternoon, scientific sessions of the association were held in Room 301, Pupin Physics Laboratories of Columbia University. Speakers were Nicholas Rashevsky, University of Chicago; W. T. Martin, Massachusetts Institute of Technology; Ralph Beatty, Harvard University; C. C. MacDuffee, University of

¹ Key symbols correspond to those in the general programs.

Wisconsin; William Feller, Cornell University; and J. W. Tukey, Princeton University.

L. M. Graves of the University of Chicago was elected first vice president, succeeding Saunders MacLane, also of the University of Chicago. Elected as members of the Board of Governors for a two-year term were M. R. Hestenes of the University of California at Los Angeles and Marie J. Weiss of Sophie Newcomb College. Continuing in office are President R. E. Langer of the University of Wisconsin, second vice president N. H. McCoy of Smith College, and secretary-treasurer, H. M. Gehman of the University of Buffalo.

The association voted to hold its next annual meeting on Saturday, December 30, 1950 at the University of Florida, Gainesville, Florida. In order to avoid a conflict with the International Congress of Mathematicians to be held at Cambridge, Massachusetts, from August 30 to September 6, the usual summer meeting of the association will not be held during 1950.

HARRY M. GEHMAN, *Secretary-Treasurer*

Section on Physics (B)

The presentation of a group of four symposia on "The Present State of Physics" at the annual December meetings of the AAAS was a new and experimental venture. The results encourage the belief that the idea is sound and that such symposia should be a regular feature of the meetings.

The general plan of the symposia was: (a) to invite a systematic presentation of significant research advances in each of four broad fields—elementary particles, physics of the solid state, chemical physics, and biophysics; and (b) to present such material, not in the language of the narrow specialty, but in terms that would be understood by anyone with sound training in physics. This plan was enthusiastically endorsed and the authors who carried it out in such an able and scholarly manner deserve the gratitude of Section B.

Despite the fact that there was little advance knowledge of these symposia, there was a good-sized and responsive audience. Many more will look forward to these symposia now that they have become a regular feature that can be anticipated.

Based upon our experience, a number of constructive suggestions can be made:

1. Each one of the symposia should be planned by a small representative working committee. Since the invitation will constitute something of an honor, precautions should be taken to make the selections fair and impartial. This time, of necessity, the working committee was chosen by the secretary from associates in the vicinity who could be gotten together promptly. The secretary is very much indebted to this committee: Merle Tuve, Kenneth Cole, and Sterling Hendricks. The secretary is also indebted to Karl Lark-Horowitz, General Secretary, for his encouragement and advice in planning the symposia.

2. The interest and support of the American Physical Society and the Institution of Physics should be invited. These symposia are intended to be supplemental to the

meetings of the Physical Society where, in contrast, the primary emphasis is placed upon short papers presenting new findings in the briefest possible terms of the specialization. The number of such contributions has grown to surprising proportions, requiring concurrent sessions in several locations. Both types of meetings seem desirable. The broad character of the AAAS makes its meeting a logical occasion for a presentation of symposia to a wider audience.

3. The four symposia should be given in four successive half-day sessions—thus avoiding two symposia in a half-day, with consequent limitation on the number of presentations and the amount of discussion. Three papers and the discussions of them seemed right for a half-day period.

4. There should be a local committee of physicists in the area of the meetings to act as hosts to speakers and guests, and to look after details of projection and other requirements of the symposia. Too much burden fell on one or two people and some details received scant attention.

5. Your secretary invites suggestions and criticisms. We hope that Section B can prove of real service not only to physics but also to the closely related sciences. Our experience in caring for the affairs of Section B and the parent organization is most limited, but we have received the finest cooperation.

FREDERICK S. BRACKETT, *Secretary*

Section on Chemistry (C)

The program of the chemistry section consisted of two unusually good symposia—one on medicinal chemistry, arranged by Robert S. Shelton, and one on recent advances, arranged by George Glockler—as well as a general session, arranged by the secretary. A number of the papers attracted capacity attendance. "Comparative Studies of Antihistaminic Agents," by N. B. Drewier, of the School of Medicine of the University of Vermont, was received after the program was printed. H. S. Booth of Western Reserve University is the newly elected chairman of Section C and one of the vice presidents of the AAAS.

Tentative plans for the 1950 meeting, to be held in Cleveland on December 26 to 30, indicate a day for industrial tours, a day for general submitted papers, and two or three days of timely symposia. It is not too early to begin to plan for this meeting, as all titles and abstracts for papers will be due on or about September 1, 1949. Plan now to attend this meeting in the Midwest.

ED. F. DEGERING, *Secretary*

Section on Astronomy (D)

The section on astronomy met December 28–30. Dean B. McLaughlin, retiring chairman, presided at the Wednesday afternoon session in the McAlpin Hotel. Seven papers were presented. Donald H. Menzel's motion picture on solar eruptions probably had the greatest general interest.

The Thursday morning session met in the Governor Clinton Hotel, with Harlow Shapley presiding until he

was called out to substitute for James B. Conant, who was ill, at another meeting. Dr. Shapley asked Miss Ida Barney to take the chair when he left. Six papers, three on interstellar matter, were presented.

The Thursday afternoon session again met in the Governor Clinton Hotel, with Lyman Spitzer presiding. The feature paper of this session was the address of the retiring chairman of the section, Dean B. McLaughlin, on "Problems in the Spectra of Novae." Seven shorter papers were presented in addition to the address.

The Friday morning session, which also met in the Governor Clinton Hotel, was a symposium on "Statistical Methods in Astronomy," with Walter Bartky presiding. This was a joint session with the Institute of Mathematical Statistics and the American Statistical Association. Six papers were presented.

The attendance was between 100 and 110 for the Wednesday afternoon session, between 50 and 60 for the Thursday morning session, between 65 and 70 for the Thursday afternoon session, and between 80 and 90 for the Friday morning session.

C. C. WYLIE, *Secretary*

Section on Geology and Geography (E)

The sessions of Section E were held in the North Ballroom of the Hotel New Yorker on Thursday and Friday, December 29 and 30. Approximately 160 individuals participated. A general program of four sessions with 33 papers, 30 on geology and 3 on geography, was arranged by W. Storrs Cole, program chairman, and the section secretary. All but two of the scheduled papers were presented. The sessions were presided over by Henry R. Aldrich, W. Storrs Cole, Chairman R. C. Moore, and Johnson Fairchild. The program was notable in that about half of the papers were given by younger men. On December 28, Section E participated with the Society for the Study of Evolution in a symposium on "The Role of the South Atlantic Basin in Biogeography and Evolution, with Special Emphasis on the History of South America During the Mesozoic Era." A special program, including abstracts of papers, was made available through co-operation of The Geological Society of America.

The regular Section elections and Council actions resulted in the following new officers: vice president and chairman, Kenneth K. Landes; retiring vice president, Raymond C. Moore; and elected to the Section Committee, K. E. Lohman.

LELAND HORBERG, *Secretary*

National Geographic Society (E4)

The officers and Board of Trustees of the National Geographic Society were pleased with the arrangements by the AAAS for the first report by Frank M. Setzler on the Arnhem Land Anthropological Expedition, sponsored by the National Geographic Society, the Smithsonian Institution, and the Commonwealth of Australia.

A capacity audience—about 1100—heard Mr. Setzler describe nearly a year's scientific study of the aborigines of remote Northern Australia, who have been seen by few white men and cling to the customs of the Stone Age.

The first colored motion pictures out of Arnhem Land illustrating the report showed the aborigines in their search of forests and streams for food, and in their weird tribal rites.

We feel that our part of the program was a great success.

GILBERT GROSVENOR, *President*

American Society of Parasitologists (F1)

At the 24th annual meeting of the society, the following officers were elected: Willard H. Wright, president; H. W. Manter, vice president; H. W. Brown, secretary; Robert M. Stabler, treasurer; and John C. Swartzwelder and George W. Wharton, council members at large.

Attendance at the sessions was approximately 200. In addition to regular sessions devoted to various aspects of parasitology, a symposium on "The Physiology of Parasites" was arranged by the president elect, Willard H. Wright. The presidential address, delivered by retiring president T. W. M. Cameron, was entitled "Osler and Parasitology." R. Barclay McGhee's paper, on the "Infection of the Immature White Mouse with the Avian Malaria Parasite, *Plasmodium lophurae*," was voted outstanding.

The society voted to meet with the AAAS in Cleveland during the Christmas holidays in 1950.

H. W. BROWN, *Secretary*

The Society of Systematic Zoology (F4)

The society held its second annual breakfast and business meeting on December 29 in New York City. The result of the election of officers was announced as follows: president elect, Carl L. Hubbs; secretary-treasurer, R. E. Blackwelder; councillors, K. P. Schmidt and G. F. Ferris.

The society is engaged in numerous activities designed to benefit taxonomists, including improving publication outlets and abstracting journals, circulation of useful information, elimination of abuses and misconceptions, and standardization of procedures and terminologies.

A membership of 531 was reported, and a goal of 1000 members was confidently set.

R. E. BLACKWELDER, *Secretary-Treasurer*

The American Microscopical Society (FG1)

The society held its 66th annual meeting during the week of December 26-31. The annual Executive Committee luncheon was held in Parlor B, Hotel Statler, on Tuesday, December 27, with President Clarence E. Taft, of Ohio State University, presiding. Following the luncheon, the business meeting of the committee continued until 4:30 in the afternoon.

The annual business meeting of the society was called to order by President Taft at 4:00 p.m. in Parlor 2 of the Hotel Statler, on Friday, December 30. The meeting was well attended and much business of interest to the members and importance to the society was transacted. Details will be reported in the annual proceedings, which will appear in the January issue of the *Transactions*. Among other items of business were amendments to the constitution and the bylaws, bringing

the rates for membership and subscriptions into line with the present costs of publication.

Officers elected for 1950 are: president (one year) Asa C. Chandler, The Rice Institute; first vice president (one year) David Chandler, Cornell University; second vice president (one year) Theodore L. Jahn, University of California at Los Angeles; treasurer (three years) A. M. Chickering, Albion College; custodian (three years) James E. Ackert, Kansas State College; elective executive committeeman (three years) Clarence V. Bangham, College of Wooster. Other officers whose terms carry over through 1950 are: elective committeemen, O. W. Richards, American Optical Company; A. B. Dawson, Harvard University; Spencer-Tolles committeemen; James E. Ackert, chairman; L. E. Noland, University of Wisconsin; and C. E. Taft, Ohio State University; secretary-editor, F. E. Eggleton, University of Michigan.

The Executive Committee recommended and the society approved the initiation of a limited program of invitation papers to be read at the 1950 meeting of the society. Not since the early days of the society has a program of papers been presented at the annual meeting. The present plan is being initiated on an experimental basis. It is hoped that the response of members, as indicated by communications to the secretary and, in particular, by attendance at the program, will justify its continuance.

FRANK E. EGGLETON, *Secretary-Editor*

The American Society of Human Genetics (FG2)

The society held its second annual meeting December 28-30. A large percentage of members was present. The short papers were excellent, as was the retiring presidential address of H. J. Muller, entitled "Our Mutations." The officers for 1950 are: president: L. H. Snyder, University of Oklahoma; vice president, Curt Stern, University of California at Berkeley; and secretary-treasurer, Herluf H. Strandkov, University of Chicago; AAAS Council member, C. P. Oliver, University of Texas. Elected to the Board of Directors for a two-year period were: R. C. Cook, Philip Levine, and Bronson Price. Serving one more year on the Board are: J. B. Birdsall, J. V. Neel, and C. P. Oliver. The first issue of the journal of the society, *The American Journal of Human Genetics*, appeared late in 1949. The first volume will consist of two issues. The 1950 and later volumes will consist of four issues each. The editor is C. W. Cotterman, University of Michigan.

HERLUF H. STRANDSKOV, *Secretary-Treasurer*

The American Society of Limnology and Oceanography (FG3)

The society held its 12th meeting December 28-30. The sessions on the first day took place at Columbia University, where papers on the special topic of "Apparatus and Methods" were presented in the morning. The afternoon session consisted of a joint meeting with the Ecological Society of America. The remaining sessions were held in the Governor Clinton Hotel with more than 100 members in attendance.

At the annual business meeting of the society, A. D. Hasler, University of Wisconsin, was elected president, E. S. Deevey, Yale University, vice president, and T. S. Austin, U. S. Navy Hydrographic Office, Washington, D. C., secretary-treasurer.

With the expansion of the scope of the society to include all aspects of limnology and oceanography, as announced last year, the enrollment has grown to a current total of 865 members. All official correspondence should be addressed to the new secretary-treasurer.

THOMAS S. AUSTIN, *Secretary-Treasurer*

The American Society of Naturalists (FG4)

The society met with the AAAS in New York, December 29 and 30. The well-attended Biologists' Smoker was held in the American Museum of Natural History through the kindness of its director, A. E. Parr. The society presented a symposium on "Reproduction in Plants," organized by its vice president, K. V. Thimann. The retiring president, T. M. Sonneborn, presented a very careful analysis of the recent genetic controversy under the title "Heredity, Environment and Politics."

WILSON S. STONE, *Secretary*

Beta Beta Beta (FG5)

The Beta Beta Beta Biological Fraternity held its convention luncheon December 27 at the Hotel Martinique. Tracy M. Sonneborn, of Indiana University, delivered the convention address on the subject "Paramecium in Modern Biology." The plenary session of the society was held Tuesday afternoon.

F. G. BROOKS, *Secretary*

Biometric Society (FG-6)

The Eastern North American Region held its annual meeting December 28-30, jointly with the Biometrics Section of the American Statistical Association. The first session, under the chairmanship of Horace W. Norton, concerned the use of rationally developed equations in biology with papers by S. E. Luria on "An Interpretation of the Formation of Active Bacterial Virus from Ultraviolet Inactivated Virus" and by Elliot V. Newman and Margaret Merrell on "The Application of Equations Derived from Models to 'Central' Circulatory Volume." The following day a session on long-time follow-up in morbidity studies was chairmaned by John W. Fertig and included papers by Paul M. Densen on "The Definition of the Group to be Followed;" T. E. Harris, Paul Meier, and John W. Tukey on "Timing of the Distribution of the Events Between Observations;" and by Harold F. Dorn on "Methods of Analysis in Follow-up Studies." The closing session under the chairmanship of Frederick Mosteller consisted of contributed papers by Joseph Berkson on "Relative Precision of Minimum X^2 and Maximum Likelihood Estimates of Regression Coefficients, with Particular Reference to Bioassay;" Jane Worchester, and S. S. Stevenson on "Malformations at the Boston Lying-in Hospital, 1930-1941;" W. J. Youden on "A Statistic for Rating Diagnostic Tests;" and

by S. W. Greenhouse and Nathan Mantel on "The Evaluation of Diagnostic Tests." All sessions were characterized by active discussions, both by announced discussors and by members attending the meeting.

At the business meeting of the region on December 30, there were reports on the sessions held by the region during 1949 and those planned for 1950 and brief reports of the International Conference at Geneva. A membership committee was approved, the financial status of the region reviewed, and the following officers elected for 1950: vice president, Joseph Berkson; secretary-treasurer, Walter T. Federer; members of the regional committee for 1950-52, Lila F. Knudsen and W. J. Youden.

C. I. BLISS, *Secretary*

The Genetics Society of America (FG9)

The society arranged a program for the presentation of scientific papers and for the annual luncheon and business meeting. At the various sessions, 97 papers were presented including 64 short papers; one session devoted to a program of six papers selected for a more extended presentation; 19 presented as demonstrations and eight read by title.

Because of the large number of papers to be presented at these meetings, concurrent sessions were necessary on Wednesday and on Thursday afternoon. The luncheon was held Thursday noon at the Men's Faculty Club at Columbia University, followed by the business meeting at which more than 175 persons were in attendance.

The sessions were noteworthy for the great variety of papers given at the regular sessions. Papers dealing with genetic phenomena in microorganisms, population genetics, genetic effects of radiation, cytogenetics, and mutations were particularly outstanding in the program.

Members participated with those of other societies in symposia on "Experimental Cell Research" and "Reproduction in Plants," with Sections G and FG in a panel discussion on "Botany in the Service of Man," and with Section F on "Sex Differentiation in Vertebrates."

The following officers were elected for 1950: president, Curt Stern; vice president, M. R. Irwin; secretary-treasurer, W. Ralph Singleton.

M. R. IRWIN, *Vice President*

The Society for the Study of Evolution (FG11)

The society held its fourth annual meeting at Columbia University, the third meeting in conjunction with the AAAS. The program consisted of 42 papers presented in five sessions. Of special interest, not only to the society but to other societies of Sections E, F, and G, was the two-session symposium on "The Role of the South Atlantic Basin in Biogeography and Evolution," organized by President Norman D. Newell. The SSE has endeavored to avoid concurrent sessions and to spread its program over the whole period of the meetings with selected half-day periods open, in order to reduce major program conflicts. However, the vigor with which the

programs of this young society are developing, may soon preclude such arrangements. Because the membership of the SSE includes persons belonging to societies that do not usually meet with the AAAS, it is contemplated to meet with the AAAS only in alternate years.

STANLEY A. CAIN, *Secretary (retiring)*

Section on Botanical Sciences (G)

Section G held only one session, a panel discussion on "Botany in the Service of Man," which was organized by the section secretary and held jointly with the societies of Sections G and FG. William C. Steere was moderator of the discussion and the panel was composed of Hazel K. Stiebeling, S. T. Dana, Gove Hambidge, K. A. Ryerson, and Frans Verdoorn. The panel members not only pointed out the many ways in which botany is of service to man and fundamental to many specialized sciences and human institutions and activities, but emphasized the role the plant sciences must play in international fields if man's aspirations to build a permanent peace are to have hope of success.

Nine societies associated with Section G held programs, individually or jointly. They were: American Bryological Society, American Fern Society, American Phytopathological Society, American Society of Plant Physiologists, American Society of Plant Taxonomists, Botanical Society of America, Mycological Society of America, Phycological Society of America, and the Torrey Botanical Club. These societies collectively presented 117 sessions, of which 25 were major joint programs of two or more organizations. Fourteen sessions were devoted to society affairs (council and business meetings), nine were banquets or other social affairs, and 48 were formal sessions for reading of contributed papers. In addition there were 21 programs of special type, including symposia, panel and conference discussions, and demonstrations.

The botanical sciences were also involved in the various programs of the broad biological societies of FG. The 13 organizations presenting programs of interest to both zoological and botanical scientists were: American Microscopical Society, American Society of Human Genetics, American Society of Limnology and Oceanography, American Society of Naturalists, Beta Beta Beta, Biometric Society, Biometric Section, Ecological Society of America, Genetics Society of America, National Association of Biology Teachers, Society for the Study of Evolution, American Institute of Biological Sciences, and the Society of Industrial Microbiologists.

The American Society of Human Genetics, which was organized at Washington in 1948, held its first full-dress program meeting, with two sessions for technical papers and one demonstration session. The Society of Industrial Microbiologists (tentative name) held its organizational meeting on December 29. It is planned for the society to cover fields such as deterioration and preservation of military and industrial materials, microbiological manufacturing processes, microbiological assay, fungicides, etc. The largest society program of Section G was that of the Botanical Society of America, with 26 sessions for papers, 10 symposium-type programs, and other

meetings of a business or social nature, before which were presented more than 250 technical papers and speeches.

STANLEY A. CAIN, *Secretary*

The American Bryological Society (G1)

The society breakfast was held in the Marine Grill, McAlpin Hotel, December 27. At the business meeting which followed in El Patio, the new constitution was adopted and officers were elected for the next two years: president, Lewis E. Anderson, Duke University; vice president, Geneva Sayre, Russell Sage College; and secretary-treasurer, Winona H. Welch, DePauw University. The place and the dates of the future meetings will be in accord with those of the Botanical Society of America. The Executive Committee meeting was held at the luncheon hour in the Marine Grill.

Thirteen papers were presented at the morning session, President Paul M. Patterson, presiding. A symposium, "The Bryologist and the Development of Bryology in North America," composed the afternoon program.

The American Bryological Society joined the taxonomic section of Botanical Society of America in the Wednesday sessions at the New York Botanical Garden.

WINONA H. WELCH, *Secretary-Treasurer*

The American Phytopathological Society (G3)

The society held its 41st annual meeting at the Hotel Martinique, on December 28, 29, and 30. The northeastern division met with the parent society. Business meetings were held on December 28 and 30. The council met on December 27, and again on the 28th. On the afternoon of December 30, a joint session was held with the Mycological Society of America. Four hundred and twenty-five members registered. One hundred and sixty-two papers were scheduled in 14 sessions, and four symposia. Conferences and symposia were held under the following titles: "Stone Fruit Virus Diseases," "Extension Work in Plant Pathology," "The Teaching of Plant Pathology," "Fungicide Colloquium," "Plant Disease Forecasting," "Performance of New Fungicidal Sprays and Dusts in Cooperative Regional Experiments Conducted in 1949," and "Outlook for Cooperative Regional Projects in Plant Pathology under the Research and Marketing Act." A trip was scheduled to the Foreign Plant Quarantine Inspection House of the U. S. Department of Agriculture at Hoboken, New Jersey. Inspection and treatment methods were observed and quarantine problems discussed. One hundred and forty-nine applicants were accepted as members of the society.

CURTIS MAY, *Secretary*

American Society of Plant Physiologists (G4)

The 24th annual meeting of the ASPP was held December 26-31. Meeting jointly with the Physiology Section of the Botanical Society of America, the society heard and discussed approximately 90 submitted papers. Subjects most frequently represented in the discussion were the physiology and chemistry of the plant growth substances, tissue culture studies of growth and differentia-

tion, the biochemistry of plant enzymes and respiratory mechanisms, floral initiation and photosynthesis.

Two symposia were held, one on plant tissue culture as a technique for elucidating problems in plant physiology, the other on reproduction in plants. Participants in the tissue culture symposium stressed the definition of the growth factors of plants and the recent advances in our understanding of differentiation and organogenesis achieved by the tissue culture technique. The discussion after the symposium on reproduction in plants was most stimulating because of the presence of numerous zoologists, who demonstrated their eagerness to apply recent advances in photoperiodism and environmental control of plants to their particular field.

The annual dinner meeting of the society was well attended, and featured talks by D. B. Anderson, retiring president, and by David R. Goddard, winner of the 1948 Stephen Hales prize for achievement in plant physiology.

JAMES BONNER, *President*

The Botanical Society of America (G6)

The 44th annual meeting of the society on December 26-30 was the largest in its history, with over 700 members in attendance. Forty-eight sessions were held by the six sections with a total of 306 papers presented. Twenty-three of these sessions were held jointly with other plant science societies. At the annual banquet on Thursday evening, December 29, J. C. Clausen, W. M. Hiesey and D. D. Keek of the Carnegie Institution of Washington, Stanford, California were awarded the Cranbrook Institute of Science Mary Soper Pope Medal for distinguished accomplishments in botanical science.

The officers elected for 1950 are A. F. Blakeslee, Smith College, president; John S. Karling, Purdue University, vice president; Harriet B. Creighton, Wellesley College, secretary, and W. H. Camp, Philadelphia Academy of Natural Sciences, member of the editorial board.

JOHN S. KARLING, *President*

The Mycological Society of America (G7)

The society met at the Hotel McAlpin, jointly with the Microbiological section of the Botanical Society of America and the American Phytopathological Society. The papers presented accentuated the changing emphasis in the field of mycology from that of taxonomy and morphology of the fungi to that of physiology and medical mycology. Seventy-two papers were presented in the following fields: general 4, taxonomy 11, geographic distribution 3, morphology 3, medical mycology 9, physiology 24, cytology and genetics 11, industrial mycology 5.

JOSEPH C. GILMAN, *Secretary*

Torrey Botanical Club (G9)

Ninety members and guests attended the special luncheon of the club held on December 29 at the Hotel McAlpin. It was a gathering more representative of the membership than is usually possible, for the club now has nearly 800 members, not more than a quarter of them resident in the New York area where regular meetings

are held. The president, Edwin B. Matzke, gave a brief outline of the club's history and activities before introducing the speaker, W. H. Camp, of the Academy of Natural Sciences, Philadelphia.

JENNIE L. S. SIMPSON, *Corresponding Secretary*

Section on Anthropology (H)

Section H held three sessions this year, and one session jointly with Sections I, K, N, and Q.

A general session on social anthropology came on the first afternoon of the meetings and, since this happened to be the only session scheduled for that time, Section H had the honor of starting off the long list of scientific papers which marked the sixth New York program. Speakers at this session came from Adelphi College, Brooklyn; Temple University, Philadelphia; the University of Pennsylvania; Principia College, Elmhurst, Illinois; and the University of California, Los Angeles. The session was admirably led by the Section's chairman, Wilton M. Krogman.

Possibly the main feature of the Section H program was the full-day symposium on "Mind, Culture and Individuality." Twentieth century investigations of man's behavior have somewhat overemphasized its automatic and nonintellectual aspects, and this symposium aimed to bring together persons from various disciplines who are more peculiarly aware of the effects of man's cognitive powers on his actions. The papers took the form both of reviews of research over the past decades and of ideas for and contributions toward future work. Philosophy, psychology, oriental studies, and anthropology were represented. The morning session was chairmaned by Horace L. Friess (Columbia University) and the afternoon session by Margaret Mead (American Museum of Natural History). Participants were Joseph Bram (New York University), Wayne Dennis (University of Pittsburgh), A. Irving Hallowell (University of Pennsylvania), Samuel N. Kramer (University Museum, Philadelphia), Dorothy D. Lee (Vassar College, Poughkeepsie, New York), S. Stansfeld Sargent (Barnard College, New York City), Marian W. Smith (Columbia University), and Laura Thompson (Institute of Ethnic Affairs, Washington, D. C.). The symposium was more successful than the most sanguine of us had dared predict and it demonstrated again the value of, and demand for, cross-disciplinary approaches to scientific problems.

In view of the fact that this was the third major group of meetings in anthropology to be held in New York City in the fall and winter of 1949, attendance figures are of rather unusual importance. The International Congress of Americanists met in New York City in September and was attended by a large group of scholars from all parts of the world, and the annual meetings of the American Anthropological Association, which were held in New York City in November, drew, as they always do a number of anthropologists from this country. Yet attendance at Section H meetings ran from 100 to well over 250, and it may be estimated that some 400 persons attended sessions. These unusually high figures indicate not only that New York City was well chosen as a meeting place but

also, since by no means all attendants and participants came from the eastern seaboard, that what seems a repetition of meetings does not necessarily mean a decrease in either attendance or interest. As so many of us have suspected, the more work is done, the more appetite there is for further work.

MARIAN W. SMITH, *Secretary*

The Academy of World Economics (K1)

The academy, in joint session with Section K, concluded its project for the year 1949 of research dealing with the general subject of aid to underdeveloped areas of the world. The April sessions of the academy, held at the Brookings Institution in Washington, D. C., developed this subject from an expositive point of view. The December session, held jointly with Section K at the Hotel Governor Clinton, explored the subject from the viewpoint of the inherent limitations contained in the governmental proposal of technical and financial aid to foreign areas. It was not the purpose of this session to be critical, but rather to explore and examine problems which might hinder the successful operation of the foreign aid plan.

In terms of purpose, academy officers concluded the New York session was an outstanding success. Edgar S. Furniss, Jr., assistant professor of politics at Princeton University, developed the subject in its relation to Latin America. Arthur R. Burns, professor of economics at Columbia University, analyzed the economic problems of the program, and John P. Shea, Department of Agriculture, approached the subject from the fields of ecology and sociology. Analyses through the disciplines of economics, political science, and sociology left few aspects of the general subject undeveloped. Benjamin H. Williams, Industrial College of the Armed Forces and board chairman of the academy, presided at the session. Dr. Williams is a specialist in the field of technology and international relations.

The proceedings of the New York session will be published in the June issue of the journal of the Academy, *Social Science*, and will be under the special editorship of Donald P. Ray.

DONALD P. RAY, *Executive Secretary*

Pi Gamma Mu (K8)

In accordance with its custom of many years, the national social science honor society, Pi Gamma Mu, held a luncheon immediately following the joint session of the Academy of World Economics, with which Pi Gamma Mu collaborated, and the sections on social and economic sciences of the AAAS, on December 28, 1949. The informal luncheon, in the Greeley Room of the Hotel Governor Clinton, honored officers of the Academy of World Economics; Section K, Section L, Section H, and Section Q.

S. Howard Patterson, professor of economics in the University of Pennsylvania, national president of Pi Gamma Mu, presided, assisted by Horace Taylor, professor of economics in Columbia University, national first vice president of Pi Gamma Mu.

The guest list included: Benjamin H. Williams, chair-

man of the board of the Academy of World Economics; Francis D. Curtis, chairman of Section Q; D. A. Worcester, secretary of Section Q; Arthur R. Burns, speaker on the joint session; John Penfield Shea, speaker; J. Laurence Phalan of the U. S. Office of Education; Marian W. Smith, secretary of Section H; Dorothy Porter Isom; William W. Martin, national second vice president of Pi Gamma Mu; Eugene H. Miller, governor of the Pennsylvania Province of Pi Gamma Mu; Paul J. FitzPatrick, national treasurer of Pi Gamma Mu; Andrew J. Kress, chancellor of the Atlantic Region of Pi Gamma Mu; Mabel Newcomer; Charles W. Shull, book review editor of *Social Science*; Edward W. Carter, editor of *Social Science*; Effie B. Urquhart, national executive secretary of Pi Gamma Mu; James J. Hayden, general counsel of Pi Gamma Mu; W. Leon Godshall, chancellor of the Eastern Region of Pi Gamma Mu; Robert D. Seltzer; Mrs. S. Howard Patterson; Conrad G. D. Maarschalk; Arthur W. Angel, lieutenant governor of the Michigan Province of Pi Gamma Mu; Ardath W. Burks, and Vladimir Anderson Dupre.

The Rural Sociological Society (K9)

The society had a well-attended, enthusiastic meeting which spilled over into very extended rump sessions on methodology of research problems. The thesis this year was regional rural problems from the Old South through the arid west to the large farms, irrigation and population problems of the Pacific States. Next meeting was voted to be held in Colorado in September, either at Denver or at Fort Collins or partly at both. Newly elected president is C. Horace Hamilton, North Carolina State College, Raleigh, North Carolina.

CARLE C. ZIMMERMAN, *President*

Section on History and Philosophy of Science (L)

Section L met jointly with the American Philosophical Association and the Philosophy of Science Association. There were four meetings. The first meeting was held on the problems of the history and sociology of science. Dirk J. Struik, of the Massachusetts Institute of Technology, talked on the problems of the history of mathematics and emphasized the interrelationship of social and political events with mathematical discovery. Frank Hartung, Wayne University, talked on sociology of knowledge, and criticized Karl Mannheim's "Ideology and Utopia." In particular, Prof. Hartung attacked Mannheim's concept of the "free floating intellectual."

In the second meeting, R. von Mises of Harvard University criticized the extra-sensory perception experiments conducted at Duke University. Prof. von Mises argued that the validation of the existence of E.S.P. could occur only after very extensive experimentation and that the data available to date did not confirm the existence of E.S.P. Joseph Rhine of Duke University replied that he and his group had never claimed the existence of E.S.P. but only its occurrence in certain individuals at certain times. At this session, Charles Morris of the University of Chicago, presented his theory of the relationship of the choice of a path of life and the physical character-

istics of the individual (as explained, for example, in the work of Kretchmer and Sheldon).

In the third meeting, Ernst Kris of Yale University discussed the problem of research in psychoanalysis. Karl Deutsch of M.I.T. discussed the role of models in social science research and Walter Pitts of M.I.T. explained some of the recent work in the field of cybernetics. Prof. Pitts talked about the relationship between the conclusions of cybernetics and some of the traditional problems of philosophy.

At the last session, Bernhard Stern of Columbia University criticized certain modern geneticists for incautious statements concerning pure and impure stock among humans. Th. Dobzhansky of Columbia University outlined a contemporary theory of genetics as accepted by many geneticists of this country. There followed a discussion of the Russian and American genetical theories.

As the titles and the names of the participants make clear, Section L is becoming an increasingly important forum where those working on the growing edges of science meet for the clarification and assessment of their sorties over the existing borders of knowledge. This interpenetration of scientific imagination and philosophical scrutiny indicates a healthy vigor of contemporary thinking on basic issues. The sessions were lively and well attended.

C. WEST CHURCHMAN, *Secretary of the Philosophy of Science Association*, and
CHARLES W. MORRIS, *Chairman of Section L*

Section on Engineering (M)

The activities of Section M for 1949 centered around the annual meeting of the AAAS. The general policy of the section is to encourage joint activities of the various affiliated societies. With this point in view, letters were sent to the affiliated engineering societies in January 1949, inviting them to take part in developing the program for our annual meeting.

A favorable reply was received from the New York Section of the American Institute of Electrical Engineers and a three-day program was developed. This program, under the chairmanship of I. E. Lattimer of the American Telephone and Telegraph Company, had for its topic "Television," and consisted of a three-day display of television equipment and two symposia on the technology and development of television. Over 3000 visitors registered at the television display and the technical sessions drew about 150 members at each session.

A symposium on nuclear engineering was presented Tuesday evening, through the cooperation of the Newark College of Engineering, Newark, New Jersey. Irving P. Orens, representing the college, was the chairman of the meeting. The program consisted of three excellent papers on nuclear engineering and a paper on "Research in Great Britain," presented by W. R. Woolrich, retiring chairman of the section. The meeting was attended by 215 members.

The annual business meeting of the Committee of Section M was held on Tuesday morning, with the follow-

ing members present: W. R. Woolrich, chairman; F. D. Carvin, secretary; J. I. Yellott, B. A. Bakhmeteff, R. S. Swinton, and G. E. Pendray.

The following officers and committeemen were elected: vice president and section chairman, Morrrough P. O'Brien (1950) University of California at Berkeley; secretary, Frank D. Carvin (1952), Illinois Institute of Technology, Chicago; Executive Committee: Boris A. Bakhmeteff (1950), New York City, John I. Yellott (1951), Baltimore, Irving P. Orens (1952), Newark, New Jersey, and G. Edward Pendray (1953), New York City.

The annual meeting of the Association for 1950 will be held in Cleveland, Ohio, December 26-31, 1950. It will consist of section meetings for the first three days and general symposia for the last three days. The following topics were suggested for program material for the 1950 meeting:

1. Social Physics as applied to Industrial Expansion.
2. Symposium on Nuclear Engineering.
3. Study of Water Supply as related to Industrial Expansion.
4. Industrial Research Developments.

All affiliated societies of Section M are invited to take part in the meeting.

Section M has been invited by the American Society of Mechanical Engineers to sponsor jointly several of the programs to be presented at the annual ASME meeting to be held in New York City during the week of November 27, 1950. The section is glad to accept this invitation.

FRANK D. CARVIN, *Secretary*

Section on Medical Sciences— Subsection on Dentistry (Nd)

Of three sessions held, the first was devoted to a symposium dealing with histo- and cytochemical studies of teeth and oral tissues. The topics discussed consisted of general studies on normal and carious teeth, phosphatase localization in relation to growth and calcification, radioautographic visualization of tooth development, and factors occurring in gingivitis, with special reference to the distribution of mucopolysaccharides in the gingival tissues.

The afternoon session was of a more varied nature. Papers presented dealt with such varied topics as eruption, genetic aberrations, studies in the mechanism of calcification, proteins in saliva, and several other aspects of dental science.

The main feature of our evening session consisted of a dinner at which William Gies, founder of the *Journal of Dental Research*, gave a short address in which he reviewed the history of dentistry and its growth in cognate basic science researches.

In general, the meetings were widely representative, of very high caliber scientifically, and well attended (estimated attendance 125 at morning and afternoon sessions). The discussions were lively, provocative, extremely interesting and informative.

G. BEVELANDER, *Local Program Chairman*

Section on Medical Sciences— Subsection on Medicine (Nm)

Twenty-four outstanding investigators in the field of experimental and clinical endocrinology participated in a symposium on the adrenal cortex sponsored by section Nm. Although conferences on adrenal physiology have been held frequently in the past few years, the progress in this field of endocrinology has been so rapid and popular interest so high that the symposium drew overflow audiences at all four sessions. The first session was devoted to papers on the regulation of adrenal cortical activity, the second and third to metabolic effects of the cortical hormones, and the fourth to the relation of adrenal cortical activity to disease states. It is hoped that the papers will be published soon in a symposium volume.

Additional features of the section program were the presentation of the Theobald Smith Award to Seymour Kety of the University of Pennsylvania for his studies on human cerebral blood flow, and the vice presidential address by Alan Gregg of the Rockefeller Foundation. Dr. Gregg discussed the merits of travel in the training and development of the scientist.

On behalf of the section committee, the secretary wishes to thank the many who assisted in developing the program, and particularly the participants for their excellent contributions.

GORDON K. MOE, *Secretary*

Section on Agriculture (O)

The symposium sponsored by Section O on the subject "Whither Soil Conservation" attracted an audience of varied interests, including, among others, foresters, geographers, horticulturists, soil scientists, and representatives of fertilizer companies. The total attendance was approximately 95. Probably the reputations of the speakers—H. H. Bennett, W. Vogt, H. W. Hannah, and E. Truog—attracted some listeners as much as the subject under discussion. The optimistic view of the problem, supported by citation of the great public interest in soil conservation and the high percentage of American farms now included in conservation districts, was tempered by a pessimistic note based on the large number of farms where conservation practices are not in use. The expansion of interest in soil conservation and the adoption of erosion control practices in most areas of the United States has come in the last fifteen years. The role of soil fertility in a conservation program was explained and attention was called to some of the laws in force in many states which may impede the accomplishment of a complete soil conservation program.

The presentation of the program earlier in the week would probably have increased the attendance.

C. E. MILLAR, *Secretary*

Section on Education (Q)

The program of Section Q consisted of a symposium sponsored by the section, and including representatives of the fields of anthropology, psychology, sociology,

medicine, and education; one session of general papers; and an evening session, at which the vice presidential addresses of Sections I and Q were given and the tribute to E. L. Thorndike, a former president of AAAS, was presented.

The meetings were unusually successful. The speakers of the symposium had each received, before the time of the meeting, an outline of what the others were proposing to say, so that there was a meeting of minds. The papers were all of high quality, and were followed by a spirited discussion among symposium members and between the symposium participants and persons in the audience. There were some 300 in attendance. The quality of the afternoon and evening programs was unusually high, and the attendance better than it usually has been. There were about 60 present for the afternoon meeting, and about 100 for the evening meeting. The meetings of this section received an unusual amount of publicity.

The meetings of the subsection on the teaching of science attracted wide interest and large attendance. There is an increasing interest among members of affiliated societies of Section Q; and it is anticipated that at the Cleveland meeting, there will be even a wider participation than there was at this time.

D. A. WORCESTER, *Secretary*

Science Teaching Societies (Q)

With the encouragement of the AAAS Committee on the Teaching of Science and Mathematics, the following groups met both jointly and individually during the three-day session December 27-30: American Nature Study Society; National Association of Biology Teachers; National Science Teachers Association; National Council of Teachers of Mathematics; Junior Scientists' Assembly; Conference on Industry-Science Teaching Relations.

In three joint sessions, reports were presented by outstanding authorities on trends in research, such as the transuranium elements (Quill), hormones (Domm), agriculture (Stakman), vitamins (Mushett), antimicrobial agents (Hobby), blood hormones (Charipper). More general discussions concerning science in general education, and science as a humanity, were introduced by Sears, Meister, Lark-Horovitz, Shapley, and others, followed by numerous brief comments from the floor.

Each of the cooperating groups held three separate programs, featuring special interests such as a demonstration of expert glass blowing (Baker), nature photography (Cruikshank, Teale, Platt, Baldwin), dental health (Strausser), outdoor laboratories (Subarsky), and many others.

The Third National Conference on Industry-Science Teaching Relations was held with discussion of business-sponsored teaching aids by Surface, Carleton, and Read. An exhibit of nearly one hundred units of value for teaching science was set up. Most of these were prepared by science students, and came from various cities in the nation. One display came from California.

The Fourth Annual Junior Scientists' Assembly of-

fered an interesting program featuring young people who are entering careers in science. A high light of the cooperative meeting was the joint banquet of the Science Teaching Societies, at which Karl Lark-Horovitz, AAAS general secretary, was toastmaster. William Jansen, superintendent of the New York City Public Schools, gave the welcoming address. The feature of the evening was a demonstration by J. O. Perrine of the American Telephone and Telegraph Company, who showed many phenomena of the microradio waves now used for radio-telephony and television.

Field trips and tours to places of scientific interest in and near New York City featured the fourth day of the meeting.

HANOR A. WEBB, *Secretary, National Science Teachers Association*

American Nature Study Society (X1)

A series of stimulating, practical talks on nature writing and nature books, by Raymond T. Bond, Roger Tory Peterson, Ellsworth Jaeger, and Howard Zahniser, were a feature of this year's annual meeting. They set off one of the liveliest discussions in the society's history. As a result, a nature book committee was established to review manuscripts and choose twelve outstanding nature books each year.

Overflow crowds attended this session and the following program on nature photography. On the panel were Allan D. Cruickshank, Edwin Way Teale, Rutherford Platt, and S. Glidden Baldwin. Salon prints, Kodachrome slides and movies illustrated the series of talks.

As successful as the 1948 Christmas trip to the Indiana Dunes was the 1949 foray to Jones Beach on the south shore of Long Island. Led by Edwin Way Teale, Roger Tory Peterson, E. Laurence Palmer, Richard H. Pough, and Richard L. Weaver, 90 persons turned out on a cold, clear morning in hope of seeing snowy owls. They were not disappointed, since at least four of the big white owls were sighted.

At the annual business meeting at the New Yorker Hotel, the reelection of President Richard W. Westwood, Editor of *Nature Magazine*, was announced. Vice president for 1950 will be Eva Gordon, and Richard L. Weaver will serve the second year of a two-year term as secretary-treasurer. New directors, elected for two-year terms, are Marie Gaudette, Roger Tory Peterson, Dorothy Treat, William Vinal, and Arthur R. Whitemore.

The American Nature Study Society cooperated with the National Association of Biology Teachers and the National Science Teachers Association in arranging two joint sessions dealing with recent developments and trends in science, and in sponsoring a joint annual banquet, on December 29. Next year's meeting will be held in Cleveland, with the AAAS.

RICHARD L. WEAVER, *Secretary-Treasurer*

Scientific Research Society of America (X5)

The first annual convention of delegates from branches and clubs of the RESA was held at the Hotel Statler, New York on December 26th. The Director reported six

groups established during the first year of the society's history and a total membership of over a thousand. The Society sponsored a public lecture by J. R. Danning of Columbia in the Statler Ballroom on the evening of December 26, with an attendance of 750.

DONALD B. PRENTICE, *Director*

Conference of State Academies of Science (X8)

The conference was concerned this year with the problems of science as a whole. At the morning session we heard Howard A. Meyerhoff, Administrative Secretary of the AAAS, discuss the present status of the National Science Foundation in the Congress and W. A. Macfarlane describe the organization of science in the United Kingdom. The papers were preceded by a brief statement of the foundation and the conference objectives.

At the afternoon session Watson Davis discussed "A National Program for the Science Talent Search." He

described the program of the Science Talent Search and told of the subsequent records made by former winners in it. He also emphasized the great value of the Science Fairs which have been conducted in a number of states. Philip N. Powers then discussed "The Changing Man-power Picture."

The afternoon papers were followed by a paper by Mrs. Madeleine Coutant, who described Hartwick College's work on the Science Fair program. Demonstrations of the projects of winners in the fairs followed.

At the evening dinner William G. Pollard of the Oak Ridge Institute for Nuclear Studies, discussed the Atomic Energy Program in the Associated Colleges. Dr. Pollard's paper was a most fitting climax to an excellent program of the Academy Conference. Mimeographed copies of all papers are being sent to those who attended the conference and to the various secretaries of the state academies of science.

AUSTIN R. MIDDLETON, *Secretary*

Technical Papers

Effect of Whole Body X-Radiation and of Intraperitoneal Hydrogen Peroxide on Mouse Liver Catalase¹

Robert N. Feinstein, Carrie L. Butler,
and Daniel D. Hendley

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The University of Chicago, Chicago, Illinois

It is well established (6) that ionizing radiations produce hydrogen peroxide in aqueous media. Because of the known toxicity of hydrogen peroxide, it seemed possible that this might represent at least a portion of the mechanisms responsible for biological radiation damage. An important consideration in opposition to this hypothesis is the wide distribution of the very active enzyme catalase, which rapidly destroys hydrogen peroxide. We have now shown that hydrogen peroxide, known (8) to destroy catalase *in vitro*, also destroys liver catalase when injected into intact mice, and that x-radiation of whole mice also brings about a sharp reduction in the catalase activity of the liver.

Mice used were Carworth Farm males, fed a standard diet. They were x-rayed at a rate of about 17 r per min, for a total dose of 800 r. Hydrogen peroxide was injected in the amount of 20 milliequivalents (340 mg) per kg, as an approximately 4% solution. Mice, the same age and weight, injected with 0.2 ml of normal saline, served as controls for the H₂O₂-injected animals. Un-

TABLE 1
EFFECT OF INTRAPERITONEAL HYDROGEN PEROXIDE
ON MOUSE LIVER CATALASE

| Time after injection | Catalase units per mg protein | % Decrease |
|---|-------------------------------|------------|
| (No H ₂ O ₂) | 4.1 | .. |
| 2 Minutes | 2.8 | 32 |
| 1 Hour | 2.5 | 39 |
| 2 Hours | 2.4 | 41 |
| 26 Hours | 3.0 | 27 |
| 45 Hours | 2.3 | 44 |
| 1 Week | 3.8 | 7 |
| 2 Weeks | 2.8 | 32 |
| 3 Weeks | 4.4 | -7 |
| 4 Weeks | 3.7 | 10 |

treated mice of the same age and weight served as controls for the x-radiation group.

Catalase was assayed by the method of one of the authors (2). Protein was determined by a modification (3) of the biuret method of Robinson and Hogden (7). Two separate mice were used, and the results were averaged, for each value in the tables. Previous tests had shown that 20 meq. of H₂O₂ per kg was slightly less than the LD₅₀, while 800 r of x-rays was well above the 30-day LD₅₀.

Table 1 shows the effect of hydrogen peroxide on liver catalase. Of particular interest is the very rapid decrease in activity, and the slow recovery.

Table 2 shows the effect of whole body x-radiation on liver catalase. Here it will be noted that an appreciably longer period of time is required for a significant reduction in liver catalase activity, but that the ultimate effect is much more marked and there is no tendency to return toward normal within one week. Not enough mice were irradiated to extend this experiment beyond one week.

¹ Under AEC research contract through Medical Division, Army Chemical Corps. Neither is responsible for opinions or conclusions.