A more critical examination of the final crop products is needed. We need to measure not only their physical attributes as bushels and tons but also the amount and quality of their protein, thereby giving fuller consideration to the fertility of the soils on which the products were grown. The diversity of the amino acids within these crops demonstrates clearly that the fertility level of the soil determines our agricultural production in terms of the protein output, which is much more significant than its commonly considered control in terms of only bushels and tonnages. When the national food problem is now looming larger, we believe it is high time to adopt this newer criterion by which to view and direct the creative business that is agriculture.

Encouragement of these studies by the support of Swift and Company is gratefully acknowledged.

AAAS Centenary—A Preliminary Report

J. M. Hutzel, *Assistant Administrative Secretary*

SEPTEMBER 20, 1948, MARKED THE COMPLETION of the first 100 years in the history of the AAAS and followed by a few days the week-long eventful celebration of the 100th anniversary meeting in Washington, D. C. It is estimated that more than 5,000 persons attended the various sessions and functions. Registration, required for attendance at the morning symposia, was officially tabulated at 2,000, more than half of this number having registered in advance. Unlike previous meetings of the Association, with 60 or more sections and societies organizing as many as 360 sessions, the Centennial Meeting was comprised of only 14 technical symposia and 19 evening lectures. Each symposium consisted of three papers, augmented by a panel of two or three discussants. These sessions ended with a question period during which the audience submitted written questions to the speakers. It was the consensus of the chairmen that audience participation was enthusiastic and contributed much to the high success of the meetings.

The afternoon tours were among the major attractions of the Centenary. In every case the number wishing to participate in the tours exceeded expectations, and with one exception approached the capacity of the cooperating institutions to handle visitors. Chartered buses carried 300 to the Agricultural Research Center at Beltsville, Maryland; more than 500 to the National Institutes of Health and the Naval Medical Center; 180 on the circulating tour to the Geophysical Laboratory and the Department of Terrestrial Magnetism of the Carnegie Institution of Washington and the National Bureau of Standards. An additional busload of sightseers spent an entire afternoon at the Bureau of Standards, and many more participated in the "open house" activities sponsored by this institution on Friday, September 17, the final day of the meeting. The national defense tours to the David Taylor Model Basin, at Carderock, Maryland, and to the Naval Research Laboratory by way of the National War College, were participated in by 156 and 88 persons, respectively. That the tours were interesting and stimulating was generally acclaimed, and the administrative officers of the Association warmly acknowledge the generous cooperation of the participating laboratories in accommodating visiting scientists. All the host institutions welcomed the inspection of those assembled for the occasion of the Centenary, and many scientists who could not take the formal tours found time to make a leisurely survey of research activities related to their special interests.

An outstanding exhibition of the investigations carried on by the Division of Biology and Medicine of the Atomic Energy Commission was on public display in the Statler Hotel during the week of the Centenary. Special exhibits illustrated isotope distribution, the inducement of mutations by radiations, instrumentation, and methods of safeguarding the health of employees engaged in atomic research. By operating instrument controls, visitors were able to detect with Geiger counters radioactivity in inanimate and animate subjects, e.g. a bar of uranium and frogs in a tabletop pond. Automatic devices demonstrated the shielding effect of several materials against the different emanations of a variety of radioactive substances. This exhibition, prepared under the direction of Dr. James H. Jensen, chief of the Biological Branch of the Division of Biology and Medicine, proved to be one of the principal attractions of the meeting.

The opening session on Monday evening, September 13, in Constitution Hall was addressed by the President of the United States and Dr. Shapley, retiring president of the AAAS. It is customary for the president of the AAAS to deliver an address before

the general assembly of the meeting held the year following his retirement from office, and on this occasion Dr. Shapley spoke on "One World of Stars." His address was illustrated in part by moving pictures of eruptions from the surface of the sun. The reception held later that evening in the Pan American Union Building attracted several thousand members and registered guests. Those in the reception line included Dr. and Mrs. Shapley, Dr. Stakman, and Dr. and Mrs. Sinnott. Refreshments were served in the Hall of the Americas, and guests found pleasant relaxation in the beautiful open-air gardens behind the building. Music was provided by the U. S. Air Force Band, and floral decorations were arranged through the courtesy of the U. S. Botanic Garden.

The evening sessions were open to the general public and in nearly all cases attracted capacity attendance. Programs sponsored by the Association and the National Geographic Society and the Association and the Society of the Sigma Xi were particularly popular due in part to the high reputation these joint lectures have attained at previous AAAS meetings.

"What Hope for Man," subject of debate for the well-known radio forum presented weekly by The Town Hall, Inc., was broadcast on Tuesday evening, September 14, as one of the special events of the meeting. A report from the corporation's New York office states that respondents to the program were divided almost equally into diametrically opposing camps. "One group has been stirred to express their enthusiastic praise in an abundance of superlatives. They all feel that this discussion surpassed all previous 'Town Meetings,' and some of them insist that it was the most vitally important program ever broadcast. One teacher was so impressed that he has decided to give a copy of the transcript to each of his students and then offer a $50 prize for the best essay on the subject.

"Those who are critical of the program all have the identical complaint—that there were no representatives of religion to discuss a question which they feel can be answered only by religion.

"There was particular interest in the question asked regarding what children should be taught, and a number of listeners have given their answers to the query. Belief in God, how to search for truth, and practical psychology have been mentioned most often."

The growing interest of the radio industry in presenting programs of true educational merit is reflected in the steadily increasing coverage given the postwar meetings of the Association. Mr. Irving Gitlin, representative of the Columbia Broadcasting System, states that in his opinion network programs devoted to the AAAS Centenary by CBS "represent coverage of an organizational meeting second only to that devoted to political conventions." Quincy Howe, CBS news analyst, presented a daily feature throughout the week of the meeting entitled, "You and Science." Other CBS programs included "Adventures in Science," moderated by Watson Davis, director of Science Service; "The Peoples Platform"; and late evening news commentaries devoted exclusively to the meetings. In addition to broadcasts originating with the networks and with the local stations, a number of outstanding telecasts were aired by WTTG, Dumont television station; WNBW, NBC television station; and WMAL–TV, ABC television station. These included "Learning and Growth," with Arnold Gesell, Yale University; "Mapping the News," with Kirtley Mather, Harvard University; "Solar Prominences," with Leo Goldberg, University of Michigan; and "Event of the Week," with Harlow Shapley, Harvard University.

The proceedings of the Centenary were well distributed to the public under the able direction of the AAAS press director, Dr. Sidney S. Negus, of the Medical College of Virginia. According to Dr. Negus, approximately 180 newspaper and magazine representatives reported the meetings. One well-known science writer found that he "had difficulty in covering the Centenary thoroughly and doing justice to all the fine speakers." Small wonder that the usual type of AAAS meeting with its thousands of papers calls for very close cooperation between authors and representatives of the press in the proper interpretation of science to the public!

In general, the Centennial Meeting was a great success—a success prompted to some extent by the occasion itself. The following are typical excerpts from letters received in the Washington office, the first by a speaker and the second by a science writer:

> I enjoyed the meetings very much, and I hope the AAAS will continue to make its meetings of this integrating and cross-disciplinary type. There is not much need for an organization which simply duplicates the work of the specialized societies. But there is great need for an organization for intellectual trading among specialists.
>
> So far as I was concerned, it was the best AAAS meeting I've attended in 16 years, and I've not missed many.

Problems resulting from the growing size of the annual meetings of the Association and the high cost of operations have led to much debate, among its officers, as to the kind of meeting the AAAS can organize in the best interests of science. The search for a satisfactory solution is reflected by a resolution passed at the Centenary directing that the Council be polled as to the type of meeting the Association should plan following the New York meeting. The

alternatives to be voted upon are: (1) to continue as in the past with no change; (2) to adopt the conference type of meeting, without provision for specialized activities of the sections and affiliated societies; (3) to alternate the two types of meetings.

The New York meeting, to be held from December 26 to 31, 1949, will be conducted in the same manner as the last Chicago meeting. The affiliated and associated societies are cordially invited to meet with the Association. It may be necessary to prorate session rooms in such a way as to insure the housing of related societies in the same or closely adjacent hotels, since this meeting promises to be the largest in the history of the Association.

The achievement of a meeting notable for its harmonious progression of events and atmosphere of accomplishment and good will may be traced to a large extent to the efficient operations of the local committees. In September of 1947 the heads of 40 educational and cultural institutions in the Washington area named representatives to a Centennial Planning Committee, which in turn appointed a subcommittee charged with formulating host plans and policies for the Centenary. The members of this subcommittee included Dr. Waldo Schmidt, Smithsonian Institution; Dr. Lloyd Berkner, Carnegie Institution of Washington; Cdr. J. O. Baker, David Taylor Model Basin; and Col. W. R. Wolfinbarger, The National War College. These men, in cooperation with the administrative officers of the Association, outlined the establishment of local committees and their functions. The chairmen and subchairmen who accepted invitations to bear the principal responsibilities for carrying out the many time-consuming committee tasks were: Equipment, E. G. Stanley Baker, Catholic University of America; Patrons, Daniel Holland, American Security & Trust Company; Publicity, Austin H. Clark, Smithsonian Institution, assisted by Watson Davis, radio chairman, and Gordon Hubble, television chairman; Reception, Alexander Wetmore, Smithsonian Institution; Afternoon Activities, Raymund L. Zwemer, National Academy of Sciences; Registration, Elmer L. Kayser, George Washington University; and Transportation, V. D. Long, National War College. Registration personnel was furnished through the courtesy of the Greater National Capital Committee.

To help defray the costs of the local committees, AAAS members residing in Washington and its suburbs were asked to volunteer their services during the meeting or to contribute a small sum toward expenses incurred by the host committees. Approximately 300 of the total 1,429 local members made contributions amounting to $883, and 68 volunteered to help. Those who offered to render personal assistance helped staff the information booth at the Statler Hotel or aided members of the equipment committee in collecting the written questions from the audiences at the morning symposia. For a most noteworthy meeting on the occasion of its 100th anniversary, the Association is indeed grateful to those named who served on the various committees and to the many unnamed contributors and volunteers.

This preliminary report of the Centennial Celebration will be followed by a summarized proceedings of the Centenary in the November 26 issue of *Science*. Many of the anniversary papers will be published in *Science* and *The Scientific Monthly*, and present plans call for the publication of the symposia in special volumes during the forthcoming year.

Obituary

Arthur Gordon Ruggles

1875-1947

Arthur Gordon Ruggles, professor emeritus of entomology and economic zoology at the University of Minnesota, and for 25 years State entomologist, died December 23, 1947, in Professional Center hospital, Montgomery, Alabama, at the age of 72 years. Since his retirement, his home had been in Union Springs, Alabama.

He was born May 30, 1875, in Annapolis Royal, Nova Scotia. He was graduated from the Truro (Nova Scotia) Normal School and from the Truro Agricultural School. After teaching for a time in the Provincial schools, he entered the College of Agriculture of Cornell University and was granted the B.S.A. degree in 1901. His graduate work in entomology was interrupted, but he returned to complete his work for the A.M. degree in 1904.

In 1902 he joined the staff of the University of Minnesota, where he remained for 41 years, first as assistant professor of entomology and assistant to the State entomologist (1902–13) and then as associate professor (1913–18), professor and, succeeding F. L.