

PROCEEDINGS OF THE TENNESSEE ACADEMY OF SCIENCE FOR 1970

JAMES D. CAPONETTI, Secretary
THE UNIVERSITY OF TENNESSEE, KNOXVILLE

EXECUTIVE COMMITTEE MEETINGS
January Meeting, 1970

The Executive Committee Meeting of the Tennessee Academy of Science was called to order by President James L. Wilson at 7:40 P.M. CST in Room 300 of The University of Tennessee Nashville Center, Nashville, on January 30, 1970. Members present were James L. Wilson, President; Gustave H. Lundberg, Past-President; Richard J. Raridon, President-Elect; James D. Caponetti, Secretary; Gus Tomlinson, Journal Editor; Richard J. Raridon, Director of the Collegiate Division; John H. Bailey, Director of the Junior Academy; Paul Wishart, Director of the Visiting Scientists Program; James T. Davis, Director of the Science Talent Search Program; Robert F. Sears, and John G. Parchment, Members-at-Large.

The Secretary passed out printed copies of the Minutes of the November, 1969, Executive Committee Meeting and the Annual Business Meeting. They were read and approved without correction. Since the Annual Meeting, six new members have joined the Academy, making the total membership 923 at this time. A motion was seconded and passed to accept the six applicants into membership in the Academy.

The Editor reported that the January issue of the Journal is in proof form and that galleys have been sent out to paper authors for corrections. President Wilson commented on the recommendations concerning the Journal made by the previous Editor, Donald Caplenor, and he stated that the new Editor and his editorial staff need time to consider the recommendations.

The Director of the Reelfoot Lake Biological Station was absent from the meeting, but he sent a letter to the President informing him that work is proceeding on lining up two courses for this summer at the Station.

The Director of the Junior Academy submitted the following report:

"As of this date we have had the usual interest shown by teachers asking for cover sheets to accompany their papers for our Annual Meeting to be held at Vanderbilt University, on April 24-25, 1970. We anticipate the usual degree of cooperation at Vanderbilt, although we will be dealing with a new Physical Science Departmental Chairman; Dr. Holladay has moved into the office of Academic Dean. I anticipate no unusual problems for the spring meeting.

"An application has been filed with the National Science Foundation asking for continued financial support in the 1970-71 school year in the amount of \$2,000.00. This application, if granted, will need an additional support of an estimated \$3,755.00 for a total of \$5,755.00.

"In order that continuity not be broken, I hope that a system of priorities might be established so that an assurance will be available for certain programs in order that the work could move successfully from one school year to the next."

A motion was passed to accept the Director's report.

The Director of the Collegiate Division submitted the following report:

"The Collegiate Division held its annual meeting on November 22, 1969, at the University of the South. Approximately 50 students were in attendance. Eight papers were presented by students representing 6 schools. A total of \$369.90 was spent for student travel and per diem and other incidental expenses."

A motion was passed to accept the Director's report.

The Director of the Visiting Scientists Program submitted the following report:

"The Visiting Scientist Program for 1969-70 began operations in the Fall of 1969. Due to the curtailment of the pro-

gram in 1968-69 because of lack of funds, considerable effort had to be expended to revise the roster of scientists for 1969-70. At present there are approximately 80 cooperating scientists listed in the roster. The director feels that the list should be increased to approximately 100 names in order to provide flexibility of choice in each of the subject areas in each of the geographic areas of the state.

"As of January 30, 1970, 46 visits had been arranged. Biological scientists continued to be the most requested group although all scientific areas have been represented by visits. Activity and interest is evident in schools throughout the state."

A motion was passed to accept the Director's report.

The Director of the Science Talent Search Program gave his report as follows:

"Below are itemized some of the activities which have been in progress that are related to the Science Talent Search: (1) A newsletter from the state department was prepared and sent to all science teachers across the state encouraging them to participate in the Science Talent Search. (2) Each science organization such as NETSEA and the science sections of ETEA, TEA, and West Tennessee have been contacted and encouraged to participate. (3) Dr. Paul Wishart from U.T. invites the Tennessee Science Talent winners to participate in the Science and Humanities Symposium each spring and this year is no exception. (4) Names of last year's winners have been sent to many colleges and universities for scholarship consideration.

"One consideration that needs some study is the communication gap. Some study should be made concerning better methods of getting information to all science students across the state. I might add that the symposium at U.T. under the guidance of Dr. Wishart is one of the most appreciated activities associated with the Talent Search."

A motion was passed to accept the Director's report and his request for \$250.00 for operating expenses.

The Treasurer was absent from the meeting.

The following two reports were submitted by James D. Caponetti who, as our AAAS representative, attended both the Academy Conference Meeting and the AAAS Council Meeting held in conjunction with the AAAS Meetings in Boston, Massachusetts, December 26-31, 1969.

The Academy Conference Meeting Held At The A.A.A.S. Meeting In Boston, Massachusetts, On December 27, 1969

The morning session was called to order at 9:00 a.m. by Chairman Wilmer W. Tanner, Professor of Zoology, Brigham Young University, who introduced the morning speaker, M. Frank Hersman, Staff Associate, Office of Planning and Policy Studies, N.S.F. The title of Dr. Hersman's speech was "The Role of State Academies in Providing Scientific Assistance to State Government. Dr. Hersman's talk centered around the fact that advice from scientists to state and local government is urgently needed and is increasingly being sought. In their desire to serve local science needs, opportunities exist for academies to assist in meeting this demand. A question and answer period followed which took up the rest of the morning session.

The afternoon session was called to order at 2:00 p.m. by Chairman John Mayor, Director of Education, AAAS, who introduced the afternoon speaker, Howard F. Foncannon, Coordinator of Technical Education Studies for the AAAS. The title of Dr. Foncannon's talk was "Academies and Technical Education." His main idea was that not everybody wants to attend college so they may later enter the learned professions. An increasing number of young people want a relevant, occupational education which will prepare them for a technical occupation. Basically, the technical training program is one of

science education heavily oriented toward developing mechanical skills plus enough theory so that scientific knowledge can be put to practical use. The training of technicians is assuming an important place in our educational system. The implementation of program offerings for technical educators presents some critical problems, however. Academies of science can assist in the solution of such problems. A short question and answer period followed, and then a general meeting and discussion of Academy Conference affairs was chaired by the President, Harry J. Bennett.

The usual reports were presented by the officers and chairmen of committees. One notable report was that by Charles E. DePoe, Chairman of the Collegiate Divisions Committee. He outlined the functions and operation of a Collegiate Division and specifically cited our own TAS Collegiate Division as an excellent example of what a Collegiate Division should be.

The following amendments to the Constitution were passed:

- a. Article IV. Officers.
Add a final sentence—"Only members of AAAS are eligible to hold office in the Academy Conference."
- b. The present constitution shall be amended to remove the words "Academy Conference" wherever they appear and to substitute the words "Association of Academies of Science."
- c. Article IV. Section C of the By-Laws, Secretary-Treasurer.
Amend the final sentence to read: "As treasurer he shall have custody of all funds, accounting for same as of the last day of the month before the month of the annual meeting of any year to the Conference at its annual meeting, and to perform such other duties as customarily pertain to this office."

The following motions were presented:

1. The Retiring President shall arrange the annual meeting and its sessions. This motion passed.
2. The dues of the academies shall be increased to 5¢ per member. This motion was defeated, thus leaving the dues at 2¢ per member.
3. The Director of the American Junior Academy of Sciences shall be elected for a three year term, can be re-elected, and is to be made a member of the Executive Committee. This motion passed.

The present conference seal needs modification because of the name change, and two proposed seals for the American Junior Academy of Sciences were displayed. It was announced that all Directors of Junior Academies will be contacted and asked to help in the selection of a seal.

The Nominating Committee presented the following candidates:

- President-Elect: Len W. Stuart
Secretary-Treasurer: Charles E. DePoe
The candidates were unanimously elected to their respective offices.

The meeting was adjourned at 4:00 p.m.

The A.A.A.S. Council Meeting Held in Boston, Massachusetts, on December 30, 1969

The morning session was called to order at 9:10 a.m. by the President of AAAS, H. Bentley Glass, in the Ballroom of the Statler Hilton Hotel. There were 210 Council members in attendance, and they were admitted to the council chamber only by special passes. Visitors were allowed to sit in a designated place at the rear of the ballroom. Numerous reports and resolutions were presented. Only the ones of importance to TAS officers and members will be the subject of this report.

The Chairman of the Board of Directors presented his report and announced that Dael Wolfe is resigning as Executive Officer of AAAS and will return to college teaching.

The Committee on Nominations and Elections reported that Council had elected the following new officers:

1. *President-Elect*
Mina Rees, President of the Graduate Division, City University of New York.
2. *Members of the Board of Directors*
 - a. Lewis M. Branscomb, Director of the National Bureau of Standards
 - b. Phyllis V. Parkins, Director of Biosciences Information Service of Biological Abstracts
3. *Members of the Committee on Council Affairs*

- a. David E. Davis, Professor and Head of the Department of Zoology at North Carolina State University
- b. Stanley Marshall, President of Florida State University
- c. George Sprugel, Jr., Chief of the Illinois Natural History Survey

Council voted to adopt the following resolutions:

1. That the Council of AAAS urge that the U.S. Department of Defense immediately cease all use of 2,4-D and 2,4,5-T in Vietnam.
2. That the scientist exchange program currently being executed between the East and the West should be greatly intensified and extended to other nations, and that there be full international disclosure of the results of basic research through publication and open discussion.

The Committee on Council Affairs reported that it was studying a number of items in connection with organization and composition of Council; namely, the constituency to be represented, maximum size, function, frequency of meetings, and the term of office of Council members. The items are still under study except the last one; it was moved and passed that Council inform affiliates that their representatives to Council should be appointed for three-year terms, and that in the absence of a regularly selected representative, the affiliate may be represented by its President. This action was prompted by the fact that regular attending Council members noticed that affiliates sent a different representative each year. The new person being unfamiliar with the meeting "has no idea of what is going on" and thus would be rather shy in presenting ideas and participating in discussions. A three year term might alter this situation.

The Committee on Council Affairs endorsed, and Council voted to accept the following recommendations:

1. That the Section on Zoological Sciences (Section F) and the Section on Botanical Sciences (Section G) be discontinued and that a new section be established; namely, the Section on Biological Sciences.
2. That affiliation be granted to the American Orthopsychiatric Association and to the Parapsychological Association.
3. That affiliation be withdrawn from the Rhode Island Academy of Science since it no longer exists, and from the International Association of Milk, Food, and Environmental Sanitarians which had asked to withdraw.

The meeting was recessed at 12:15 p.m. for lunch and the afternoon session was called to order by President Glass at 2:00 p.m. There were 172 Council members present and again admittance was by special pass only.

Mr. Mack Lipkin, Jr., acting as spokesman for a group of young scientists (science students), presented a lengthy report advising senior scientists to take "appropriate steps to solve the problems of young scientists' disaffection with the house of science, disinterest in science as irrelevant, and concern over the social ineffectiveness of scientists." He thanked the AAAS Board of Directors for inviting him and a number of his colleagues to discuss these problems with them and expressed the wish of continuing dialogue.

Dr. Richard Bolt, acting as spokesman for the Board of Directors, also presented a lengthy report on how the AAAS Council should concern itself with the well-known, current problems of human society and how to attempt to correct these problems during the decade of the 1970's. To implement this commitment, the Board resolves:

1. To expand by an order of magnitude the AAAS membership, with particular attention to all professional communities.
2. To stimulate and foster effective communication with the entire population concerning science, technology, and social change.

Another Board member, Gerald Holton, prepared a systematic review of certain AAAS activities as related to war, population pressure, hunger, etc., and called upon AAAS to select those tasks that are of the greatest importance, and then to get to work. Council went on record as endorsing the program presented by the Board of Directors.

After several small items of new business, the Council Meeting was adjourned at 4:10 p.m.

A motion was passed to accept both above reports.

REPORT BY C. L. BAKER ON THE ACADEMY CONFERENCE

Few here recall the year our beloved Dr. John T. McGill instituted plans for a conference of academy secretaries that resulted in the Academy Conference of the AAAS. This was in 1926 when this national scientific organization held its annual convention in Nashville. This year at the Chicago annual convention the Academy Conference ceases to exist; being replaced by the Association of Academies of Science.

A History of the Academy Conference was published this year and copies are available for officers of academies.

This Conference, or rather Association of Academies of Science, continues to promote the common aims of academies and the AAAS and to provide means for consultation on and investigation of the problems of academies with a view to aiding all in their common purposes. Each year since 1950 a Directory and Proceedings has been compiled and mailed to all academy officers, and every new officer should read it carefully and completely. Communication between academies and between them and the AAAS presents a continuing problem. Representatives to the Conference and the AAAS Council should be appointed at least one year in advance. By contrast I determined that I was your representative to the Boston meeting in December 1969 six months after the meeting was held.

Last year the Academy Conference through its Publication Committee, and with financial support from the NSF, conducted a three day workshop for editors of academy journals. Nineteen journals were represented. Eleven replied but could not attend, and fifteen did not respond to mailings. Thus, for a potential nationally of forty-five journals there was a 42% participation. It may be noted that NSF is interested in sponsoring a second workshop in the future.

A highlight of last years Conference was a report given by Dr. M. Frank Hersman, of the Intergovernmental Science Planning Program of the NSF, on "The Role of State Academies in Providing Scientific Assistance to State Governments." In order to decentralize the Federal level greater attention is being focused on the potential of state government for managing scientific programs. A few states are experimenting with the development of scientific programs and greater efforts along these lines will be required.

There is little descriptive information available on state science policies and programs and there is indication that state investments in R & D have been relatively minor and in very applied areas. Although all Governors have named a science advisor, these are not full time positions. Georgia has a Science and Technology Commission, Pennsylvania has the Governor's Science Advisory Committee and California has Science and Technology Advisory Council to the General Assembly. Recent Federal developments include the Federal Council for Science and Technology establishing the Committee on Intergovernmental Science Relations, which is charged with assessing and delineating relationships and problems faced by state governments with regard to science and technology. The NSF has a grant assistance program designated to help state and local governments develop their science policies and planning activities. About fifteen grants have been issued since June 1968, and other awards are expected to be announced soon.

What is the role for state academies of science? They could become one of the most valuable sources of advice, performing at the state level similar to the role of the National Academy of Sciences in relation to the Federal Government. In July 1969 only four academies stated they have attempted to provide assistance to decision-making units. Most all academies responded that they ought to provide greater assistance. A productive relationship between scientists and politicians will require effort on both sides. Communication systems must be established. The academy should provide sound, unbiased advice of a kind which the decision-maker can apply to problems which he faces. State academies must first develop a firm conviction that academy involvement is needed for the future welfare of society; greater academy leadership will be needed to stimulate member interest and participation. Dr. Hersman suggested that initiative should probably come from the academies in one or more of the following actions:

1. Establish a seminar or discussion series which examines the science aspects of various public issues.
2. Encourage governmental participation in academy meetings.
3. Volunteer assistance to government officials, by indicating a willingness to serve on governor's science advisory committees and by offering service to legislators.
4. Demonstrate a capability to provide sound, unbiased, and relevant advice on troublesome problems.
5. Work towards the development of a full-time staff. This probably will be the key to promoting a greater academy role.

The non-profit status can be maintained providing the academy contents itself with a scientific analysis, and does not pursue an advocate role.

Dr. Hersman further stated that the NSF is willing to support acceptable pilot programs involving 4 or 5 states and suggested that the Academy Conference might assume the role of coordinator of the project. All academies have been notified of this program and the possible potentials, results and procedures remain uncertain and quite nebulous.

OTHER BUSINESS

1. For the AAAS Meeting next December in Chicago, Illinois, it was moved, seconded, and passed that Richard J. Raridon be appointed both representative to the Association of Academies of Science (formerly Academy Conference) Meeting and delegate to the AAAS Council Meeting.
2. A motion was passed to set the date of the 1970 annual meeting of the Academy at November 20-21, 1970. Each year the date of the annual meeting comes up for scrutiny because it conflicts with some other scientific meetings. A motion was passed requesting the President to appoint an ad hoc committee charged with compiling a list of all scientific meetings including their dates in an effort to possibly select a more appropriate time for the annual meeting of the Academy. President Wilson appointed the following ad hoc committee: Robert F. Sears, Chairman; John G. Parchment; and Joe Minor.
3. A motion was passed requesting that President Wilson write to the Honorable J. H. Warf, Commissioner of the State Department of Education asking that he please appoint a Science Supervisor to attend the next Executive Committee Meeting to serve as a consultant on science education activities in the state.
4. A member of the "brochure committee," James D. Caponetti, reported that the proposed brochure designed to stimulate industrial memberships is almost complete. When it is finished, copies will be sent to the members of the Executive Committee for any corrections and for approval. Printed copies will be sent to the chairman of the Membership Committee, Johnny O. Younghans. He and his committee members will then make appropriate distribution.
5. The Secretary read the following memorandum to the Executive Committee from Dr. S. K. Airee of The University of Tennessee at Martin, concerning the Seminar Exchange Program in Chemistry:
"The possibility of organizing a seminar exchange was discussed at the meeting of the Chemistry Section of the Academy at Clarksville on November 22, 1968.

It was visualized that the program can be useful in providing opportunities for enrichment of the academic atmosphere through seminars, promoting graduate student enrollment for departments with graduate programs, exchanging information and ideas about curricula and other developments, and possibly in developing cooperative projects between the participating departments. I was asked to explore this idea.

"I sent out an exploratory letter dated January 27. Responses and data from some twenty departments were tabulated and mailed out. The interest at this stage seemed to warrant preparation of a Speakers Pool List; this was prepared and set out on September 12. This created further interest and I received names of ten more speakers from as far west of the State as Memphis and as far east as Johnson City. The latest list was mailed out on December 26, 1969.

"Copies of all these mailings were sent to the Secretary of the Academy, Dr. Caponetti, and at times to other officers, for information.

"I have sent bills for \$12.05 to the Treasurer of the Academy, Dr. Robert L. Wilson, for past expenses. It is envisaged that NO MORE THAN TWENTY DOLLARS expense would be incurred in the next year; actually it may be far less. I propose to use this sum in sustaining interest in this worthwhile project mainly through collection and dissemination of information regarding seminars and speakers."

A motion was passed directing the Treasurer to reimburse the \$12.05 to Dr. Airee and to appropriate \$20.00 for next year's expenses.

The meeting was adjourned at 11:20 P.M. CST.

November Meeting, 1970

The Executive Committee Meeting of the Tennessee Academy of Science was called to order by President James Wilson at 7:40 p.m. C.S.T. in the South Meeting Room of the Sheraton Motor Inn in Memphis, Tennessee, on November 19, 1970. Members present were James L. Wilson, President; Gustave H. Lundberg, Past-President; Richard J. Raridon, President-Elect and Director of the Collegiate Division; James D. Caponetti, Secretary; Robert L. Wilson, Treasurer; Mayme Lee Blankenship, Associate Editor of the Journal; John H. Bailey, Director of the Junior Academy; Robert F. Sears, Albert L. Myers, and John G. Parchment, Members-at-large.

The President submitted the following report:

"I feel very fortunate in being able to serve as President of the Academy during 1970. I have not been faced with any major problems due to the excellent work done by President Lundberg last year.

"We were fortunate again to be one of the few Academies to receive Federal money. Through the efforts of John Bailey, \$2,000 was granted for the Junior Academy Program. I feel that we should not count heavily on continuing to receive this grant in the future due to inflation and the general withdrawal of Federal grant monies. This places more stress on our ability to continue to receive financial assistance from the State and during a time when State money will be equally difficult to get. We again were very fortunate in obtaining an appropriation of \$11,500 for this year, \$3,000 of which was designated for support of the Reelfoot Lake Biological Station. With a new Governor coming into office, we may have to establish diplomatic relations with new people in order to obtain continued support.

"At the request of the Executive Committee, I wrote to Commissioner Warf asking him to appoint a Science Supervisor to the Executive Committee of the Academy. He appointed Mr. Joe P. Minor, who has been very active in the Academy in the past, along with other members of the State Department of Education, Don Wood and John E. Cox. Mr. Minor will be able to help the Executive Committee in many ways and we appreciate his willingness to serve with us.

"Dr. John Parchment of the Biology Department of Middle Tennessee joined the Executive Committee this year as the new member-at-large for a three year term. The other members-at-large are Dr. Sears, whose term expires at the end of 1971 and Dr. Myers whose term expires at the end of 1970.

"We reactivated the Distinguished Teacher Awards Committee this year with John Bailey serving as Chairman of this Committee.

"I want to thank the Executive Committee and the Academy membership for its cooperation and again say that it has been a real privilege to serve as President of the Academy."

The Secretary passed out printed copies of the Minutes of the January Executive Committee Meeting. They were read and approved without correction. The Secretary reported that from the start of 1970 to this moment, there were 49 new membership applications. Four drops and eight deaths were reported to the Secretary. Total membership is now 872. A motion was seconded and passed to accept the 49 applicants into membership in the Academy.

The Treasurer submitted his report. As of January 1, the balance was \$9,427.78. Receipts, which included appropriations

by the Tennessee State Department of Education, amounted to \$14,163.00. Total cash available, therefore, was \$23,590.78. Disbursements were \$11,709.50 leaving a balance of \$11,881.28 as of November 1, 1970. A fiscal year report will be presented by the Treasurer at the January Executive Committee Meeting. The Chairman of the Auditing Committee, Myron S. McCay, had transmitted a written auditors' report to President Wilson, as follows:

"The records of the Treasurer of the Tennessee Academy of Science have been examined, and have been found in excellent order. The records are clearly and conveniently arranged. The Treasurer is to be commended on the excellent post-payment file which makes rapid verification of all fiscal transactions very simple. The Academy's business matters appear to be handled promptly and properly. An audit by a Certified Public Accountant will be made and reported at the end of the current year. Winston L. Massey, Department of Mathematics. Signed: Myron S. McCay, Chmn., Department of Physics and Astronomy."

A motion was passed accepting the reports of the Treasurer and the Auditing Committee.

The Editor was absent from the meeting, but the Associate Editor was present and she gave the Editor's report:

"One number of Volume 44 and four numbers of Volume 45 have been published since the November meeting last year. The 1970 Volume contains 19 articles and reports. The breakdown by subject area for the 1970 publication is as follows: Botany 5; Zoology 6; Physics-Astronomy 1; Mathematics 1; Geology 1; Abstracts 3 sets; Proceedings 1; Index 1. In addition to the manuscripts on hand at the beginning of the year, 27 new manuscripts were received in 1970. Thus, a total of 34 manuscripts are in some phase of preparation for publication.

"Two seemingly modest goals have guided the Editor and Associate Editor during the past year. These being to get the Journal back on schedule and to update the mailing list for recipients of the Journal. By foregoing any attempt at innovation or change for the Journal and concentrated efforts on the issues, the Journal was on schedule as of the current October issue. Secondly, the mailing list seemed to be in disarray. A major updating of the list was undertaken and is essentially complete at this time.

"Now that these goals have been attained, it is hoped that there will be sufficient time to ponder over innovations, improvements, changes, etc. The two-year commitment which the Editor made to the Academy with respect to editorship of the Journal extends through 1971, at the pleasure of and upon the approval of Academy membership and its officers. When and if the Editor's host Institution can make a commitment for some release time for him and for continued support of an Associate Editor for 1972, an additional year's commitment to the Academy may be possible. This is obviously predicated upon the continued approval of the Editor by the Academy. Should such support from the Editor's host Institution not be realized for 1972, the present Editor would have no choice but to reluctantly request that the Academy select a new Editor effective January 1, 1972.

Finally, the Editor would like to enlist the cooperation of prospective authors for the following time-saving suggestions:

1. An abstract should accompany each manuscript.
2. Manuscripts could be shortened.
3. Tables could be neatly typed.
4. Mathematics papers should be typed in a form that could be photographed for publication.
5. Each author should read the instructions to the authors on the inside cover of the Journal.

A motion was passed to accept the Editor's report.

The Director of the Collegiate Division submitted the following short report:

"The Collegiate Division of the Tennessee Academy of Science held three regional meetings during the spring of 1970 under the able direction of the regional sponsors, Dr. Robert G. Ziegler, Lincoln Memorial University, Harrogate; Dr. John T. Natterville, David Lipscomb College, Nashville; and Dr. George E. Rouse, Bethel College, McKenzie. The programs of the meetings and abstracts of some of the papers have already appeared in the Journal. The total amount of money spent for luncheons

and travel at the spring meetings was \$356.04."

A motion was passed to accept the Director's report. He then presented a proposed budget for 1970-71 for \$2,000.00.

The *Director of the Junior Academy* submitted his written report as follows:

"The 1969-1970 academic year program of the Tennessee Junior Academy of Science, under the financial support of the Tennessee Academy of Science provided many opportunities for science programs in the Tennessee secondary schools.

"During the year we established contact with 3200 science and/or mathematics teachers advising and encouraging student participation.

"The final twenty-five papers to be selected for presentation were procured by careful screening of papers by the science teaching staff at East Tennessee State University.

"Twenty-five students together with their teachers were invited to present their papers at the Tennessee Junior Academy of Science Annual Meeting at the Physical Science Center at Vanderbilt University on April 24 and 25, 1970.

"A final Handbook and Transactions was published containing abstracts and reprints of papers presented at the annual meeting. These were distributed to all participating students and their schools. (A limited number are available upon request).

"This program was funded jointly by the Tennessee Academy of Science and the National Science Foundation."

A motion was passed to accept the Director's report. In his proposed budget for 1970-71, the Director requested a total of \$5,555.00 of which \$2,000.00 is requested from the National Science Foundation, and the balance of \$3,555.00 be supplemented by the Academy.

The *Director of the Visiting Scientists Program* was absent from the meeting but had made arrangements with the Secretary to present his written report which follows:

The Visiting Scientist Program for 1970-71 is designed to provide approximately 60 to 75 visits to secondary schools in the State.

ROSTER: Approximately 90 scientists are listed in the current roster. Those who had previously served in this program were given preference to continue as participants. New personnel have been added to strengthen some subject matter areas and to give better geographic representation to each division of the State.

DEVELOPMENT OF PROGRAM: The Commissioner of Education and staff members within the State Department of Education have continued to endorse the program by contacting all superintendents in the 151 school districts. 527 of the 1970-71 rosters were mailed to the secondary schools.

A motion was passed to accept the Director's report. He requested a budget of \$4,755.00 for 1970-71.

The *Director of the Reelfoot Lake Biological Station* was absent from the meeting but had sent a letter to President Wilson who submitted a report as contained in the letter dated October 12, 1970:

"Since I was in India all summer, I have very little to report. Courses in ichthyology and field ecology were offered, running consecutively. Five students registered in one course, four of these remaining for the other as well. Turnout thus was somewhat disappointing and the future of course offerings at the lake is in doubt. We will probably start offering field courses from the campus at Martin and abandon the idea of staying at the lake during the summer. The expense to UTM for renting the "dormitory" at the lake is too high for the number of students involved."

A motion was passed to accept the Director's report.

A member of the ad hoc "brochure committee," James D. Caponetti, reported that the proposed brochure designed to stimulate industrial memberships is complete and copies will be sent to members of the Executive Committee for any corrections and for approval.

The ad hoc committee, appointed by the President and chaired by Robert F. Sears, charged with compiling a list of all scientific meetings including their dates in an effort to possibly select a more appropriate time for the annual meeting, submitted a report through the Chairman. A careful study of the list made it evident that any month presents a conflict, and that November poses the least problem of all. A motion

was seconded and passed to retain the annual meeting time to the Friday and Saturday before the Thanksgiving holiday.

The Director of the Junior Academy and the President had privately discussed the feasibility of reactivating the Distinguished Teacher Awards. Accordingly then, the President appointed John H. Bailey Chairman, and Paul Wishart and Joe Minor as members of an ad hoc committee to select distinguished teachers for 1971. The chairman reported that a list of deserving teachers was being compiled and would be presented to the Executive Committee at the January meeting. He also suggested that the committee be allowed to select at least one teacher from each congressional district so as to obtain a fair and equitable statewide distribution. Member-at-large Albert Myers converted the suggestion into a motion; it was seconded, and passed subject to the approval of the Executive Committee and the membership of the Academy.

OTHER BUSINESS

1. The *President* asked the Secretary if any invitations for the 1971 annual meeting had been received by him. Since the Secretary had received none, he read aloud invitations received last year. The Executive Committee decided to hold the next annual meeting in the middle of the state and thus agreed to accept the invitation of Dr. John A. Patten, Head of the Department of Biology at Middle Tennessee State University, Murfreesboro, provided that the invitation was still open. Member-at-large John Parchment volunteered to telephone Dr. Patten to check on the invitation. Dr. Patten was reached by telephone and he reaffirmed the invitation. The Secretary was instructed to write a confirmatory letter to Dr. Patten accepting his invitation. The Executive Committee also set the dates of November 19 and 20, 1971, for the next annual meeting.

2. *President-Elect* Richard Raridon requested that the autobiography of Samuel C. Lind, consultant to ORNL, be published in the Journal. A motion by Past-President Gustave Lundberg was seconded and passed to authorize publication of the autobiography at a time to be determined by the Editor.

3. The *Treasurer* needed a clarification on the reimbursement of expenses for those who travel on Academy business. A motion by the President was seconded and passed to authorize the Treasurer to reimburse the expenses of those who do not have access to a travel fund from their university or company.

4. President Wilson then introduced the painful subject of budget for 1970-71. The Treasurer reported that after he approximated the committed expenses, there was only about \$6,000.00 left for the three high school and college student educational programs. A motion by Member-at-large Albert Myers was seconded and passed to allot \$1,000.00 to the Collegiate Division, \$2,500.00 to the Visiting Scientists Program, and \$2,500.00 to the Junior Academy. The motion included a statement to the effect that if more funds became available, they would be put toward the three educational programs in an effort to fulfill their budget requests. In an effort to raise more money, another motion by Albert Myers was seconded and passed to allow the Treasurer to include a request with the mailed dues notice for a voluntary donation of three or more dollars to the Academy.

5. The *Treasurer* expressed the view that the annual meeting was becoming more expensive each year due to the current inflationary trends in costs. He introduced a motion which was seconded and passed to make the meeting self-supporting to a certain degree by charging a registration fee of \$1.00 for students and \$3.00 for non-students. President Wilson stated that we would carry this proposal to the membership for voting at the business meeting.

6. The *Secretary* reported that he received an announcement from the Trustees of Southwestern at Memphis that Dr. William L. Bowden was inaugurated as the 17th President of the College on November 7, 1970. The Secretary requested permission to send a congratulatory letter to Dr. Bowden, and also to Governor-Elect Dr. Winfield Dunn and Senator-Elect Bill Brock. The Executive Committee granted the requests.

The meeting was adjourned at 1:00 a.m. C.S.T.