

Doctoral Fellow, and in 1965 he was Alumnus of the Year at Xavier University, New Orleans, Louisiana. Again, in 1965, a paper delivered at the University of California, Berkeley, California, on December 28, was chosen as one of the most outstanding and newsworthy presented at the American Association for the Advancement of Science. In June 1967, he received a travel grant (NSF) to attend the First International Congress of the Transplantation Society in Paris, France. He was accepted as a Grants Associate with the National Institutes of Health in April 1969. In 1970 he was listed in Outstanding Educators in America, Personalities of the South, and Community Leaders in America. He is a Fellow of the American Association for the Advancement of Science. In 1971 he was named Teacher of the Year at Tennessee State University and received an award from the Standard Oil

Foundation. He has appeared in the Dictionary of International Biography during 1971, 72, 73, 74, and 1975. In 1971 he was honored by being the recipient of a Papal honor—Knight of St. Gregory. Also in 1971 he was selected to appear in American Catholic Who's Who. In 1973 he appeared in International Who's Who in Community Services, was an At-Large Member, UIS, of the Catholic Bishops Advisory Council and appeared in Men of Achievement.

He is an ordained deacon in the Roman Catholic Church, Diocese of Nashville, St. Vincent de Paul Parish. He was married on August 19, 1959, to Pazetta Berryman. They have three children, John Michael, Jr., Adelaide Veronica, and Pazetta Ann. John Michael, Jr., is a sophomore at Father Ryan High School. Adelaide is in the eighth grade at St. Vincent de Paul School and Ann is in the third grade at Cavert School.

JOURNAL OF THE TENNESSEE ACADEMY OF SCIENCE
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PROCEEDINGS OF THE TENNESSEE ACADEMY OF SCIENCE 1975

JAMES D. CAPONETTI, *Secretary*
EXECUTIVE COMMITTEE MEETING
JANUARY, 1975
UNIVERSITY OF TENNESSEE, KNOXVILLE

The Executive Committee Meeting of the Tennessee Academy of Science was called to order by the President at 7:15 p.m. C.S.T. in the Walnut Room of the Henry H. Hill Student Center, George Peabody College, Nashville, on February 7, 1975. Members present were Albert L. Myers, President; John M. Mallette, President-Elect; Robert L. Amy, Past-President; James D. Caponetti, Secretary; Robert L. Wilson, Treasurer; Gus Tomlinson, Journal Editor; John H. Bailey, Director of the Junior Academy; Richard J. Raridon, Director of the Collegiate Division; Wintfred L. Smith, Director of the Reelfoot Lake Program; Jerry Rice, Science Specialist of the Tennessee State Department of Education; Julian T. Darlington and Clay M. Chandler, Members-at-Large.

The Secretary had mailed printed copies of the Minutes of the November, 1974, Executive Committee Meeting and the Annual Business Meeting to each member of the Executive Committee. They were quickly accepted by a passed motion.

The Treasurer submitted an audited report which appears elsewhere along with the Report of the Auditor. Both reports were accepted by a passed motion.

The Editor submitted the following report:

"A complete report on 1973-74 activities, including a list of manuscripts received, published, and rejected for the year, was given at the November meeting. These data will not be repeated in this report. Instead, this report represents an updating of the November report plus plans for operation during the 1975 year.

"The January 1975 issue, which included the report of the Reelfoot Biological Station, ten regular manuscripts, and TAS news events and announcements, has been published and mailed to all subscribers. The Junior Academy of Science Recognition Program for 1975 and the Atomic Energy Commission's Energy-Environment Workshops were highlighted in the news and events section of the January issue. In order to continue to economize, a separate printing for the Director of the Reelfoot Biological Station has not been done. Instead, the Editor will share any available back issues with the Director of the Reelfoot Biological Station.

"The April 1975 issue is already in preparation. It will include a biographical sketch of the new President of TAS, the proceedings for TAS during 1974, abstracts of manuscripts which were presented at the November meeting, plus as many regular scientific manuscripts as space will allow. Among the news

events covered in the April issue will be an announcement of the Outstanding Teacher Awards for Tennessee for 1975 and hopefully a report on the Tech Aqua Biological Station.

"November and January were again good months with respect to receipt of new manuscripts for publication in JTAS. Ten new manuscripts have been received since the November report was given. These new manuscripts will provide a modest backlog which will allow appropriate editorial review to precede publication.

"Immediately after the November 1974 Annual meeting, the Editor contacted AMS Press Incorporated in New York concerning the microfilming process for all JTAS back issues. The Editor sent a formal letter to the Microfilm Division and its head with a copy also going to the Editor-in-Chief of AMS Press Incorporated. Happily, the microfilming process was finally completed and one copy of microfilm for JTAS issues dating back to 1926 was received by the Editor January 10, 1975. This was done at no cost to the Academy as specified in the original contract. The Editor is in the process of checking the microfilm in order to insure that all back issues have been placed on copy. If the microfilm proves to be complete, the back issues of the Journal at Peabody, Vanderbilt, and other institutions can then be dealt with in order to alleviate space problems which have existed for years. The Editor will ask the advice of the Executive Committee as to final dispensation of back copies which are deemed to be useless.

"Members of the Executive Committee will recall that the Editor was asked in a recent general business meeting to consider the possibility of publishing a cumulative author index for all manuscripts which have been included in JTAS since its inception. The Executive Committee decided in 1974 that the project should not be actually begun until it could be more completely discussed in the February Executive Committee Meetings of 1975. The Editor's office has been working to estimate the length of such a document, its cost in terms of publication expenses, and the length of time which would be required for publication. A progress report with some of the desired estimates will be presented in the February 7 meeting.

"A number of Academy members have suggested that a forthcoming JTAS issue be devoted to the Ecological-Environmental Sciences. To date, sufficient manuscripts for such an issue have not been received by the Editor's office. If members of the

Executive Committee feel that such an issue is appropriate, it would be helpful if those views were made known to the Editor and to state scientists who might have research contributions to make in this field. If there is any opposition to such an issue the Editor's office needs to be aware of that also."

The Editor's report was accepted by a passed motion.

The Director of the Visiting Scientists Program was absent from the meeting but had arranged with the Secretary to present the following report:

"Preparation for the 1974-75 Visiting Scientists Program began in the Spring Quarter of 1974. Following is a summary of activities involved:

1. Letters were sent to all scientists participating in the current program expressing appreciation for their efforts and soliciting nominations of additional scientists in specified science areas.
2. An analysis was made of specific science field representation in each of the geographic areas of the state.
3. Invitations were sent to participating scientists and newly selected scientists to work in the 1974-75 program. Efforts were made to fill vacancies to strengthen the program by securing the personnel who were located within 100 miles of any secondary school requesting their services.
4. Rosters including the names of 96 scientists were mailed to more than 350 Tennessee Secondary Schools, to all Visiting Scientists, and to approximately 50 supervisors in the state.
5. All scientists were invited to become members of the Tennessee Academy of Science if not presently affiliated.
6. 60 visits to 40 schools were completed in 1973-74.
7. 8,911 students were contacted during the school visitations.
8. 214 teachers were contacted.
9. 209 classes were visited.
10. 11 science and science related areas were requested by the schools.
11. Scientists representing 20 colleges and the Oak Ridge National Laboratory participated in the program.

The Director wishes to express his appreciation to all participants for their willingness to contribute their time and professional services to the continuation of the program. It is suggested that the scientist keep mileage records to submit to the IRS for travel costs permitted beyond the \$0.10 per mile allowance used in the VSP budget.

Consideration needs to be given to adjustment of travel allowances due to the rapidly changing energy costs. The TAS membership also is encouraged to talk with colleagues and fellow scientists relative to their participation in the 1975-76 program.

Visiting Scientist Program 1973-74, Statistical Summary:

Contacts Made

Number of visits	60
Number of students contacted	8,911
Number of teachers contacted	214
Number of classes contacted	209
<i>Number of Scientists on Roster</i>	96

Fields Represented

Astronomy	Geology & Geography
Biology	Mathematics
Chemistry	Medicine & Pharmacy
Ecology	Physics
Engineering	Psychology
General Science	

Visiting Scientist Program, Statistical Summary

<i>Contacts Made</i>	1971-72	1972-73	1973-74
Number of visits	60	66	60
Number of students contacted	9343	10234	8911
Number of teachers contacted	268	249	214
Number of classes contacted	178	217	209
<i>Number of Scientists on Roster</i>	99	83	96

Fields Represented (same as listed above)

The Director's report was accepted by a passed motion.

The Director of the Junior Academy presented his report as follows:

- "1. The completion and mailing of the Tennessee Junior

Academy of Science Handbook and Transactions for the 1973-1974 academic years has been completed and mailed to TJAS participants and participating schools.

"2. Completion and mailing of TJAS Newsletters for 1974-1975 to public and private high school officials and science teachers in Tennessee.

"3. Fifteen to twenty-five papers are to be selected for presentation at the TJAS spring meeting.

"4. Approximately 185 requests for Cover Sheets have been received for participation in the 1974-1975 program. Other requests are anticipated prior to March.

"5. The attached financial statement reflects some of the activities of the past year and project activities for the 1974-1975 school year. Energy problems and other conditions could conceivably effect further changes as the school year progresses. These will be handled as events unfold.

"6. The completion of the 1974-1975 program will represent ten years that I have served as Director of the Junior Academy.

"7. To ETSU, the TAS Senior Academy, the State Department of Education, Vanderbilt University, and the high school science teachers we owe thanks for much untold help.

"8. Following my retirement at ETSU, in 1972, I have received encouragement to continue with the Junior Academy program by Dr. William Pafford, Chairman, General Science and Science Education Department. Dr. Pafford has filled in effectively when I have been unable to participate.

"9. Mrs. Jean Knox, General Science and Science Education departmental secretary has done much to see that everything moved on schedule. Her help has been invaluable."

The Director's report was accepted by a passed motion. The Director is also chairman of the Distinguished Teacher Awards Committee and presented the following nominees to receive awards for 1975.

1. First District—Mrs. Nancy Buck, Biology Teacher, Elizabethton High School, Elizabethton.

2. Second District—Mr. Kenneth Ward, Chemistry Teacher, Farragut High School, Concord.

3. Third District—Mrs. Darby Marable, Biology Teacher, Central High School, Harrison.

4. Fourth District—Mr. Joe Nunley, Jr., Biology Teacher, Oakland High School, Murfreesboro.

5. Fifth District—Mrs. Margie J. Covington, General Science Teacher, Cumberland Junior High School, Nashville.

6. Sixth District—Mrs. Miriam Young, Chemistry Teacher, Central High School, Cunningham.

7. Seventh District—Mrs. Selma B. Kolmes, Biology Teacher, Milan High School, Milan.

8. Eighth District—Mrs. Josephine Bennett, Biology-Chemistry Teacher, Whitehaven High School, Memphis.

A motion was passed to present awards to the nominees.

The Director of the Collegiate Division submitted the following report:

"The Collegiate Division met on November 23, 1974, in conjunction with the annual meeting of TAS. Nine papers were presented by students representing seven schools. The total expenses for the meeting were \$618.32 which provided travel and per diem for 16 students and the state director. The remaining allotment of \$694.59 should be sufficient to finance the regional CD meetings during the spring of 1975. Meetings have already been scheduled for April 12 at Bryan College, April 12 at UT-Martin, and April 26 at Belmont College."

The Director's report was accepted by a passed motion. The Director is also the Academy's representative to AAS, and submitted the following report:

"I attended the meeting of the Association of Academies of Science in New York City on January 28, 1975. Delegates representing 18 academies were present. During the morning session Dr. Donald E. Cunningham of the Denver Research Institute spoke on Technology Assessment. His main points were as follows: that technology assessment is a process and not a thing, that it has distinct time phases—from early warning to implementation, that its field is not confined only to technology but is ubiquitous, that assessments are aimed all too often at symptoms rather than causes, that major policy decisions are frequently made without sufficient consideration of secondary impacts, that *now* technology assessments are of utmost importance, and that the Academies of Science do have a role.

During the afternoon session delegates from Utah, Iowa, Indiana, Florida and Michigan joined James Butler, formerly with AAAS, in a panel discussion on the future of scientific communication. Their remarks, together with those of Dr. Cunningham, will be included in the 1975 Directory and Proceedings of AAS which each academy officer will receive.

"During the business meeting the following officers were elected to serve during 1975: president-elect, Lora M. Shields, New Mexico; secretary-treasurer, Richard J. Raridon, Tennessee; archivist, John H. Melvin, Ohio; AAS delegate to the AAAS Council, Charles M. Vaughn, Ohio. Frank Starr continues as director of the Junior Academy program and Lauren Gilman of Florida becomes president.

"On January 27 I attended some of the papers presented by the junior academy and heard Gary Chamberlain of Maryville give his paper on "The Effect of Three Levels of Three Estrogenic Compounds on the Reproductive Efficiency of Mice." It was well received. That evening I attended a banquet at the New York Academy of Sciences together with other AAS officers and directors of various state Junior Academy programs. The education committee of NYAS was interested in what others were doing on the high school level. In the absence of Dr. Bailey I reported on our program. There was considerable discussion as to whether cash prizes or certificates should be awarded for the best papers. NYAS is also considering recognition of outstanding teachers such as we have already been doing."

The Representative's report was accepted by a passed motion.

The Director of the Reelfoot Lake Program reported that he and his advisory committee were still working with the architects and planners of the State Department of Conservation on a cooperative Reelfoot Lake instructional program.

The Chairman of the Science Advisory Committee, Dr. Robert L. Amy, presented the following report:

"At our last meeting in November the Policy Subcommittee was asked to consider ways of reorganizing and revitalizing this Committee. We met on November 22nd and reached the following conclusions:

"1. We must make the governor and legislators aware of the existence of such a Committee.

"2. Its function will be to make policy statements on the scientific community's position in pertinent areas.

"3. There should be no "lobbying" activity.

"4. Policy Subcommittee members and Resource Committee members should represent all areas of state and all scientific disciplines in so far as that is possible.

"5. Resource Committee Membership should be updated and revised periodically.

"6. TAS members should be advised as to whom is on the Committee so they can communicate with them concerning matters that need to be studied, etc.

"7. A permanent Director should be selected, made a member of the Executive Committee, and funds provided for necessary expenses. (A U.S. Senate bill under the sponsorship of Senator Edward Kennedy is now under consideration to support such state advisory groups and this might eventually solve the financial problem but the Academy may have to supply funds to get the Committee off the ground.)

"8. I was asked to contact Dr. William Ellis of Austin Peay about taking on the Directorship. He has agreed to explore the matter, assess the feasibility of such a program and try to determine the sort of time commitment that might be involved. After he has done that and the Executive Committee has considered the matter further, he will be ready to make a final decision as to whether or not he can assume this responsibility.

"9. I was asked to invite Dr. Ray Tanner to become a member of the Policy Subcommittee. He has accepted."

The Chairman's report was accepted by a passed motion. Another motion was passed to contact Dr. Ellis and ask him (or another person if he declines) to meet with the Policy Subcommittee during 1975 and do a feasibility study to make guidelines of what that group ought to be, report at the November, 1975 annual meeting, and provide travel funds to them. Until the committee establishes guidelines, all policy statements will be made through the Executive Committee after the statement has been approved by some appropriate means.

Old Business

1. The Secretary and the President presented a list of pro-

posed amendments to the Constitution and By-Laws of the Academy which had been returned to them at the November, 1974, meeting for re-wording. The revised amendments are as follows:

ARTICLE III—SECTION 3. Present Reading:

The President-Elect shall, in the absence of the President, preside over all meetings and shall assume the powers and prerogatives of the President. The President-Elect shall become the President at the end of one year.

Proposed Reading 1:

No change in the above

Proposed Reading 2:

The President-Elect shall in the absence of the President, preside over all meetings and shall assume the powers and prerogatives of the President. The President-Elect shall succeed at the end of the term of office of the previous President. No person shall serve as President for more than two years.

In the event that the Nominating Committee proposes a President to succeed himself, there shall be a secret ballot with the names of the President and the President-Elect at the annual business meeting.

If the President does succeed himself, the Nominating Committee shall propose a Program Chairman. If he does not, they shall propose a President-Elect.

Proposed Reading 3:

The President-Elect shall in the absence of the President, preside over all meetings and shall assume the powers and prerogatives of the President. The President-Elect shall succeed as President at the end of the term of office of the previous President. No person shall serve as President for more than two years.

In the event that the Nominating Committee proposes a President to succeed himself there shall be a ballot with the names of the President and President-Elect sent out with the minutes of the annual meeting. These ballots are to be returned to the Secretary to reach him at least three weeks in advance of the annual meeting.

If the President does succeed himself, the Nominating Committee shall propose a Program Chairman. If he does not, they shall propose a President-Elect.

Action: Proposed reading 1 passed; i.e., the present reading stands.

ARTICLE VIII—SECTION 1. Present Reading

The fiscal year of the Academy shall end on December 31. All annual dues for the ensuing year shall be due on January 1. Any member in arrears for dues for two years shall be dropped from the roll of members, provided he has had at least four notices mailed to him.

Proposed Reading:

The fiscal year of the Academy shall end on June 30. All annual dues for the ensuing year shall be due on July 1. Any member who has not paid dues by December 1 shall be sent a second notice. If the dues are not paid by February 15 of the ensuing year, or by 30 days after the second notice, whichever is later, he or she shall be dropped from the roll of members.

ARTICLE X—SECTION 1.

(Adoption of this section as given in the Executive Committee minutes for November 21, 1974, page 14, is proposed).*

Action: passed.

ARTICLE X—SECTION 5. Present Reading:

Any person, institution, or business organization contributing \$100 or more to the Academy becomes a Patron of the Academy.

Proposed Reading:

Any person or institution contributing \$100 or more to the Academy becomes a Patron of the Academy for that year.

Action: passed.

ARTICLE X—SECTION 6. (proposed new section)

Any business organization contributing \$100 or more to the Academy becomes an Industrial Member of the Academy for that year.

Action: passed.

ARTICLE X—SECTION 6.

Change to Article X section 7 (number change only)

Action: passed.

ARTICLE X—SECTION 7. Present Reading:

The President-Elect shall serve as chairman of the program

committee. He shall select a Local Arrangements Chairman from among Academy members of the host institution or immediate vicinity.

Proposed Reading:

The President-Elect shall serve as chairman of the program committee, except as noted under Article III Section 3. The Program Committee Chairman shall select a Local Arrangements Chairman from among Academy members of the host institution or immediate vicinity.

Action: none needed because the proposed change of Article III Section 3 did not occur.

***Present Reading (Article X—Section 1)**

The annual dues of members and Fellows are \$5.00, except that all teachers below the college level shall pay dues at \$3.00. Honorary members are exempt from the payment of dues.

Proposed Reading:

The annual dues of members and Fellows are \$8.00 except: teachers below the college level whose dues are \$5.00, students whose dues are \$3.00, or emeritus members whose dues are \$4.00, if they wish to continue receiving the JOURNAL or \$1.00 if they do not want the JOURNAL. Honorary members are exempt from the payment of dues.

2. The Treasurer again reported that the Auditing Committee had raised the question of whether the major appropriations to the several divisions of the Academy should be added to the Invoice File. A motion was passed to have the President sign a copy of the budget and place it into the Invoice File.

New Business

1. A motion was passed to accept the invitation from the President of Lambuth College, Dr. James S. Wilder, Jr., to hold the 1978 annual meeting of the Academy on that campus. The Secretary was instructed to write a formal letter of acceptance to President Wilder.

2. Member-at-Large, Dr. Clay M. Chandler, read a letter to Dr. J. Gerald Parchment from Dr. Eric L. Morgan requesting his help in establishing a new section of Aquatic Ecology. The letter was accompanied by a memorandum to the Executive Committee of the Academy giving justification for the establishment of the proposed new section plus additional pages containing the required minimum of 15 signatures of Academy members. After discussing the proposal, the members of the Executive Committee agreed that the name of the proposed new section was too restricted because it would exclude terrestrial ecology. The Secretary was instructed to contact Dr. Morgan to inform him that if he and the co-signers of the petition would agree to naming the proposed new section simply the Ecology Section, the Executive Committee would approve his proposal. The new section would then include both aquatic and terrestrial ecology. In any case, the proposal would have to be ratified at November, 1975, annual business meeting, and could not go into effect until the annual meeting of 1976.

3. A budget for the fiscal year 1975-1976 was formulated according to available money already in the Academy treasury and projected accounts receivable. The Treasurer's report contains the exact figures allotted to each Academy activity and function. A passed motion set the budget. The Treasurer further stated that the Academy could better meet annual meeting expenses if the registration fee was increased. He recommended and moved a fee of \$4.00 for non-students, and \$1.00 for students. The motion passed. Since the three monetary scholarships to the Tech Aqua Biological Station are not part of the annual budget, this item had to be discussed separately. Since the Director of the Station had not yet submitted a request for the Summer of 1976, action on this item was postponed. The Secretary was instructed to contact the Director concerning these scholarships.

The meeting was adjourned at 11:30 p.m. C.S.T.

**EXECUTIVE COMMITTEE MEETING
NOVEMBER, 1975**

The Executive Committee Meeting of the Tennessee Academy of Science, Inc., was called to order by the President at 7:00 p.m. C.S.T. in the Granada Room of the Sheraton Hotel in Nashville, Tennessee, on November 20, 1975. Members present were Albert L. Myers, President; John M. Mallette, President-Elect; Robert L. Amy, Past-President; James D. Caponetti, Secretary; Robert L. Wilson, Treasurer; Gus Tomlinson, Journal

Editor; John H. Bailey, Director of the Junior Academy; Richard J. Raridon, Director of the Collegiate Division; Paul Wishart, Director of the Visiting Scientists Program; Wintfred L. Smith, Director of the Reelfoot Lake Program; Jerry Rice, Science Specialist of the Tennessee State Department of Education; Myron S. McCay, Julian T. Darlington, and Clay M. Chandler, Members-at-Large.

The Secretary had mailed printed copies of the Minutes of the January, 1975, Executive Committee Meeting. They were accepted without change by a passed motion.

The Treasurer submitted an audited report which appears elsewhere in the proceedings along with the Report of the Auditor. Both reports were accepted by a passed motion.

The Editor submitted the following report:

Four numbers of volume fifty have been published since the annual meeting last November. Each issue was published and mailed on schedule during this year. In addition to the regular annual inclusions in the Journal, i.e., proceedings, news items, awards, current events, abstracts, reports, index, etc., the 1975 volume contains thirty-two manuscripts and the Reelfoot Lake Report. The breakdown by subject area for 1975 inclusions in the Journal is as follows:

Physics	1	General Science	5
Reelfoot Lake Report	1	Proceedings	1
Abstracts (sets)	2	News Events (sets)	4
Botany	5	Mathematics	1
Chemistry	2	Science Education	1
Geology-Geography	5	Agriculture	1
Zoology	11	Index	1
High School Science	1	In Memorium	2

The January, 1976 issue of JTAS is in preparation. October 3, 1975, twelve manuscripts, fully marked and edited for publication, were placed in the possession of the printer for the January, 1976 issue. Page proofs have been promised by the end of November. In addition to the manuscripts already scheduled for the January issue, eight have been accepted for publication, six additional manuscripts are in author revision, and three manuscripts are being reviewed by sectional editors. Two manuscripts were rejected during 1975, after several attempts to get the manuscripts revised to meet objections of the Editor and Sectional Editors. The breakdown by subject area for the manuscripts to be included which are in some phase of preparation is as follows:

<i>January 1976 Issues</i>		<i>Seventeen Manuscripts in Preparation</i>	
Zoology	3	Zoology	7
Geology	1	Geology-Geography	1
Botany	2	Botany	1
Chemistry	2	Chemistry	2
Gen. Science	2	General Science	2
Physics	1	Physics	1
Mathematics	1	Mathematics	3
Elem. School Science	1		

The current backlog of seventeen manuscripts compares with eighteen in 1974, ten in 1973, ten in 1972, twenty-five in 1971, and thirty-four in 1970. With this modest backlog of manuscripts, new manuscripts are still being published relatively soon after they are received. For example, thirty-seven new manuscripts (as compared to forty-one in 1974 and thirty-five during 1973) were received during 1975. Twenty-five of these have already been published or are scheduled for publication in the January issue 1976. Among the twelve unpublished manuscripts which were received during the year, three were received only recently and are still in the review process. Thus, a well written manuscript of reasonable length has an excellent chance of being published within a few months after it has been submitted and accepted for publication in JTAS. This should encourage authors to avail themselves of JTAS for their publications. Hopefully, the decrease of four manuscripts submitted for publication in JTAS in 1975 as compared to 1974 will be reversed during 1976. The Editor continues to welcome the assistance of the Executive Committee and all members of the Academy in soliciting new, short, well written manuscripts for the Journal.

Editorial and clerical assistance continues to be done by students who work part-time at the expense of the Academy.

Total operating costs of the Editor's Office to the Academy averaged \$242.50 per month in 1975 as compared to \$222 per month in 1974. Although the high student turn over rate makes this procedure difficult, it is still the least expensive operating procedure with respect to cost to the Academy. By continuing to utilize student help, yet recognizing administrative changes at Peabody College, it should be possible to hold monthly costs for 1976 to approximately \$260 per month.

At the November, 1972 meeting, the Executive Committee authorized the Editor to negotiate with AMS Press, Inc. in New York for the purpose of microfilming back copies of the Journal to alleviate the space problem that exists in housing back copies at Peabody, Vanderbilt University, and Austin Peay State University. Following this authorization, the Editor proceeded to put together a complete set of back issues of the Journal by "pooling" the resources of APSU, Peabody and Vanderbilt. Finally, a complete set back to 1926 was compiled. A contract with AMS Press, Inc. to place all back issues on microfilm and microfische was negotiated and signed by the Editor February 1, 1973. The contract did not require additional funds from the Academy. The complete back copy set was then forwarded immediately to AMS Press, Inc. with the contractual agreement that microcopy would be completed and the back issues returned to the Editor within one year. Although much effort has been expended since that time in cajoling AMS Press, Inc. to follow up on its contract, the Editor is delighted to report that all back copies from 1926 through 1972 are on microfilm and one complete set is in the Editor's office. In addition, the record set which was utilized by AMS Press, Inc. has been returned and is also in the office of the Editor. The Editor's office is now in the process of making inventory pertaining to back copies at Peabody, Vanderbilt, Austin Peay State University, and Southwestern in Memphis. Most of these institutions have indicated that they simply cannot retain the back copies any longer.

JTAS SUMMARY REPORT FOR 1976

1. One issue of JTAS, the July issue, was devoted primarily manuscripts on ecological and/or environmental studies.
2. A total of thirty-seven manuscripts were received during 1975, twenty-five of which have already been published or scheduled to be published in the January issue. Several others were only recently received. Thus, short, well written manuscripts are being published within a few months after they are submitted for publication in JTAS.
3. All back issues of JTAS from 1926 are available from AMS Press, Inc., 56 East Thirteenth Street, New York, New York 10003 on microfilm.
4. Zoology manuscripts continue to be received at approximately the same rate as usual during 1975. Manuscripts on botanical research decreased somewhat during 1975 while those in Geology, Science Education and Mathematics increased slightly.

NOTE: Members of the Academy and their colleagues are urged to support the Academy and its official publication by submitting their research in short, well written manuscripts which can enhance the quality of the Journal of the Tennessee Academy of Science.

The Editor's report was accepted by a passed motion.

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

Initial preparation for the 1975 Roster began in May, 1975. Letters were written to each scientist listed in the current Roster to inquire if they wished to continue to serve in the program. They also were requested to make appropriate additions or changes in the topics for their presentations in the event they wished to continue as an official participant. All participating scientists were sent nomination forms in an effort to secure additional specialists from different academic fields from the various parts of the state. Approximately twenty new scientists were added to the official team as a result of the inquiry. After collection of all the required data for the new Roster had been received, forms were sent out to all of the new prospects to obtain: (1) information as to the topics to be presented in the secondary schools and (2) relevant professional and personal

data required to conduct the program. Due to vacation schedules, travel, and other factors considerable difficulty was encountered in contacting all of the scientists in the first mail-out. Follow up letters were mailed during the summer and also during the fall in order to complete the Roster.

The 1975 Roster, including more than 100 individuals, was typed in two sections in order to make it possible for late responses to be included for the current academic year. More than 500 copies were prepared for distribution to teachers, supervisors, and scientists throughout the state. Geographic areas extending from Upper East Tennessee to the Memphis area are involved in the program with both rural and metropolitan secondary schools utilizing the services of our scientists. We have found that significant number of the schools were desirous of repeated visits from scientists representing one special academic area as for example: biology or geology. Every effort is made to arrange for selected schools to have as many as four follow-up visits if this is compatible with the curricular program of the school.

The energy crisis still plays an important role in the operation of the VSP educational effort. It is with great gratification that the scientists of the state show their willingness to accept the very modest honoraria and mileage stipends in order to serve Tennessee's high school students and teachers.

Evaluative comments from both the schools and the scientists seem to indicate that the program has considerable popularity and is deserving of continuation in future years. Evaluation reports are used after each visit. Feedback from scientists, science teachers, principals, and students are most beneficial in improving the operation of all portions of the program.

Following are the special fields in science and science related areas that were included in the program for the current year:

- | | |
|------------------------|--------------------------|
| 1. Astronomy | 6. Geology and Geography |
| 2. Biology and Ecology | 7. Mathematics |
| 3. Chemistry | 8. Medicine and Pharmacy |
| 4. Engineering | 9. Physics |
| 5. General Science | 10. Psychology |

SUMMARY OF ACTIVITIES

Approximately 90 scientists representing 21 colleges, universities, and research agencies (e.g. ERDA) throughout Tennessee were listed in the official 1974-75 Roster.

Following is a statistical summary of activities for 1974-75:

- Visits requested: 42
- School classes visited: 81
- Students contacted: 3,502
- Teachers and staff contacted: 148

The Director's report was accepted by a passed motion.

The Director of the Junior Academy submitted the following summary report:

1. The 1975 edition of the Tennessee Junior Academy of Science *Handbook and Transactions* tells of but a small part of our activities for the school year 1974-1975.
2. Our overall objective was to aid in promoting and encouraging an improved science instructional program in Tennessee high schools, and to encourage more original scientific research by young students under the guidance and instruction of competent and inspired secondary teachers.
3. Letters of invitation and public announcements were made to acquaint school personnel—administrative and instructional—to encourage student participation in the program.
4. The letters of invitation outlined the operation and procedures to enlist participation by teachers and students in the Junior Academy of Science program. From over 200 requests for cover sheets that indicated interest in participation, a final list of fifteen students were invited to participate in the final program of participation on the Vanderbilt Campus in April of 1975.
5. On behalf of the Tennessee Academy of Science, I extended thanks to the Stephenson Physical Science Center at Vanderbilt University for their having hosted the Junior Academy meeting in such an excellent manner.

The Director's report was accepted by a passed motion. The Director of the Collegiate Division submitted this report: The Collegiate Division held three regional meetings during