1977


Academy Editors
### Secretary’s Report

#### MINUTES OF THE SIXTY-FIRST ANNUAL MEETING—1-2 April 1977

**FIRST BUSINESS MEETING**

Dr. Jewel Moore, President, opened the meeting. She called on Dr. Gary Tucker, Local Arrangements Committee Chairman, for a report. Tucker said that his committee had worked diligently and hoped that Academy members had a good meeting. He then introduced Dr. Kenneth Kersch, President of Arkansas Tech University, who delivered the welcome address.

President Moore recognized Dr. John Gilmour for the Secretary’s report. Gilmour reported that the Proceedings of the 60th Annual Meeting containing minutes of the First and Second Business Meetings were available. He said a motion for approval of the minutes would be made at the Second Business Meeting.

President Moore recognized Dr. William L. Evans for the Treasurer’s report. Evans said the financial statement and a four-year summary of income and expenditures were available. He then discussed some of the salient features of the above. The financial statement and four-year summaries are shown below.

#### Financial Statement

March 31, 1977

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Balance in Checking Account, Apr. 1, 1976</td>
<td>2,319.00</td>
</tr>
<tr>
<td>Less Outstanding Check</td>
<td>175.00</td>
</tr>
<tr>
<td>Unobligated Funds in Checking Acct.</td>
<td>2,144.09</td>
</tr>
<tr>
<td>Reserve Funds, Savings Certificate</td>
<td>1,075.85</td>
</tr>
<tr>
<td>Reserve Funds, Passbook Acct.</td>
<td>1,741.86</td>
</tr>
<tr>
<td>Total Funds, Apr. 1, 1976</td>
<td>4,961.80</td>
</tr>
</tbody>
</table>

**Income (April 1, 1976 through March 31, 1977)**

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Memberships</td>
<td></td>
</tr>
<tr>
<td>a. Sustaining</td>
<td>240.00</td>
</tr>
<tr>
<td>b. Regular</td>
<td>1,416.00</td>
</tr>
<tr>
<td>c. Associate</td>
<td>76.00</td>
</tr>
<tr>
<td>2. Institutional Dues</td>
<td>800.00</td>
</tr>
<tr>
<td>3. Subscriptions to the PROCEEDINGS</td>
<td>1,744.09</td>
</tr>
<tr>
<td>4. Page Charges for the PROCEEDINGS</td>
<td>663.50</td>
</tr>
<tr>
<td>5. Registration Fees, UALR Meeting</td>
<td>179.00</td>
</tr>
<tr>
<td>6. Banquet Fees, UALR Meeting</td>
<td>666.00</td>
</tr>
<tr>
<td>7. Commercial Registration Fees, UALR Meeting</td>
<td>75.00</td>
</tr>
<tr>
<td>8. AAAS Reimbursement, Research Grant</td>
<td>100.00</td>
</tr>
<tr>
<td>a. Certificate (6.5%)</td>
<td>71.81</td>
</tr>
<tr>
<td>b. Passbook (5.25%)</td>
<td>129.45</td>
</tr>
<tr>
<td>Total Income</td>
<td>4,966.76</td>
</tr>
</tbody>
</table>

**Disbursements (April 1, 1976 through March 31, 1977)**

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Meeting Expenses</td>
<td>814.38</td>
</tr>
<tr>
<td>a. UALR, Postage &amp; Print. (376)</td>
<td>25.12</td>
</tr>
<tr>
<td>b. Holiday Inn, Banquet (380)</td>
<td>633.00</td>
</tr>
<tr>
<td>c. Dr. Morgan, Refreshm. (381)</td>
<td>9.60</td>
</tr>
<tr>
<td>d. UALR, Signs (383)</td>
<td>19.30</td>
</tr>
<tr>
<td>e. UALR, Registration &amp; Tags (388)</td>
<td>51.68</td>
</tr>
<tr>
<td>f. UALR, Printing Programs (390)</td>
<td>65.60</td>
</tr>
<tr>
<td>g. UALR, Refreshments (194)</td>
<td>25.80</td>
</tr>
</tbody>
</table>

**Total Disbursements**

$4,248.57

**Summary**

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Balance, Checking &amp; Reserve (Unobligated)</td>
<td>4,961.00</td>
</tr>
<tr>
<td>Plus Income</td>
<td>4,966.76</td>
</tr>
<tr>
<td>Less Disbursements</td>
<td>4,248.57</td>
</tr>
<tr>
<td>Funds on Hand, March 31, 1977</td>
<td>5,680.09</td>
</tr>
</tbody>
</table>

**Balance Checking Acct., McClory Bank 3/31/77**

| Acct 71-905                                 | 1,661.02     |
| FGSA Certificate, Res. 71-905 (6.5%) 3/31/77 | 1,147.66     |
| FGSA Passbook, Acct 7679 (5.25%) 3/31/77     | 2,871.41     |
| Total Funds on Hand, 3/31/77                 | 5,683.05     |

Note: Invoice No. 28752 from Phillips Litho Co., dated 3/25/77, for printing Vol 30 of the PROCEEDINGS, is an outstanding obligation as of 3/31/77. Rev. 3/24/77.

Respectfully submitted,

April 1, 1977

William L. Evans
Treasurer

Arkansas Academy of Science Proceedings, Vol. XXXI, 1977

Published by Arkansas Academy of Science, 1977
President Moore then recognized Dr. Dwight Moore for the Historian’s report. He briefly reviewed the history of the Academy which is published in the 30th Proceedings of the Arkansas Academy of Science. He announced his resignation as the Historian. President Moore commended Moore for his efforts as Historian.

President Moore recognized Mr. Tom Palko, Director of the Junior Science and Humanities Symposium, for a report which is shown below:

The Eleventh Arkansas Junior Science and Humanities Symposium was held on March 3, 4, 5, 1977, on the Arkansas Tech University campus at Russellville, Arkansas 72801.

One hundred and fourteen students and forty-six teachers representing sixty-one high schools from all sectors of the state were in attendance. Delegates were housed at the Ramada Inn in Russellville, Arkansas. Meetings at the Symposium utilized facilities at the Tech campus.

The program was quite varied in subject areas and was well received by the delegates. Speakers with their titles included: Lt. Colonel James A. Vick, Medical Service, United States Army, Pentagon, Washington, D.C.—‘Natural Toxins: Snakes and Bees’; Dr. Gary E. Tucker, Associate Prof. of Biology at Arkansas Tech University—‘Opportunities for Research in Endangered Plant Species’; and Dr. Paul White, Director of Division of Communicable Diseases, Arkansas Department of Health, Little Rock, Arkansas—‘Swine Influenza’.

Tours included the Morton Frozen Food Company and the Dardanelle Hydroelectric Plant and lock and dam.

There were five career sessions on Saturday morning that were attended by all participants at the Symposium. These included sections:

1. Data Processing
2. Tele-Communications
3. Medical Technology
4. Forestry Research
5. Food Science

The time of the Symposium was changed from its November meeting date to March to allow more time for research during the current school year when the Symposium was being conducted. The quantity and quality of papers submitted was most gratifying and the positive response by teachers would indicate that this time change was for the best. A total of forty-two (42) research papers were submitted from sixteen different high schools. The Twenty were selected for reading their papers at the Symposium. The winners were Eugene Boyles, Augusta High School, David Lilly, Springdale High School, Clarissa Wisner, Monticello High School, Donnie Keller, Weiner High School, and Mohini Chattrathi, Fayetteville High School. These five students and Mr. Tom Palko will attend the fifteenth National JSHS, May 4-7, 1977, at West Point, New York, as guests of the U.S. Army.

Mr. Eugene Boyles will read his paper which is entitled “Behavioral Aspects of Air sponus from onset of life to maturity” at the National Symposium, competing with forty other students for five winning places. These five winners will attend the London International Youth Science Fortnight, July 27 - August 10, 1977.

In addition to the five winners at the Symposium, two alternates were named. They were Glen Berry, Fayetteville High School, and Rhonda Honeycutt, Harrison High School. Each won a $100 Arkansas Tech University scholarship awarded by the Arkansas Tech Student Senate.
To assist the students in an advisory capacity, an Arkansas Junior Science and Humanities Symposium-Scientific Resource Board has been started. It is made up of persons in industry and college faculties in the state of Arkansas who have expressed a willingness to have students direct questions to them concerning problems with their research projects. This service is being coordinated for proper channeling by the Arkansas JSHS director.

Persons interested in obtaining additional information about the Arkansas JSHS should direct their questions to:

Mr. Tom Palko, Director Arkansas JSHS
Arkansas Tech University
Russellville, Arkansas 72801

President Moore asked the Academy to give Palko a vote of thanks for his efforts.

President Moore then asked Dr. Ed Wilson, Sponsor of the Collegiate Academy, for a report. He said new officers had been elected.

President Moore then appointed the following committees: Auditing (Ed Wilson [Chairman], Bob Kirkwood), Resolutions (Clarence Sinclair [Chairman], P.M. Johnston), Meeting Place (Don Hickman [Chairman], Art Johnson). She then asked Gilmour to give a report on the discussion of the research fund in the Executive Committee. Gilmour said that an effort would be made to attract additional monies from industry located in Arkansas if the Academy wished to do so. Moore then reminded the Academy that research monies are also available for high school students. Requests should be sent to the President of the Junior Academy. Moore then reported that the Executive Committee recommended that the Junior Academy and the State Science Fair meet at times different from that of the Senior and Collegiate Academies. Gilmour read the motion concerning this separation which Moore said would be made at the Second Business Meeting. Discussion followed.

President Moore adjourned the First Business Meeting.

SECOND BUSINESS MEETING

President Moore opened the meeting.

President Moore recognized Dr. John Gilmour who made the following motion.

I move that the minutes of the 60th Annual Meeting published in the 30th Proceedings of the Arkansas Academy of Science be approved as written.

The motion was seconded and passed.

President Moore then recognized Dr. William Evans who made the following motion.

I move the acceptance and approval of the Treasurer’s financial statement for the period April 1, 1976, to March 31, 1977, as submitted to the membership and presented at the First Business meeting.

The motion was seconded.

Dr. Ed Wilson then gave the report of the Auditing Committee shown below:

The Auditing Committee has examined the financial statement of the Arkansas Academy of Science for the period April 1, 1976, through March 31, 1977, and find it complete and correct. We would like to commend Dr. Evans for an outstanding job.

Evans’s motion was passed.

President Moore recognized Dr. Leo Paulissen who reiterated his report on the Arkansas Biota Survey from the First Business Meeting.

President Moore then recognized Dr. Henry Robison, Coordinator of the newsletter. He reported that he hopes to have spring and fall newsletters and emphasized deadlines must be met to have an effective newsletter.

President Moore recognized Miss Marie King, Director of the Junior Academy of Science. She reported that 11 schools registered and that a number of schools had visited. Twenty-five papers were presented. She also noted that the Junior Academy had over $500 in its treasury. She then thanked Southern Arkansas University for the use of its facilities. Mrs. Marie Arther will be the new Director of the Junior Academy.

President Moore then recognized Dr. Carl Rutledge, President of the Arkansas Science Fair Association. He reported the Science Fair was a success and thanked the people who helped as judges. Rutledge noted that the Science Fair finances are in poor shape. He then made the following motion.

I move that the Arkansas Academy of Science contribute $100 to the Arkansas Science Fair Association as has been customary in the past.

The motion was seconded and passed.

President Moore recognized Dr. Ed Wilson, Sponsor of the Collegiate Academy. He announced that William Casson would be President of the Collegiate Academy for the coming year. Wilson said Dr. Joe Guenther and Dr. Glen Good would be Sponsor and Co-Sponsor of the Collegiate Academy. Wilson then asked Phil Goad, Past-President of the Collegiate Academy, to give awards. The Physical Science winners were: 1) Johnny B. Sharp, UAM; 2) Christopher Godfrey, UCA; and 3) Pat S. Bolding, OBU. The Biological Science winners were: 1) Gerald S. Greer, UAF and 2) Dan J. Hawkins, HC. President Moore then recognized Guenther who made the following motion.

I move that the Senior Academy allow up to $175.00 to cover expenses and operations of the Collegiate Academy for the coming year.

The motion was seconded and passed.

President Moore then asked for unfinished business.

President Moore recognized Dr. John Gilmour who made the following motion.

I move that the Academy accept donations to the Research Grant Fund and that the Academy actively pursue support from industry for this fund.

The motion was seconded and discussion followed. The motion was passed.

Gilmour then made a second motion pertaining to the Research Grant Fund shown below.

I move that the Research Grant Fund be administered by the Research Committee with the understanding that:

1. The maximum single grant awarded in any one year will not exceed 50 percent of the balance in the Research Grant Fund existing at the time of the previous annual meeting.

2. Upon the approval by the President of a recommendation by the Research Committee, the President will authorize the Treasurer to appropriately transfer funds to the research grant recipient or the institution as stipulated in the research grant proposal.

3. That the grants are restricted to members of the Arkansas Academy of Science.

4. That interest from reserve funds of the Academy be added to the Research Grant Fund each year.
The motion was seconded and passed.

President Moore then asked Gilmour to read the following motion.

That the Junior Academy of Science and the State Science Fair meet at a time separate from the Senior and Collegiate Academies.

Dr. Joe Nix moved that the motion be placed before the Academy. The motion was seconded and much discussion followed. The motion was passed.

President Moore recognized Dr. Leo Paulissen for the Arkansas Biota Survey report. He noted the Academy had been supporting the survey. Paulissen then made the following motion.

I move to continue distributing Arkansas Biota Survey checklists to members at the annual meetings.

The motion was seconded and passed.

President Moore then recognized Dr. Robert Watson to give a report from the Nominating Committee. He placed the following slate of officers in nomination: Dr. Gary Heidt, Editor; Dr. William Evans, Treasurer; Professor Robert Kirkwood, Historian; and Dr. P.M. Johnston, President. President Moore asked for nominations from the floor. There were none. Dr. Ken Beadles moved the nominations be closed and the slate of officers be elected by acclamation. The motion was seconded and passed. The new officers were given a round of applause.

President Moore then recognized Dr. Art Johnson of the Meeting Place Committee. He stated that the University of Arkansas at Fayetteville had extended an invitation which had been accepted. President Moore then recognized Dr. Charles Harbison who made the following motion.

That we ask the appropriate committee to endeavor to have our meetings of the Arkansas Academy of Science at a time other than that when the Arkansas-Oklahoma Sectional meeting of the Mathematical Association of America is held.

The motion was seconded and discussion followed. The motion passed.

President Moore then recognized Dr. Clarence Sinclair of the Resolutions Committee who read the following resolution.

Be it resolved, that the Arkansas Academy of Science express its appreciation to the Administration and Faculty of our host institution, Arkansas Polytechnic University, for the use of their excellent facilities and for their warm hospitality.

The Academy also expresses its appreciation to the following people for their part in making the 1977 meeting a success: the arrangements committee at Arkansas Tech University; Gary Toeker, Chairman, Charles Bronco, Richard Cohoon, Raymond Coaser, Henri Crowley, John Hoff, E.E. Hudson, Gerald Hutchinson, Dave Matayo, Harlan McMillan, Tom Palko, Don Rickard, Buford Tatum, Bill Trigg, Glyn Turnipseed, Victor Vere, Martha Wilbers, and James Willeutt; the Chairman of the Sections of the Academy, Alex Nisbet, J.E. Mackey, Gary Heidt, John Beadles, Dick Cohoon and Norman Williams, Timothy Klinger, Neal Buffaloe and Gerald Hutchinson; Director of the Junior Academy of Science, Marie King; Ed Wilson, Sponsor of the Collegiate Academy of Science; Tom Palko, Director of the Junior Science and Humanities Symposium; Carl Rutledge, Director of the State Science Fair and President of the Arkansas Science Fair Association.

The Academy also wishes to express its thanks to Jewel Moore, President of the Academy; John Gilmour, Secretary; William L. Evans, Treasurer; and James Wickliff, Editor, for the excellent manner in which they have discharged their duties during the years. A special note of thanks is extended to Dwight M. Moore, Historian, for his many years of service to the Academy.

President Moore recognized Dr. James Wickliff for the Editor's report. Wickliff stressed the need for Associate Editors and then made the following motion.

I move that the Academy allocate $400.00 for editorial assistance and expenses for preparing Volume XXXI (1977) of the PROCEEDINGS for publication during the next Academy fiscal year.

The motion was seconded and passed. Wickliff then made the following comments.

I wish to make some final comments, since my term as Editor expires with this meeting. Although the PROCEEDINGS publication got off to a stuttering start in 1972-73, I think that improvement in quality and size of the volumes has occurred in the five years of my term. The consistently high quality of the format must be attributed to the efforts of the editorial board, the publishers, and to the superior work of the printing company, Phillips Litho Company, Inc. Any improvements in quality of the papers themselves must be attributed to authors who cooperated and/or capitulated to the demands by me or the Associate Editors. The standards for publication in the PROCEEDINGS evolved early in my term and I thank the previous Editorial Board for advice received during this policy-making period. But at the core of any scientific journal, and especially one as broad-scope as our PROCEEDINGS, are the many nameless manuscript reviewers. I especially thank those reviewers, members and non-members of the Academy, who have shown the effectiveness of the peer review system by helping make the PROCEEDINGS a respected, "refereed" scientific publication.

President Moore then asked for new business.

President Moore recognized Dr. Ken Beadles who presented the following resolution.

WHEREAS it has come to the attention of certain members of the Arkansas Academy of Science that publication of scientific investigations in the PROCEEDINGS of the Academy has been considered by some administrative officers of institutions of higher learning in the state as being of secondary importance;

NOW BE IT RESOLVED by the members of the Academy in session on April 2, 1977, at Arkansas Tech University, Russellville, Arkansas, that the Academy takes exception to such consideration and calls upon such officials to take due regard of scientific publications appearing in the PROCEEDINGS of the Academy.

The resolution was seconded and discussion followed. The resolution passed.

President Moore then recognized Dr. William Evans who made the following motion.

I move that the subscription price for the PROCEEDINGS be increased to $8.00 per year when fewer than 10 copies are purchased and, further, that the Secretary of the Academy be empowered to negotiate a contract price when more than 10 copies are purchased.

The motion was seconded and passed.
President Moore then gave her farewell address. She noted some of the highlights of her tenure as President. President Moore then turned the gavel over to Dr. Joe Nix, President-Elect.

President Nix appointed the following committees: Nominating (Henry Robison [Chairman], Art Johnson, Les Howick) and Research (Howard Hodges [Chairman], James Wickliff, Bill Shepard). He asked the Research Committee to draw up regulations and procedures for applying for a research grant which he noted could be reported in the Newsletter. President Nix then stated his support of raising money for the Research Grant Fund and urged participation in the Collegiate Academy. He then led a discussion about the possibility of meeting in the middle of the week. Most comments were negative.

President Nix adjourned the Second Business Meeting.

Respectively submitted,

John T. Gilmour, Secretary