

PROCEEDINGS OF THE TENNESSEE ACADEMY OF SCIENCE 2004

SARAH H. SWAIN, SECRETARY TAS

Middle Tennessee State University, Murfreesboro, Tennessee

TENNESSEE ACADEMY OF SCIENCE
EXECUTIVE COMMITTEE MEETING
23 April 2004

President and Meeting Coordinator Michael Redding called the meeting of the Executive Committee of the Tennessee Academy of Science (TAS) to order at 7:05 PM CST in the Massey Business Building on the campus of Belmont University, Nashville, Tennessee, 23 April 2004. Attendees were Past President Karen Kendall-Fite, President-elect Steve Wright, Treasurer Steve Murphree, Secretary Sarah Swain, Managing Editor Gore Ervin, Junior Academy Director Jack Rhoton, Electronic Communications Director James Howard, Collegiate Division Director Fred Matthews, Publicity and Research Committee Chairperson Mandy Carter-Lowe, Education Committee Chairperson Cindi Smith-Walters, Financial Oversight Committee Chairperson Andy Slinger, State Science Consultant Linda Jordan, Members-at-large Michael Gibson and Al Hazari, and retiring Treasurer John Harris.

Minutes of the November 2003 Executive Committee meeting had been sent to committee members by Secretary Swain. A motion to approve the minutes passed. Secretary Swain distributed rosters of the 2004 Executive Committee to attendees. President Redding called for an approval of the meeting agenda. Motion to approve passed.

REPORTS FROM OFFICERS AND DIRECTORS

President-elect and Program Chairperson—Steve Wright presented a proposed agenda for the November 2004 annual meeting to be held at Columbia State Community College, Columbia, Tennessee. For the Plenary Session President-elect Wright has invited Dr. Jackie M. Katz of the Influenza Branch of the Center for Disease Control (CDC) to address the membership. For the board's consideration Wright proposed two symposia: 1) Regents On-Line Degree Program (RODP), "Kudos and Criticisms", and 2) Emerging Public Health Issues in Tennessee. Wright reported interest in a discussion of RODP had been suggested by the Tennessee Science Chairs Association as well as other interested individuals. For the symposium on health issues personnel from the Tennessee Department of Health would be invited to participate in a panel discussion of current issues. Discussion related to scheduling focused on how best to allow participation in both symposia. The members of the Executive Committee agreed to host two symposia as proposed by Wright.

Past President—Karen Kendall-Fite reported positive responses from Tennessee Science Teachers Association officers and members, and also from TAS officers and members, regard-

ing the joint meeting held in Franklin, Tennessee last year. The two organizations plan to work together to explore ways to benefit science education in Tennessee.

Treasurer—Steve Murphree and retiring Treasurer John Harris presented the following report:

CASH BALANCE—July 1, 2003	\$16,805.79
RECEIPTS	
Membership Fees	4,485.00
Institutional Dues	7,000.00
Library Subscriptions	2,040.00
Interest Earned, US Bank	6.94
Dividends Earned,	
UBS Money Market Fund	53.31
Close-out of UBS Account	15,000.00
Contributions	200.00
Annual Meeting Registration	
and Meal Fees	2,690.00
TSTA Dues Collected	105.00
Page Charges	1,530.00
Closeout of Murfreesboro	
Bulk Mail Acct.	12.84
Journal Revenue	70.00
Write-off of Uncashed Checks	595.00
TJAS Trust Fund	2,217.75
TOTAL RECEIPTS	36,005.84
TOTAL CASH AVAILABLE	52,811.63
DISBURSEMENTS	
Journal	10,886.31
Tennessee Junior Academy of Science	7,208.80
Treasurer's Expenses	868.27
Travel	603.72
Annual Meeting Expenses	2,094.85
Annual Meeting Registration	
and Meal Fees	2,760.00
TSTA Dues Collected	105.00
Plaques and Awards	244.60
Dues and Fees	20.00
AAAS Meeting Expenses	1,432.10
Website Maintenance	119.40
Science Fairs and Olympiads	2,890.00
Auditor's Fee	975.00
UBS Service Charge	75.00
Collegiate Division	900.00
TOTAL DISBURSEMENTS	31,183.05

CASH BALANCE—April 15, 2004	21,628.58
Receipts	36,005.84
Disbursements	31,183.05
Cash Increase	4,822.79
BREAKDOWN OF HOLDINGS	
US Postal Service, Cookeville, TN	226.98
US Postal Service, Lawrence, KS	191.14
TTU Account	84.31
Checking Account, US Bank	2,834.06
Savings Account, US Bank	18,292.09
TAS HOLDINGS—April 15, 2004	21,628.58
TJAS TRUST FUND (Vanguard Star Fund)	
(9,240.619 shares as of 3/31/04)	
Account Value as of 12/30/04	158,938.65
Disbursements (Dividend Distributions)	
12/19/03	2,217.75
Account Value as of 12/31/03	158,938.65
Account Value as of 3/31/04	164,575.42
TOTAL VALUE OF HOLDINGS—	
April 15, 2004	\$186,204.00

A motion to accept the Treasurer's report, subject to revision after final accounting with TSTA, passed. (NOTE: the report printed above is the revised report.)

Managing Editor—M. Gore Ervin presented the following report:

"There were a total of thirteen manuscripts submitted during calendar year 2003. One was published (in 78:3), four will appear in 78:4, two will appear in 79:1 (January 2004), two are in revision (will appear in 79:1), and two are still under review. Two manuscripts were rejected. There have been two manuscripts submitted thus far in 2004. One has been sent out for review and the second was returned to the author without review."

Managing Editor Ervin added that photos from the annual meeting would be published in the *Journal* along with meeting proceedings.

Electronic Communications—Director James Howard presented the following report:

"The web site is still functioning but is not up to date. A couple of things have happened to impede my ability to work on it: 1) The graduate student who programmed the search function quit school without teaching me how to edit the database. Instead of having a separate file to search, the data are embedded in the program, and 2) I am on two grants to obtain new NMR instruments and molecular drawing and modeling software. It has been my job to plan and supervise the room renovation, develop the bid specifications, and coordinate the installations. We now have 300 and 500 MHz spectrometers and ChemOffice Ultra has been installed on twenty computers in our computer lab. Everything else has been on a "get-by" basis.

"It will be advantageous to get some help for me. I would like to hire someone to either reprogram the search engine or develop a simple method to update the database. The problem is I have no idea how many hours will be required and what is the going rate (for an employee)."

Director Howard added that he plans to work on the TAS database this summer. After discussion related to the need for

assistance, a motion to allocate \$100 to hire student help to edit and update the membership database was approved. President Redding requested Director Howard to inform the board of the cost to hire professional help to update the site to accommodate on-line registration, title submissions, etc.

Junior Academy of Science—Director Jack Rhoton presented the following report:

"The 2004 spring meeting of the Tennessee Junior Academy of Science (TJAS) met Friday, April 23, 2004, at Peal Cohn High School in Nashville. A total of twenty-five students were invited to present their research papers. This year 116 students were involved in TJAS research throughout the state.

"During the April meeting a framed certificate and a small honorarium (\$100) was presented to an outstanding science teacher from each of the three divisions of the state. The recipients this year are Angela V. Kinsler (Biology, Chemistry, Environmental Science), Hancock County High School, Sneedville; Daylon Taylor (Biology, Chemistry, Physics), Clarkrange High School, Clarkrange; Marion Pitts (Biology, Chemistry, Technology), Westview High School, Martin. These TAS Outstanding Secondary Science Teacher Awards recognize teachers for their outstanding contribution to science education and for stimulating and inspiring students to an active interest in science.

"Phillip C. Redding represented TJAS at the 2004 American Junior Academy of Science annual meeting in Seattle, Washington. The title of Phillip's paper was "Disproportionate Growth Rates of Root and Shoot Tissue in Maize, *Zea mays*."

Discussion followed with Executive Committee members complimenting the increasing "professionalism" of the papers presented at the Junior Academy meetings.

Visiting Scientist Program—Director Michael Daley was not in attendance to present a report. For the benefit of new committee members, Jack Rhoton provided a brief overview of the history of the Visiting Scientist Program (VSP). He noted that money had not been available in recent years for promotion and administration of the program. Currently a VSP database is available on the TAS web site. Its availability needs to be communicated to teachers. Discussion related to the need for a new VSP promotional flier followed. President Redding will ask VSP Director Daley to coordinate preparation and distribution of a flier with Publicity Chairperson Mandy Carter-Lowe.

Collegiate Division—Director Fred Matthews discussed activities of the TAS Collegiate Division. A link to Collegiate Division abstracts has been set up on the TAS web site. Director Matthews and Managing Editor Ervin will coordinate collection of abstracts for publication in the *Journal*. Director Matthews hopes to develop a plan that will alleviate past problems of collecting contact information on "best paper/poster" winners so that awards can reach winners in a timely manner. It was suggested that the award should be presented as a letter of invitation to accept a free one-year TAS membership. Another concern related to judging consistency from one division to another. The committee agreed that the number of awards given should be left to the discretion of division sponsors, and that the judging form available on the TAS web site should be used at all division meetings.

Meeting Coordinator—Michael Redding discussed the following report:

"The 2003 meeting of the Tennessee Academy of Science was held jointly with the Tennessee Science Teachers Association (TSTA) at the Cool Springs Convention Center near Franklin, Tennessee. Judging from the various comments I have received,

it was a most successful event. By my records we had 95 oral and 23 poster presentations, significantly more than the previous totals of 72 and 21, respectively. The increase may be attributed to the central location of the 2003 meeting and the 11 presentations in the special Reelfoot Lake symposium."

"During the 2003 annual meeting the Executive Committee expressed the consensus that our joint meeting with TSTA was a positive experience for both organizations and ought to be repeated on a regular cycle, perhaps every five years. In light of this sentiment some committee members expressed reservations about continuing the five-year cycle of joint meetings with the Kentucky and Tennessee Academies of Science. I have inquired of Kentucky Academy of Science (KAS) President Rob Kingsolver about their interest and commitment in continuing this relationship. They have not yet set a place or time for their 2006 meeting, nor have they discussed the possibility of holding a joint meeting. However, he did say that a poll of their executive committee was uniformly willing to participate if their meeting took place in a location other than Bowling Green. Lexington was cited as a preferred site. This question is based on the fact that the Bowling Green members hosted their meeting only two years ago and would likely not be willing to host another big meeting in 2006. I believe it is imperative for the TAS to decide what we want from the KAS and then make a clear statement to the KAS, pro or con, on the continuation of joint meetings." (The discussion related to a joint meeting with KAS is reported in the Old Business section of these minutes.)

AAAS Section Y Representative—Representative Michael Redding reported on the 2004 AAAS/NAAS meeting as follows:

"Representing the TAS, I attended the annual meeting of the American Association for the Advancement of Science in Seattle on February 12–14, 2004. The following comments summarize my activities and information deemed pertinent to the TAS.

"At the AAAS Affiliates meeting Alan Leshner, CEO of AAAS, encouraged all affiliates to communicate with him directly. Al Teich, Director of Science and Policy Programs, discussed current issues relating to visa delays for foreign students and scholars, selective agent rules for weaponizable biologics, restrictions on grants, censorship of publications for national security reasons, and regulation of sensitive but non-classified information. The AAAS is highly active in the area of public policy.

"The Section on General Interest in Science and Engineering (Section Y) held its annual business meeting on February 13. Chairperson Phyllis Kahn presided. John Safko, Section webmaster, reported progress on the Section's website hosted by the AAAS <http://science/aaas.org/~general/>. Links to Section-sponsored symposia are to be listed on the site along with general information. There followed a spirited discussion about a proposed Section-sponsored workshop for the 2005 AAAS meeting entitled, *Adult Scientific Literacy: Goals, Methods, Measures*. The intent of this three-part workshop is to develop means to promote and track meaningful changes in scientific literacy in our society. The notion is that we, the scientific community, cannot work effectively unless there is a critical mass of scientifically literate individuals in the general public.

"The National Association of Academies of Science (NAAS) Delegates Workshop was held on February 14 prior to the business meeting. Delegates and interested AJAS students heard a presentation by Dr. Sandra Porter of Geospiza, Inc., a company that designs and markets software intended for "hands on" educational exploration and experimentation using large

public databases in the field of bioinformatics—effectively a tool for "database mining".

"President Assad Panah (Pennsylvania) presided over the annual business meeting of NAAS delegates. Dr. Ed Brogie (Nebraska) was recognized as the incoming President. Kathleen Donovan (Oklahoma) was elected as President-elect. The primary function of the NAAS is the organization of the American Junior Academy of Science meeting. The AJAS has a budget of about \$100,000 per annum generated from corporate fundraising and registration fees. This 2004 AJAS program was exceptionally exciting thanks to the generous support of several new and returning sponsors."

REPORTS OF COMMITTEES

Education Committee—Chairperson Cindi Smith-Walters stated that a full report would be available at the November meeting.

Financial Oversight Committee—Chairperson Andy Sliger said he would submit a complete report when Treasurer duties were completely transferred. Sliger and retiring Treasurer Harris provided information related to the declining TAS Trust Fund. The need for an increase in TAS dues and fees was made clear.

A motion to approve the following increases was passed by vote of the Executive Committee: Life Membership dues to \$300 (current \$200), annual regular member dues to \$30 (current \$20), annual Support Membership dues to \$35 (current \$25), annual Sustaining Membership dues to \$40 (current \$30). Student dues remain unchanged at \$10 per year. As required by the TAS Constitution, the proposed dues changes will be presented to the membership for approval at the 2004 annual meeting. The proposed changes will be communicated to the membership via the TAS web site.

A similar discussion led to a recommended annual meeting registration fee increase. A motion to approve a \$25 registration fee (current \$15) for regular members was approved. Student registration fee remains unchanged at the current \$5.

Long-range and Strategic Planning Committee—Karen Kendall-Fite will serve as chairperson and will provide names of committee members as soon as the new appointments are made. As recommended by the committee chaired by George Murphy, each President and each of the two most recent past Presidents will appoint two members to serve on the committee. Once established, each in-coming President will appoint two new members to the committee for three-year terms.

Publicity and Research Committee—Chairperson Mandy Carter-Lowe discussed the following report:

"1. Digital pictures were taken at the November 2003 meeting. Karen Kendall-Fite e-mailed the pictures to Gore Ervin for distribution to James Howard for inclusion on the TAS website.

"2. Certificates and seals were ordered for preparing TAS and science fair certificates.

"3. William Boadi of TSU requested a letter for his portfolio recognizing that his student had been recognized as a student winner at the November 2003 meeting. The request was deferred to Michael Redding.

"4. Certificates were mailed to student winners of oral and poster presentations at the November 2003 annual meeting.

"5. A search was performed by a Columbia State Community College student worker on newspaper articles related to education. A database was then formed of staff writers who commonly report on educational topics.

"6. Certificates were mailed to winners of the Memphis/Shelby County Science Fair.

"7. Certificates were mailed to winners of the Middle Tennessee Science and Engineering Fair.

"8. A press release was sent to the Tennessean concerning the Tennessee Junior Academy of Science."

Chairperson Carter-Lowe reported that student help was used at Columbia State Community College to search newspapers to compile a list of newspaper staff who wrote about educational issues. In the future these writers will be contacted directly when TAS news is distributed to area newspapers.

Industry/Government Committee—no current chairperson. President Redding will continue to search for a chairperson.

OLD BUSINESS

Retiring Treasurer John Harris reported on the financial outcome of the November 2003 joint meeting with TSTA. A formula to share profits and expenses had been agreed upon, and a contract signed, by TAS and TSTA officers prior to the joint meeting. Based on that agreement, and because of unexpected charges assessed by Marriott Hotel, meeting expenses increased unexpectedly. TAS will pay its portion of those expenses. Harris suggested separate TAS registration at future joint meetings to more accurately record the number of TAS attendees and the collection of fees. TAS expenses at the joint meeting are reflected in the Treasurer's Report.

Representing the 2004 Local Arrangements Committee for the Columbia State Community College (CSCC) meeting site, Karen Kendall-Fite made a visual presentation to display the CSCC campus and meeting facilities. Special needs will be coordinated with President-elect and Program Chairperson Steve Wright. Section Chairs will be asked to provide audio-visual requirements for their respective sections, as at past meetings. Plans for meeting details will continue this summer. Kendall-Fite presented the official letter of invitation from Cathy McDonald, Vice President for Academic Affairs, Columbia State Community College.

The 2005 TAS annual meeting will be held on the campus of the University of Tennessee, Martin, Tennessee, on November 17–18. Mid-state meeting sites are needed for the 2006 and 2007 annual meetings. The committee suggested the possibility of Austin Peay State University for a mid-state meeting site to feature the new science building on that campus. A site in the east region will be needed for the 2008 annual meeting.

President Redding asked the Executive Committee to discuss the question of another joint meeting with the Kentucky Academy of Science (KAS) in the near future. The committee agreed that if such a joint meeting were to occur, a preferred location would be Bowling Green, Kentucky or other location close to the Middle Tennessee area. A recent communication from KAS (see Meeting Coordinator's report in these minutes) indicated that Bowling Green would not be a likely choice in the near future as an annual meeting was held there two years ago. After discussion, the following motion was proposed as a statement to the KAS board: When the KAS meeting cycle comes around to a Bowling Green location, TAS would like to be contacted regarding the possibility of a joint meeting if KAS wishes to do so. The motion was approved and will be communicated to the current KAS President by TAS President Redding.

NEW BUSINESS

Member-at-large Al Hazari provided information from the American Chemical Society (ACS) Committee on Chemical Safety related to chemical safety in K–12 schools. ACS offers information on its website, as well as in printed brochures, for different academic levels. Member-at-large Hazari asked Executive Committee members to inform colleagues, student teachers, and local school systems of the availability of this information. TAS Director of Electronic Communications Jim Howard agreed to set up a link to the ACS site on the TAS website. Past President Karen Kendall-Fite offered to search the TAS website to find members interested in doing chemical inventory with schools. State Science Consultant Linda Jordan would like to link state regions with TAS members willing to offer assistance and/or advice, in conjunction with the Tennessee Department of Energy and Conservation (TDEC) who prefers to handle "clean up".

Secretary Swain provided copies of letters of recommendation written on behalf of Dr. S. K. Ballal, Professor of Biology at Tennessee Technological University, who has been nominated for the TAS Distinguished College and University Teacher Award. Committee members were asked to review the materials and respond with a vote via email.

Earlier in this meeting State Science Consultant Linda Jordan discussed the implications of mandates in the No Child Left Behind (NCLB) initiative to science education in Tennessee. Jordan provided copies of "Frequently Asked Questions About NCLB" to inform committee members of efforts at the state level to meet NCLB goals. She also provided copies of "Tennessee Plan for Implementing the Teachers and Para-professional Quality Provisions of the NCLB Act of 2001", January 2004 update. Appendix B of the document specifically addresses science education. Dr. Jordan discussed concerns, emphasizing the special need for licensing in science at the middle school grade level by academic year 2005–2006. In addition to National Teacher Exam and PRAXIS Exam for teachers, HOUSSE (Highly Objective Uniform State Standard of Evaluation) options represent one way teachers can be approved as qualified for science teaching. Dr. Jordan emphasized that colleges and universities need to help by offering major subject courses after school hours, on weekends, during summers, or through Regents On-line Degree Program (RODP). She asked TAS Executive Committee members to encourage their schools and departments to do this. Competitive federal grant money (\$100,000–300,000) is available through the state Department of Education to support initiatives that increase content knowledge for teachers. President Redding will place Request for Proposal forms on the TAS website. He will also ask Kim Sadler, Math and Science Section Chair for 2004, to consider addressing NCLB issues at the annual meeting in November.

President Redding adjourned the April 2004 meeting of the TAS Executive Committee at 9:55 PM CST.

TENNESSEE ACADEMY OF SCIENCE EXECUTIVE COMMITTEE MEETING 18 November 2004

President Michael Redding called the meeting of the Tennessee Academy of Science Executive Committee to order at 7:15 PM CST in the Napier Room of the Jones Student Center on

the campus of Columbia State Community College, Columbia, Tennessee, 18 November 2004. Attendees were Past President Karen Kendall-Fite, President-elect Steve Wright, Treasurer Steve Murphree, Secretary Sarah Swain, Managing Editor Gore Ervin, Junior Academy of Science Director Jack Rhoton, Electronic Communications Director James Howard, Collegiate Division Director Fred Matthews, Visiting Scientist Program Director Michael Daley, Publicity and Research Committee Chairperson Mandy Carter-Lowe, Education Committee Chairperson Cindi Smith-Walters, Financial Oversight Committee Chairperson Andy Slinger, State Science Consultant Linda Jordan, and Members-at-large Al Hazari and Michael Gibson. President Redding recognized guests John Foote, Austin Peay State University, and Cynthia Rorhbach, Tennessee Department of Energy and Conservation.

A motion to approve the minutes of the April 2004 meeting of the Executive Committee passed. President Redding introduced guest John Foote as Local Arrangements Chairperson for the 2006 annual meeting to be held at Austin Peay State University (APSU), Clarksville, and expressed appreciation to APSU for agreeing to host the meeting. To accommodate guests making presentations to the committee, a motion to alter the agenda was approved. The discussion that followed is related in the New Business section of these minutes.

REPORTS FROM OFFICERS AND DIRECTORS

President-elect and 2004 Program Chairperson—Steve Wright thanked Karen Kendall-Fite and the Columbia State Community College (CSCC) Local Arrangements Committee for preparing the 2004 meeting site. President-elect Wright described the program plans for two symposia, "Public Health Issues in Tennessee" and "Regents On-Line Degree Program", and expressed appreciation for those participating as speakers and panelists. He discussed how fortunate the academy was to have Jacqueline Katz PhD, Chief of Immunology and Viral Pathogenesis Section in the Influenza Branch, Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases, Center of Disease Control and Prevention, Atlanta, Georgia, as this year's keynote speaker and encouraged all to attend the plenary session.

President and Meeting Coordinator—Michael Redding presented a spreadsheet summarizing the numbers of papers and poster presentations for the past several years. A total of 126 papers and posters are planned for the November 2004 meeting. A total of 123 were presented at the 2003 meeting in Nashville at the joint meeting with the Tennessee Science Teachers Association, and 93 at East Tennessee State University at the 2002 meeting. Due to low participation the Microbiology Section and the Cell and Molecular Biology Section were combined with the Health and Medical Sciences Section this year. Likewise, the Geology and Geography Section and the Physics and Astronomy Section were combined in the same meeting room. Zoology, Botany, and Engineering Sections showed the greatest participation this year.

Treasurer—Steve Murphree discussed the following report:

CASH BALANCE—July 1, 2004 \$21,210.46

RECEIPTS

Membership Fees 4,035.00
Institutional Dues

Library Subscriptions 1,020.00
Interest Earned, US Bank
Dividends Earned,
UBS Money Market Fund 1,663.31
Contributions 70.00
Annual Meeting Registration
and Meal Fees 1,750.00
Page Charges
Journal Revenue
Miscellaneous Income 80.98
TJAS Trust Fund

TOTAL RECEIPTS 8,619.29

TOTAL CASH AVAILABLE 29,829.75

DISBURSEMENTS

Journal 300.00
Tennessee Junior Academy of Science 7,066.68
Treasurer's Expenses
Travel
Annual Meeting Expenses 2,783.00
Annual Meeting Registration
and Meal Fees
Plaques and Awards
Dues and Fees 392.50
AAAS Meeting Expenses 500.00
Web Site Maintenance
Science Fairs and Olympiads
Auditor's Fee
UBS Service Charge
Collegiate Division

TOTAL DISBURSEMENTS 11,042.18

CASH BALANCE—November 15, 2004 18,787.57
Receipts 36,005.84
Disbursements 31,183.05
Cash Increase 4,822.79

BREAKDOWN OF HOLDINGS

US Postal Service, Cookeville, TN
US Postal Service, Lawrence, KS
TTU Account 84.31
Checking Account, US Bank 6,795.29
Savings Account, US Bank 8,431.38

TAS HOLDINGS—April 15, 2004 15,310.98

TJAS TRUST FUND (Vanguard Star Fund)
(9,240.619 shares as of 3/31/04)
Account Value as of 12/30/04 158,938.65
Disbursements (Dividend Distributions)
06/21/02 1,940.53
Disbursements (Dividend Distributions)
07/10/04 1,663.31
Account Value as of 12/31/03 158,938.65
Account Value as of 3/31/04 164,575.42
Account Value as of 7/10/04 166,238.73

TOTAL VALUE OF HOLDINGS—
November 15, 2004 \$179,886.40

Since Treasurer Murphree operates from Belmont University, an auditor in the Nashville area will be selected by December 31, 2004. Treasurer Murphree does not expect the recent dues increase to discourage membership; instead, the increase will improve the budget. Treasurer Murphree would like for members to notify the Treasurer when retirements occur so that Emeritus membership status can be considered. A motion to accept the report, pending adjustments and amendments, passed. A motion (later in this meeting) to authorize TAS Treasurer Murphree to acquire a checkcard for the TAS checking account was approved.

Managing Editor—M. Gore Ervin discussed the following report regarding the *Journal of the Tennessee Academy of Science*:

“There were a total of thirteen manuscripts submitted during calendar year 2003. One was published in 78:3 (July 2003), four appear in 78:4 (October 2003), three appear in 79:1 (January 2004), and two are in revision (potentially will appear in 79:3; July 2004). Two manuscripts were rejected and one manuscript was withdrawn.

“There have been eight manuscripts submitted thus far in 2004. One will appear in 79:3, three have been returned to the authors for revision and three are still under review. One manuscript was rejected.”

The following table was included in the report and summarizes the editor’s plan to bring the *Journal* back on schedule:

Outstanding Issues	Projected Publication Date	Contents
78:4 October 2003	December 2004	4 articles
79:1 January 2004	December 2004	3 articles
79:2 April 2004	December 2004	Society business/abstracts
79:3 July 2004	January 2005*	2 articles/collegiate abstracts
79:4 October 2004	January 2005*	3–4 articles
80:1 January 2005	January 2005*	? articles
80:2 April 2005	March 2005	Society business/abstracts

*Contingent on receipt of revised manuscripts/new manuscripts

Editor Ervin suggested that, in the future, Section Chairpersons ask presenters to submit manuscripts to the *Journal*. Receipt of abstracts would be more efficient if Section Chairpersons would compile the abstracts for their section and then forward all the abstracts as a package to the Managing Editor. President Redding plans to notify chairs. Abstracts will be published online. President Redding thanked Editor Ervin for his efforts as Managing Editor.

Electronic Communications—Director James Howard reported that he is continuing to update the TAS web site and will add new members after the annual meeting. On-line registration and membership renewal is planned for the future. Annual cost to maintain the web site is \$119.40 per year. A motion to approve payment passed. President Redding thanked Director Howard for his work maintaining the web site.

Junior Academy of Science—Director Jack Rhoton discussed the following report:

“The 2004 annual meeting of the Tennessee Junior Academy of Science (TJAS) was held on Friday, April 23, 2004, at Pearl Cohn High School in Nashville, Tennessee. One hundred and fifteen students from throughout the state participated in the

TJAS 2004 program. Prior to the April 23 meeting, a panel of readers selected twenty-five student papers for presentations at the annual meeting. The panel of judges during the annual meeting selected two top presenters. They are: Philip C. Redding, Cookeville High School, Cookeville, Tennessee, and Kari M. Jones, Clarkrange High School, Clarkrange, Tennessee. The title of Redding’s paper was “Disproportionate Growth Rate of Root and Shoot Tissue in Maize, *Zea mays*.” Ms. Jones’ paper was titled “Association Between Neutrophil Function and Interleukin 8 Receptor Genotype in Dairy Cows.” Both papers were published in the *Handbook and Proceedings of the Tennessee Junior Academy of Science* along with seven other papers of the top nine winners. Also, an abstract of each of the papers presented at the annual meeting was printed in the *Handbook*. A copy of the *Handbook* was sent to all high school science departments in Tennessee as identified in the Tennessee State Department of Education’s Directory of Public Schools, Approved Non-Public and Special State Schools.

“Philip C. Redding, Cookeville High School, will be representing TAS at the American Junior Academy of Science in Washington, DC in February 2005 with his paper “Disproportionate Growth Rates of Root Tissue in Maize, *Zea mays*.” He also presented his paper at the International Science and Engineering Fair in Cleveland, Ohio.

“It is customary each year for the Tennessee Junior Academy of Science to recognize three outstanding science teachers, one from each region of the state. During the Spring 2004 TJAS meeting, a framed certificate and a small honorarium (\$100) was presented to the following recipients: Angela V. Kinsler (Biology, Chemistry, Environmental Science), Hancock County High School, Sneedville; Dayon Taylor (Biology, Chemistry, and Physics), Clarkrange High School, Clarkrange; and Marion Pitts (Biology, Chemistry, and Technology), Westview High School, Martin. These outstanding secondary science teacher awards recognize teachers for their outstanding contribution to science teaching and for stimulating and inspiring students to an active interest in science”.

“Ms. Jan Coley has been named the recipient of the 2004 Tennessee Academy of Science Distinguished Science Teacher Award. Coley, who teaches at Jefferson County High School, Dandridge, Tennessee, will receive the award on November 20, 2004, during the Tennessee Science Teachers Association Conference (TSTA) in Nashville, Tennessee. Ms. Coley teaches biology, science research and design, and Advanced Placement Biology. Begun in 1997, the awards program is designed to recognize individuals who demonstrate excellence in science teaching. This award is given annually to one Tennessee science teacher who has made significant contributions to the teaching and learning of science. In addition to the recognition, Ms. Coley will receive from TAS a \$500 cash award, a plaque, and certificate. (A press release of Ms. Coley’s award has been prepared and submitted to local newspapers.)

“The criteria for the award are based on the candidate’s contributions to the teaching profession, education record, involvement in professional organizations, special awards or special recognition, and letters of support. Past and current recipients of the TAS Distinguished Science Teacher Award include: Alan Redmond (1997) John Sevier Middle School, Kingsport; Linda Phelp (1998) Camden Central High School, Camden; Jane Whitaker (1999) Lenior City High School, Lenior; Pat Carpenter (2000) McDonald School, Mohawk; Gary Barrigar (2001) Elizabethton High School, Elizabethton; Kathryn Gemmer (2002) University

School, Johnson City; Constance Brown (2003) McEwen High School, McEwen; and Jan Coley (2004) Jefferson County High School, Dandridge.

Director Rhoton wants to encourage teachers to apply for the teacher awards described above. Resumes may be sent to Director Rhoton at East Tennessee State University. A teacher may be nominated by self or others. Electronic Communications Director Howard will place the information on the TAS web site. Teachers and TAS members should be reminded that awards information is printed in each issue of the *Journal*. President Redding thanked Director Rhoton for his continued good work with TJAS.

Collegiate Division—Director Fred Matthews discussed the activities of the Collegiate Division. Division meetings were held at Christian Brothers University (West Division), Tennessee State University (Middle Division), and Pellissippi State Community College (East Division). Regional sponsors, Melinda Fitzgerald (West), Lewis Myles (Middle), and Teresa Fulcher (East), organized the events at which students presented posters and papers. Winners will be recognized in the *Journal*. Plans are in place to also list winners on the TAS web site. The East Division has a web site with photos and abstracts of participants. The East Division web site will be linked to the TAS web site.

Visiting Scientist Program—Director Michael Daley discussed the following report:

"This fall our academy sponsored a workshop on the Science Olympiad competition. The goal of the workshop was to enhance participation in the Western Tennessee Regional Science Olympiad competition that is held in late winter each year. A flyer describing the aim and rationale for the workshop was distributed to past and present coaches via e-mail. The science teacher administrators of both the Memphis City School System and the Shelby County School System also distributed the flyer to science teachers. In addition, the Western Regional Visiting Scientist Program Director participated in two "In-Service" sessions for Shelby County science teachers who expressed interest in the competition.

"The workshop was held on Saturday morning, October 30, 2004. Nine coaches from four middle schools and three high schools, and twenty students participated in four events. About four or five parents were present all morning as well. The two middle school events were "Compute This", supervised by Professor David Russomanno and "Water Quality", supervised by Professor Jack Grubaugh. The two high school events were "Designer Genes", supervised by Professor Mel Beck and "Compute This", supervised by Professor David Russomanno. Afterwards the professors gave an excellent critique of each event outlining design and scoring. The breadth of the Science Olympiad competition from science to technology was quite evident.

"Finally, the expenses incurred were about \$250. The caterer expense was \$112.15 and the use of the four undergraduate students was \$100. Also the cost of the twelve excellent TAS certificates prepared by Mandy Carter-Lowe must be factored in as well."

In response to questions Director Daley explained that the training workshop (reported above) was intended to encourage participation in Science Olympiad. A motion to approve the workshop expenses passed.

Director Daley expressed an interest in getting photos of regional science fair winners on to the TAS web site in the future. He expressed concern for the drop in activity in the Visiting Scientist Program and attributed the drop to the demands on

teacher time since the institution of the required Gateway exams given in Tennessee schools.

REPORTS FROM COMMITTEES

Financial Oversight Committee—Chairperson Andy Sliger discussed the following report:

"The Academy is financially sound. No actions have been taken to change any investments since the last TAS executive committee meeting. With the change in treasurers Dr. Murphree has needed time to settle into his new job as treasurer. As chair of the committee I recommend the following: 1. The annual audit of TAS finances needs to be conducted. 2. A new chair of the Financial Oversight Committee needs to be appointed. This person should be someone familiar with TAS functions and a person who resides in the greater Nashville area so that he/she can work closely with the new treasurer.

"I hereby tender my resignation from the Financial Oversight Committee to allow the appointment of a new chairperson. I will continue to assist the Executive Committee members in any way that I can. I do plan to help with local arrangements for the 2005 annual meeting to be held on the University of Tennessee, Martin campus."

President Redding accepted the resignation of Dr. Sliger and commended him for his service to the academy.

Publicity and Research Committee—Chairperson Mandy Carter-Lowe discussed the chairperson's report summarized below:

Certificates were prepared and mailed to Michael Daley for the Western Regional Tennessee Open Invitational Science Olympiad Workshop (conducted October 30, 2004). An e-mail list for Tennessee newspapers was revised. Press releases were prepared and distributed to Tennessee newspapers and other media sources to announce the annual meeting. Specific news writers were contacted at The Tennessean (Nashville) and The Daily Herald (Columbia) concerning the annual meeting events and lectures. Chairperson Carter-Lowe noted that personal contact with news writers seems to be more effective than e-mails to general "press release" or "news tips" e-mail addresses. The plenary address on influenza by a CDC scientist and the symposia, "Public Health Issues in Tennessee" and "Regents Online Degree Program", were highlighted and detailed in press releases to newspapers and local television stations during the week preceding the meeting. Details for meeting registration and TAS membership were also provided, as well as the TAS website address.

President Redding praised Chairperson Carter-Lowe for her effective work in promoting the activities of TAS.

Education Committee Chairperson—Cindi Smith-Walters reported that TAS Junior Academy of Science Director Jack Rhoton was presented the Distinguished Tennessee Science Educator Award by the Tennessee Science Teachers Association (TSTA). The National Science Teachers Association (NSTA) 2005 regional meeting will be held in Nashville with Jack Rhoton serving as Program Chairperson. Chairperson Smith-Walters encouraged TAS members to attend TSTA and NSTA meetings next year. No conflict with TAS meeting dates is expected. Discussion followed related to TAS-sponsored pre-conference workshops for teachers that could be offered in the local area of the TAS annual meeting site (University of Tennessee, Martin, in 2005). President Redding will propose the idea to the Local Arrangements Chairperson for the University of Tennessee at Martin meeting.

Long-range Strategic Planning Committee—Chairperson and Past President (Michael Redding 2005) will ask committee members to consider plans for future workshops. President Redding will organize the committee, composed of the three most immediate past Presidents, during December 2004.

Nominating Committee—Chairperson and Past President Karen Kendall-Fite and committee members Jack Rhoton and Martin Stewart (all past Presidents) presented the following slate of officers for 2005: John Harris (Tennessee Technological University), President-elect; Sarah Swain (Middle Tennessee State University), Secretary; Steve Murphree (Belmont University), Treasurer. A motion to accept the slate of officers was approved.

Fellows Committee—Chairperson Charles R. McGhee submitted the following report:

“The names of Dr. Chin-Zue Chen and Professor Adel Salama were submitted by Dr. Michael L. Daley of the University of Memphis for consideration by the TAS Fellows Committee. Dr. Chin-Zue Chen and Professor Adel Salama are Professors of Engineering at Austin Peay State University.

“Dr. Chen has been a member of TAS since 1992. He organized the Engineering and Technology Section of TAS in 1995 and 2002. Dr. Chen has presented seven papers in the TAS Engineering and Technology Section since 1993.

“Professor Salama has been a member of TAS since 1990. He organized the Engineering and Technology Section of TAS in 1996, 1998, and 2003. Professor Salama and his students published 19 papers in the *Journal of the Tennessee Academy of Science* between 1994 and 2003.

“Both candidates have participated in each annual meeting of TAS for the last ten years by giving presentations, sponsoring student presentations, and judging student papers. In addition, they have been active in recruiting new members to the Engineering Section of TAS.

“All members of the TAS Fellows Committee (Dr. Gladius Lewis, Dr. Charles McGhee, and Brother Kevin Ryan) approve the nominations of Dr. Chen and Professor Salama, and recommend that they be recognized as Fellows of the Academy during the 114th meeting at Columbia State Community College.”

A motion to accept the nomination of Dr. Chen and Professor Salama as Fellows of the Tennessee Academy of Science was approved. The nominations will be presented to the membership for approval at the annual business meeting.

Industry and Government Committee—no chairperson. TAS Executive Committee members Dr. Michael Daley and Dr. Andy Sliger will look for an appropriate award recipient in the Northwest Tennessee region before the 2005 annual meeting at the University of Tennessee at Martin.

Necrology Committee—Dr. Alexander Wells, Tennessee State University, serves as Chairperson for this TAS Standing Committee. Members known to have become deceased during the past year are Dr. David Snyder, Austin Peay State University, Dr. John R. (Jack) Freeman, University of Tennessee, Chattanooga, retired, and Dr. Robert Hershey, Nashville. In memory of these members their names will be read at the annual business meeting and a moment of silence will be observed.

Resolutions Committee—The following resolution was submitted by Sallie Noel, Austin Peay State University, Chairperson for this TAS Standing Committee:

“Whereas, the Tennessee Academy of Science is enjoying the most pleasant, profitable, and well organized series of meetings at Columbia State Community College, and;

“Whereas, the success of these meetings has resulted mainly

from the efforts of the officers of the respective sections; the Local Arrangements Committee composed of Karen Kendall Fite (Chair), Mandy Carter-Lowe, Spence Dowlen, David Fawcett, Dearn Lampley, Bryan Long, and B. I. Naddy; the 2004 TAS Executive Committee, composed of Dr. J. Michael Redding, President, Ms. Karen Kendall-Fite, Past President, Dr. Stephen M. Wright, President-Elect, Ms. Sarah H. Swain, Secretary, and Dr. Steven Murphree, Treasurer; and from the recognition given the meetings by the press, television, and radio stations;

“Be it Resolved, therefore, that the Tennessee Academy of Science expresses its sincere appreciation to these and all others who contributed to the success of the meetings.”

A motion to accept the Resolution of Appreciation was approved. The resolution will be presented to the membership for approval at the annual business meeting.

OLD BUSINESS

Andy Sliger, Local Arrangements Committee member for the 2005 annual meeting at the University of Tennessee, Martin reported that two symposia were being planned for the meeting. A symposium on Reelfoot Lake and an excursion to the lake is being planned. A second symposium on cosmology also has been proposed. The dates for the meeting are 17–18 November 2005.

Dues increases were approved by the Executive Committee at its April 2004 meeting and announced to the membership via the TAS web site. (See April 2004 minutes for details.) A vote of the TAS membership will be held tomorrow at the annual business meeting to approve the recommended dues increases. The Executive Committee agreed to keep dues for Emeritus membership at \$10.

NEW BUSINESS

Early in the Executive Committee meeting State Science Consultant Linda Jordan addressed the committee regarding the Tennessee School Science Safety Program and possible TAS involvement in promoting science safety in schools. TAS Executive Committee members Linda Jordan, Karen Kendall-Fite, Steve Murphree, Michael Redding, and Martin Stewart met in June to consider the merits and options of TAS involvement in the program. Cynthia Rohrbach, Tennessee Department of Energy and Conservation (TDEC) representative, described the role of TDEC in providing financial support and training for school systems, and the need for help from those with science safety expertise and experience as the program grows.

Discussion followed regarding the feasibility of involvement of TAS members and other science faculty in such a program. Committee members reported that, in most cases, their campuses hired chemical safety officers to oversee chemical clean-up, maintenance, and inventories, and expressed concern that few faculty have the experience or expertise to fill such a role for local schools.

It was agreed that a potential role for TAS would be in the area of education and raising awareness of the need for chemical safety management in the local schools. Workshops to educate teachers and other school personnel to the need for chemical safety could be offered by TAS. Karen Kendall-Fite offered to collect information related to potential participation if such workshops were offered. James Howard will post a call for help on the TAS website to identify TAS members interested in con-

ducting workshops. President Redding will contact appropriate state agencies for support and approval of TAS involvement.

As the organization's Past President Jack Rhoton will represent the National Science Educators Leadership Association (NSELA) at the 2005 meeting of the American Association for the Advancement of Science (AAAS). The NSELA requests Past Presidents attend the AAAS meeting but does not pay expenses. As Junior Academy of Science Director, Jack Rhoton will also represent TAS at the AAAS meeting. A motion to support the trip up to \$1200 was approved for Rhoton. President Redding and the Executive Committee commended Rhoton for his long

and dedicated service to TAS, the Junior Academy of Science, and science education in general.

Future sites for TAS annual meetings are planned as follows: 17–18 November 2005 at the University of Tennessee, Martin, in Martin, Tennessee; November 2006 at Austin Peay State University, Clarksville, Tennessee. To maintain the tradition of holding two consecutive meetings in the middle region of the state, a commitment from a middle region institution is needed for the 2007 annual meeting site.

President Redding adjourned the November 2004 meeting of the TAS Executive Committee at 10:00 PM CST.