

PROCEEDINGS OF THE TENNESSEE ACADEMY OF SCIENCE 2010

TERESA L. FULCHER, SECRETARY TAS

*Pellissippi State Community College, Knoxville, Tennessee*TENNESSEE ACADEMY OF SCIENCE
EXECUTIVE COMMITTEE MEETING
16 APRIL 2010

President Michael Gibson called the meeting of the Tennessee Academy of Science (TAS) Executive Committee to order at 6:30 PM CDT in the Massey Board Room on the Campus of Belmont University, Nashville, Tennessee. Attendees were President-Elect Jeffrey Boles, Past President Gore Ervin, Treasurer Steve Murphree, Secretary Teresa Fulcher, Assistant Editor Christy Carter, Junior Academy of Science Director Jack Rhoton, Director of Electronic Communications Jim Howard, State Department of Education Liaison Linda Jordan, Education Committee Chairperson Kim Cleary Sadler, Publicity and Research Committee Chairperson Mandy Carter-Lowe, Members-at-Large Gilbert Pitts of Austin Peay State University and Bryan Kent Wallace of Fisk University, George Webb of the 2010 Local Arrangements Committee, and guest Chih-Che Tai of East Tennessee State University.

President Gibson introduced Executive Committee members and guests, and welcomed all to the meeting. President Gibson extended thanks to both Belmont University and Steve Murphree for hosting the meeting. Agendas for the meeting were distributed.

REPORTS FROM OFFICERS
AND DIRECTORS

Past President—M. Gore Ervin reported that the nominating committee would be submitting Andy Andrews of Oak Ridge National Laboratory as the candidate for President-Elect for 2011.

President-Elect—Jeffrey Boles reported that the Tennessee Technological University (TTU) local arrangements committee has made considerable progress in planning for the 2010 Annual meeting. The atrium of the new Millard Oakley STEM Center will be available for the poster session. The 250-seat auditorium will be used for the business meeting, plenary lecture, and symposium. The afternoon technical sessions will be held in the Nursing Building. Each room in the Nursing Building has projectors and screens, and the Local Arrangements committee is working on negotiating wireless internet access for participants for the day. The Executive Dining Room and Lounge of the TTU Roarden University Center has been reserved for the Thursday evening Executive Committee meeting. The Nursing Building has a room that seats 75 (with additional outdoor seating possible) for the luncheon. Presi-

dent-Elect Boles will investigate the possibility of an overflow room equipped with tables for the luncheon. Luncheon options range in price from \$6–10 per person. Ample parking is available at both the Millard Oakley STEM Center and the Nursing building. There are hotels nearby for participants needing accommodations. President-Elect Boles suggested that the Science Chairs meeting be scheduled for 8:00 AM to prevent conflicts with other meetings. A Science Chairs breakfast was proposed. President Michael Gibson offered to send a special invitation to the science chairs of Tennessee Colleges and Universities in mid-August with a follow-up letter or postcard. Secretary Fulcher agreed to assist in collecting e-mail and US postal addresses for mailings. President Gibson asked that President-Elect Boles, George Webb and Linda Jordan continue discussions and plans regarding the plenary lecture and symposium.

Treasurer—Steve Murphree discussed the treasurer's report showing a total income of \$24,414.90 from 07/01/2009 through 04/16/2010 adding that the Vanguard stock fund was performing well. Expenses during the same period were \$22,481.57. Expenses for the 2009 annual meeting totaled \$4,482.48 and income from that meeting was \$3633.00 Also *Journal* expenses have been higher as the *Journal* is on schedule with four publications per year. Treasurer Murphree also reported that AllenPress has submitted a new three year contract to the Academy with a 2% increase. President Gibson commented that several publications are moving toward faster access through on-line publication with an end-of-year print publication and the Academy might want to consider moving toward some form of on-line publication in the future. Gibson suggested the Academy solicit input from the science chairs on this issue.

Director Howard made a motion to accept the treasurer's report. Gore Ervin seconded the motion and the motion carried. Director Jim Howard made a motion to authorize Treasurer Murphree to transfer funds from the Vanguard Star Fund upon Executive Committee notification, should the Academy checking balance require additional funds. Past President Gore Ervin seconded the motion and the motion carried. Treasurer Murphree stated that he would consult with the auditors.

Managing Editor—Stephen Stedman was not in attendance. Assistant Editor Christy Carter submitted the following Editor's report:

"The transition from AllenTrack Essentials to PeerTrack Essentials, the journal's new online manuscript submission and review program, was completed during early April 2010. Future submission of mss. and review of mss. will be handled by the new online program. As of 14 April 2010, two mss.,

including one new ms. and one ms. revised and resubmitted, had been accepted for review via the new program.

"Publication and mailing of *JTAS* 85-1 took place during late March 2010. Material for *JTAS* 85-2, including three research articles, is in hand and almost ready for submission to Allen Press for printing, publishing, mailing. Four additional mss. remain available for use in *JTAS* 85-3 and *JTAS* 85-4, due out in September and December of 2010, respectively.

"One new section editor and two interim section editors were added to the editorial board during late 2009 or early 2010 and require approval of the Executive Committee, as follows: Rachel Rigsby (interim section editor, Chemistry), Michael Allen (interim section editor, Mathematics and Computer Science), and Andrew Barrass (co-section editor, Zoology).

"With sadness, the *JTAS* editorial staff notes the passing of Michael Daley, long-time section editor for Engineering. He will be missed. His replacement has not yet been found.

"The TAS website has reflected an incorrect link to the journal's online manuscript submission and review program for several months; the correct link is <http://www.edmgr.com/jtas/>."

Assistant Editor Christy Carter made a motion to accept the section editors listed in the Managing Editor's report. Director Howard seconded the motion and the motion carried.

Member-at-large Gilbert Pitts moved to accept the Editor's report. President-Elect Jeffrey Boles seconded the motion and the motion carried.

Collegiate Division—Director Fred Matthews was not in attendance, but submitted a summary of the dates and locations of Collegiate Division meetings from 1998–2010.

Electronic Communications—Director Jim Howard reported that while he is retiring from Middle Tennessee State University (MTSU) in May, he will continue to use his MTSU e-mail account and will have more time to work on the Academy website. The importance of electronic communication, including visibility of the *Journal* was discussed. It was agreed that a link was needed from the Academy website to the *Journal* website (hosted by Stephen Stedman). Director Jim Howard made a request that Managing Editor Steve Stedman investigate the possibility of transitioning over a multi-year period to an on-line publication, with the possibility of an end-of-year print publication and report his findings to the Executive Committee. Member-at-large Gilbert Pitts seconded the motion. The motion carried. It was noted that the Executive Committee had previously approved the posting of a portable document format (pdf) file of a selected *Journal* article on the Academy website.

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

"The 2010 spring meeting of the Tennessee Junior Academy of Science (TJAS) met Friday, April 16, on the campus of Belmont University. A total of twenty-three students were invited to present their research papers. This year one hundred and six students were involved in TJAS research, from throughout the state. The top TJAS research papers will be published in the 2010 issue of the *Handbook and Proceedings of the Tennessee Junior Academy of Science*. The winners of the top two papers received \$500 each and the ten other top winners each received \$200.

"During the April meeting, a plaque and a small honorarium (\$100) was presented to an outstanding secondary science teacher from each region of the state: East, Middle, and

West. Recipients of this year's awards are: Sandy Adams (Middle School Science Teacher), Del Rio School, Del Rio; Kathy Lee (Middle School Science Teacher), Martin Luther King Magnet School, Nashville; and Molly Escue (Chemistry 1, Chemistry 11, Physical Science and Principles of Technology Teacher), Halls High School, Halls. These TAS outstanding secondary science teaching awards recognize teachers for their outstanding contribution to science teaching and for stimulating and inspiring students to an active interest in science.

"In addition, TAS supports four \$100 awards to science fair winners in the Upper East Tennessee Science Fair. This year's science fair is scheduled to meet on Thursday, April 22, on the campus of ETSU. Two recipients will be recognized in the biological sciences category and two in the physical science category."

Director Rhoton thanked Dr. Steve Murphree and Belmont University for hosting the 2010 Tennessee Junior Academy of Science (TJAS) meeting. Judges for the meeting were Dr. Preston J. MacDougall of Middle Tennessee State University, Dr. Lewis Myles of Tennessee State University, Dr. Chih-Che Tai of East Tennessee State University, and Dr. Gore Ervin of Middle Tennessee State University. The Executive Committee discussed the potential value of having the *Handbook and Proceedings of the Tennessee Junior Academy of Science* in an electronic format. Linda Jordan offered to put a link on the Tennessee Department of Education Website. Director Rhoton noted that the total cost for printing and mailing of the Handbook is approximately 2000 dollars. President Gibson thanked Director Rhoton. Past President Gore Ervin made a motion to accept the report. Kim Sadler seconded the motion and the motion carried.

Visiting Scientist Program—Members of the Executive Committee acknowledged the significant contributions of Dr. Michael Daley. Dr. Daley died unexpectedly February 8, 2010. In addition to serving as Director of the Visiting Scientist Program and section editor for Engineering, Dr. Daley served as the Academy President in 1997. Members of the Executive Committee discussed possible replacements and authorized President Gibson to solicit a new Director. Education Committee Kim Cleary Sadler noted that she does have the database of participants that could be forwarded to the new Director. Jack Rhoton serves as the East Tennessee contact, Sadler serves as the Middle Tennessee contact. Dr. Daley was the West Tennessee representative in addition to serving as Director, thus a new West Tennessee representative must be identified.

REPORTS FROM REPRESENTATIVES

State Department of Education—Science consultant Linda Jordan briefed the members of the Executive Committee on the status of Race to the Top funds. Low performing schools will be given assistance and there will be a focus on professional development tied to STEM initiatives (Science, Technology, Engineering, and Math). Current plans are to partner with Battelle in the management of Race to the Top funds. Science consultant Jordan encouraged the Executive Committee members to visit www.nationallabday.org, and make use of resources from that organization. She also announced that the Regional National Science Teachers Association and the Tennessee Science Teachers Association meeting would be the first week in December. Treasurer Murphree made a motion to accept Science consultant

Jordan's report. Director Howard seconded the motion and the motion carried.

AAAS Section Y Representative—Michael Redding was not in attendance but submitted the following report:

"Representing the TAS, I attended the Annual Meeting of the American Association for the Advancement of Science in San Diego on February 18–20, 2010. The following comments summarize my activities and information deemed pertinent to the TAS.

"The National Association of Academies of Science Assembly of Delegates was held on February 19. Other than the pro forma activity reports, the principle item of discussion was a set of proposed amendments to the NAAS Constitution and Bylaws. Most of the proposed changes involved clarification of specific wording existing in the current documents to more appropriately reflect the actual function of the NAAS at present. More substantively, the number of Member-at-large positions on the Board of Directors was raised from two to four. As before, they shall be elected by the Assembly of Delegates representing all the member academies. Moreover, Members-at-large, previously limited to a single two-year term, will now be eligible for re-election to the Board of Directors. All proposed amendments passed without dissent.

"A separate forum for NAAS Delegates and other organizers of the American Junior Academy of Science provided an opportunity for participants to share topics of interest and concern relating to the function of state academies. In particular, several of the participants expressed frustration that their academies were not actively involved with or otherwise unsupportive of their state junior academies. Participants expressed admiration for the positively supportive relationship of these two entities apparent in Tennessee.

"Another topic of interest at the forum related to the successful campaign by the Kentucky Academy to obtain commitments for institutional membership from most of their states colleges and universities. In return, all faculty, staff, and students who apply are provided free membership in the academy. Not surprisingly membership in their academy has increased dramatically. Such an approach might be feasible in Tennessee.

"Forum organizers proposed that the Academies host a quarterly conference call for academy presidents or directors. Participants replied that such an activity would have no impact unless a specific agenda was set forth in advance.

"The Section on General Interest in Science and Engineering (Section Y) held its annual business meeting on February 20. Barbara Gastel directed the meeting in the absence of Chair Katherine Sullivan. Section Secretary JoAnn Valenti solicited suggestions for symposia to be sponsored by the Section at the 2011 AAAS Meeting. She also announced her pending retirement in 2011 and urged anyone interested in assuming her position to contact her. Other than the recitation of reports, nothing of substance transpired.

"On February 20, Lynn Elfner and Jay Labov led a Section Y sponsored symposium entitled Plato's Progeny: Academies of Science. William Colglazier, Executive Director of the National Academy of Sciences, spoke about their 147 year history of providing expert scientific advice to governmental organizations and the importance of continuing to bridge the divide between science and society. Jose Antonio de la Pena, Past-President of the Mexican Academy of Science, spoke about the importance of international cooperation

between scientists and their affiliated institutions. Lynn Elfner advocated greater involvement and advocacy by state academies in their state governments on all matters relevant to science and science education. He cited several examples of successful outreach on the state level and mentioned several individuals who were intimately involved with their state academies and who made highly significant contributions to society in various areas of science and engineering." Member-at-Large Pitts made a motion to accept the report. Past President Ervin seconded the motion and the motion carried.

REPORTS FROM COMMITTEES

Education Committee—Chairperson Kim Cleary Sadler reported on results from the TAS website survey administered at the 2009 Annual meeting. At the April 2008 Executive Committee meeting, the Education Committee and the Publicity and Research Committee were encouraged to solicit input from the membership on the type of information that should be included on the website. Executive committee members discussed some of the comments and suggestions from the survey. The most common response was that the website should be "more user-friendly". Chairperson Sadler also reported that Middle Tennessee State University video services began work with TAS on a video project in conjunction with the Junior Academy. Some of the Junior Academy presentations were videotaped with plans to load sample clips on the TAS website. This project is funded through a NSF-funded initiative called TRIAD. Chairperson Sadler also reported that the Education Committee needs additional members. Member-at Large Pitts made a motion to accept the report. Past President Ervin seconded the motion and the motion carried.

Fellows Committee—Chairperson Charles McGhee was not in attendance and submitted no nominations.

Financial Oversight—Treasurer Steve Murphree reported that Dr. Thomas C. Wooten, Associate Professor of Accounting from Belmont University continues to assist in Financial Oversight.

Long-Range Strategic Planning Committee—Chairperson Gore Ervin discussed proposed locations for future Academy meetings. The 2010 meeting will be hosted by Tennessee Technological University in Cookeville. The current proposal is for the 2011 meeting to be held at Union University in Jackson with the 2012 TAS Centennial meeting to be held in Nashville (location of the first meeting). Possible Nashville locations were discussed. President Gibson suggested establishing a Centennial committee to work on plans for the 2012 meeting and that a final decision on the location should be made at the fall Executive Committee meeting. Options for the 2013 meeting include The University of Tennessee Space Institute in Tullahoma or Fisk University in Nashville. The meeting would return to East Tennessee in 2014. It was noted that Lincoln Memorial University has offered to host the meeting.

Membership Committee—Chairperson Karen Kendall-Fite was not in attendance.

Necrology Committee—Chairperson George Murphy did not submit a report, but it was noted by Executive Committee members that Dr. Clay Chandler, Professor Emeritus from Middle Tennessee State University died on November 17, 2009, and Dr. Michael Daley of The University of Memphis died on February 8, 2010.

Publicity and Research Committee—Chairperson Mandy Carter-Lowe reported that certificates were prepared for student winners from the 2009 Annual meeting, but emphasized the importance of identifying the specific student presenter when multiple student authors were listed. Carter-Lowe was encouraged to solicit assistance from Meeting Coordinator Eugene DeSilva. Chairperson Carter-Lowe also reported that she had been in contact with The University of Tennessee Space Institute (UTSI) and noted administrative changes. UTSI approval must come from Executive Director Dr. Robert Moore. Chairperson Carter-Lowe also commented on the TAS website survey and proposed an on-line survey to the full membership including questions about the website and other issues such as the possible transition to an electronic journal. The Executive Committee agreed to table this discussion until the Fall Executive Committee meeting, following website revisions.

OLD BUSINESS

It was announced that Dr. Eugene DeSilva of Lincoln Memorial University has agreed to serve as the Meeting Coordinator. Dr. Michael Redding, former Meeting Coordinator will work with Dr. DeSilva during the transition period and in planning for the 2010 Annual meeting. Dr. Steve Murphree reminded the Executive committee that he does have the Academy banner.

NEW BUSINESS

Secretary Teresa Fulcher distributed documentation from Dr. Martin Stewart concerning the nomination of Dr. Scott T. Handy for the TAS Distinguished College/University Scientist Award. After discussion, Member-at-Large Kent Wallace made a motion requesting resubmission of the nomination to more specifically address contributions to the State of Tennessee. Member-at-Large Gilbert Pitts seconded the motion and the motion carried. Director Jack Rhoton made a motion that a committee be formed to review applications for Academy awards and proactively solicit applications so that awards are given each year. Member-at-Large Kent Wallace seconded the motion, and the motion carried. President Gibson will appoint committee members. It was suggested that the deadline for awards nominations be changed from April to an earlier spring date to allow for the committee to review these nominations.

Members of the Executive Committee discussed possible ideas to commemorate the 100th anniversary of the Academy. President Gibson will serve as the Chair of a Centennial committee to make recommendations at the fall meeting. Past Presidents Gore Ervin and George Webb will serve on this committee.

At 10:08 PM CDT, Director Jim Howard made a motion to adjourn the meeting. The motion was seconded by Treasurer Steve Murphree and the motion carried.

TENNESSEE ACADEMY OF SCIENCE EXECUTIVE COMMITTEE MEETING 18 NOVEMBER 2010

President Michael A. Gibson called the meeting of the Tennessee Academy of Science (TAS) Executive Committee to

order at 7:02 PM CST in Room 135 of the Millard Oakley STEM Center, Ray Morris Hall, and welcomed all members of the Executive Committee. Attendees were President-Elect Jeffrey Boles, Past President Gore Ervin, Treasurer Steve Murphree, Secretary Teresa Fulcher, Managing Editor Stephen Stedman, Junior Academy of Science Director Jack Rhoton, State Department of Education Liaison Linda Jordan, Education Committee Chairperson Kim Cleary Sadler, Publicity and Research Committee Chairperson Mandy Carter-Lowe, Member-at-Large Gilbert Pitts of Austin Peay State University, Meeting Coordinator Eugene DeSilva, George Webb of the 2010 Local Arrangements Committee, 2011 President-Elect Andy Andrews of Oak Ridge National Laboratories, and Wayne Wofford of the 2011 Local Arrangements Committee from Union University.

President Michael A. Gibson introduced Executive Committee members and thanked Tennessee Technological University (TTU) and Jeffrey Boles and George Webb for hosting the meeting and providing dinner for the Executive Committee members. President Gibson entertained a motion to accept the minutes from the April 2010 meeting of the TAS Executive Committee. Steve Murphree made a motion to approve the minutes, seconded by Stephen Stedman. The motion carried.

REPORTS FROM OFFICERS AND DIRECTORS

Past President—M. Gore Ervin had no report.

President-Elect and 2010 Program Chair—Jeffrey Boles reported that the Tennessee Technological University local arrangements committee was well organized and there were many people deserving of thanks. Registration for the 2010 meeting will begin at 7:30 AM in the Millard Oakley STEM Center with breakfast provided. President-Elect Boles reported that the Auditorium for the plenary address will hold 250 people and that the President of Tennessee Technological University, Robert R. Bell, will welcome the Academy at 9:00AM.

Treasurer—Steve Murphree discussed the treasurer's report showing total assets of \$160,309.29. Treasurer Murphree reported that the Vanguard Star Fund had recovered very well during this fiscal year. Membership dues, including Institutional Sustaining Memberships were up. The 2010 program shows those Institutional members. Treasurer Murphree indicated that increased income may result in the Academy having to file the IRS Tax Form 990 (required of non-profit organizations with income typically over \$25,000 per year). Treasurer Murphree did announce that he will be removing people from the membership database if they are more than two years behind with their dues payment. Email reminders will be sent in the spring. The Academy currently has 387 members in good standing. Treasurer Murphree's full report follows. Andy Andrews made a motion to accept the treasurer's report. Jeffrey Boles seconded the motion and the motion was approved.

Managing Editor—Stephen Stedman submitted the following report:

"The new online manuscript submission and review program, PeerTrack Essentials, has operated fairly smoothly since it was launched during early April 2010. About half

Income/Expense by Category 7/1/2009 through 6/30/2010

Category Description	7/1/2009– 12/31/2009	1/1/2010– 6/30/2010	OVERALL TOTAL
INCOME			
Gale Group			
Dividend Income	105.19	55.88	161.07
Gift Received	100.00	30.00	130.00
Library Journal			
Subscriptions	1,170.00	430	1,600.00
Meeting Lunch	888.00	0	888.00
Meeting Registration	2,745.00	0	2,745.00
Membership Dues	11,980.00	1,130.00	13,110.00
Page Charge For Journal	1,890.00	990.00	2,880.00
Vanguard Dividend Payment	1,681.91	2,414.80	4,096.71
TOTAL INCOME	20,560.10	5,050.68	25,610.78
EXPENSES			
Annual Meeting	4,482.48	0	4,482.48
Bank Charge	6.00	5.00	11.00
Collegiate Division	300.00	2,020.00	2,320.00
Dues and Fees	160.70	0	160.70
Executive Committee			
Meetings	454.20	425.25	879.45
Journal	100.00	85.00	185.00
Journal printing	6,154.47	3,657.69	9,812.16
Junior Academy of Science	2,233.69	1,818.01	4,051.70
Misc. Expenses	50.00	79.35	129.35
Renewal Fee	185.00	0	185.00
Science Fair	400.00	1,190.00	1,590.00
Secretary	70.00	22.25	92.25
TJAS Award	500.00	3,100.02	3,600.02
Travel Expenses of Executive Committee	632.70	1,465.08	2,097.78
Treasurer	10.96	0	10.96
Unrealized Gain- Loss on Star Fund	0	-14,568.28	-14,568.28
TOTAL EXPENSES	15,740.20	-700.63	15,039.57
OVERALL TOTAL	4,819.90	5,751.31	10,571.21

dozen new manuscripts have been received via the new manuscript submission program, and review of these manuscripts has been handled fairly effectively by the appropriate section editors and reviewers using the program. As of 10 November 2010 approximately eight articles, including two from the AllenTrack Essentials era, remain in the publication pipeline in various stages of review and preparation for publication.

“Following publication and mailing of *JTAS* 85-1 during late March 2010, *JTAS* 85-2, comprised mainly of three research articles, was printed and mailed during late June 2010. *JTAS* 85-3–4, a combined issue for September and December 2010, is scheduled to be printed and mailed by late November 2010.

“Two new section editors and one interim section editor were added to the editorial board during 2010 and require

approval of the Executive Committee, as follows: Dr. Patricia Patterson (Middle Tennessee State University; MTSU)—new section editor for Science and Math Teaching; Dr. David Yarbrough (retired TTU)—new section editor for Engineering; and Dr. Steve Murphree (Belmont University)—interim section editor for Zoology.

“The TAS website was modified to include a link to the journal’s online manuscript submission and review program during late April 2010, a change that is much appreciated by the *Journal* staff; thanks go to Director Jim Howard for making this change. The TAS website was also modified to include a link to the *JTAS* Homepage; thanks also go to Director Jim Howard for making this change. A request is hereby made for approval from the Executive Committee to add links to PDFs of all issues of *JTAS*, Vol. 1–80, to the *JTAS* Homepage.

“As a means of compensating the *JTAS* Assistant Editor, Dr. Christy Carter, for considerable gratis editorial work performed for the *Journal*—especially with abstracts of papers presented at annual and collegiate meetings and with research articles published in the *Journal*—the waiver of page charges for publication of one article in the journal is recommended by the Managing Editor, who seeks support from the Executive Committee.

“Volume 87 (2012) of *JTAS* is contemplated to commemorate the TAS Centennial. Extra pages will be needed to accomplish this task; waiver of page charges for some specially commissioned material is also needed. Discussion of these points and others relating to the centennial issue is requested at this meeting of the Executive Committee.”

Managing Editor Stedman reported that according to the TAS constitution, the *Journal* is published in January, April, July, and October. The *Journal* is currently being published in March, June, September, and December. Managing Editor Stedman recommended that the constitution be changed to reflect this current practice. In Article VI: Publication, Section 1: Title and Frequency, the constitution currently reads: *The official publication of the Academy shall be called Journal of the Tennessee Academy of Science and shall normally be published as four issues per year. (January, April, July, October).* Andy Andrews moved that it be recommended to the full membership that the months of publication be removed from the constitution. Gilbert Pitts seconded the motion. After discussion on whether the wording should be changed to prescribe two to four issues per year rather than four, members of the Executive Committee agreed that the constitution wording on the number of issues should not change. If necessary, published issues could be combined. The motion carried to remove the months of publication, and the recommended change will be announced to the full membership at the TAS Annual Business meeting on Friday 19 November 2010 with voting occurring in 2011. Managing Editor Stedman recommended that the centennial volume of the *Journal* should include a copy of the TAS constitution.

Managing Editor Stedman noted that the constitution dictates the Managing Editor be elected every 3 years. President-Elect Jeffrey Boles made a motion to re-elect Stephen Stedman as Managing Editor of the *Journal* for a three-year term from 2011–2013. President Gibson seconded the motion and the motion carried by acclamation.

Managing Editor Stedman described for the Executive Committee near complete efforts to convert back issues of the

Journal to Portable Document Format (PDF) files. Stedman reported receiving at least one request per week for back issues of the *Journal* and proposed loading volumes 1–80 onto the *Journal* website and to the TAS website. Secretary Fulcher made a motion to authorize Managing Editor Stephen Stedman to post as PDF files, volumes up through the past five years to the *Journal* website for open access. Past President Gore Ervin seconded the motion, and the motion carried. President Gibson suggested the centennial papers be exempt from the five-year delay. Past President Gore Ervin made a motion to accept the recommended journal Section Editors (Patterson, Yarbrough, and interim Murphree). Member-at-large Gilbert Pitts seconded the motion and the motion carried. Treasurer Murphree made a motion to authorize the Managing Editor to negotiate page charges with authors. Education chairperson Kim Cleary Sadler seconded the motion, and the motion carried.

Collegiate Division—Director Fred Matthews was not in attendance but submitted a written report on the 2010 and projected 2011 Collegiate Division meetings. The Eastern division meeting was held at Walters State Community College on 24 April 2010 with 6 paper and 9 poster presentations. The Middle division meeting was held at Belmont University 17 April 2010 with 32 paper presentations. The Western division meeting was held at Christian Brothers University with 29 paper and 5 poster presentations. The 2011 Collegiate Division meetings are scheduled for Walters State (Eastern), Belmont University (Middle), and The University of Tennessee at Memphis (Western), with dates to be announced. Members of the Executive Committee suggested that records of past Collegiate Division meetings be compiled and verified by the membership for possible publication in the centennial volume of the *Journal*.

Electronic Communications—Director Jim Howard was not in attendance but submitted a written report indicating that due to personal obligations he was recommending that the Executive Committee consider a replacement for the position of Director of Electronic Communications. In Executive Committee discussion, the contributions and long service of Director Howard were noted and appreciated. It was suggested that since the current website host relationship with MTSU was largely dependent on Director Howard's MTSU affiliation, it would be prudent to investigate other possible hosts. The MTSU Academy webpage could be set to redirect to a new host for one year. Andy Andrews reminded the Executive Committee that the Academy did own two domain names. President Gibson proposed that an ad hoc committee be established to recommend a new Director of Electronic Communications, rewrite the duties of that position, and develop an interim plan for preserving information on the current website and working toward development of a structure for the new site. The following individuals offered to serve on that committee: Stephen Stedman, Steve Murphree, Gore Ervin, and Andy Andrews. Gilbert Pitts was appointed by President Gibson to Chair the committee and Jim Howard will be asked to serve. Secretary Fulcher agreed to find in the Academy records and minutes any information of the creation of the Director of Electronic Communication position, and the current job description.

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

"The 2010 spring meeting of the Tennessee Junior Academy of Science (TJAS) met Friday, April 16, on the

campus of Belmont University. This year one hundred and six students were involved in TJAS research, from throughout the state. Prior to the April 16 meeting, a panel of readers selected twenty-three students who were invited to present their research papers at the annual meeting. The panel of judges at the annual meeting selected the two top presenters. They were: Hau Phan, et al., Hume-Fogg Academic Magnet High School, Nashville; and Ashley B. Fugua, Greenbrier High School, Greenbrier. The title of Phan's paper was "Identification in Apolipoprotein B mRNA-editing Catalytic Polypeptide-like 3 F Core Localization Signal." Ms. Brooke's paper was titled "The Kinetics of Ethanol Production during Fermentation of a Variety of High-Starch Plants." These two Papers of Excellence were published in the 2010 issue of the *Handbook and Proceedings of the Tennessee Junior Academy of Science*, along with eleven other papers of the top thirteen winners. The winners of the top two papers received \$500 each and the eleven other top winners each received \$200.

"During the April meeting, a plaque and a small honorarium (\$100) was presented to an outstanding secondary science teacher from each region of the state: East, Middle, and West. Recipients of this year's awards are: Sandy Adams (Middle School Science Teacher), Del Rio School, Del Rio; Kathy Lee (Middle School Science Teacher), Martin Luther King Magnet School, Nashville; and Molly Escue (Chemistry 1, Chemistry 11, Physical Science and Principles of Technology Teacher), Halls High School, Halls. These TAS outstanding secondary science teaching awards recognize teachers for their outstanding contribution to science teaching and for stimulating and inspiring students to an active interest in science.

"In addition, TAS supports four \$100 awards to science fair winners in the Upper East Tennessee Science Fair. This year's science fair met on Thursday, April 22, on the campus of ETSU. Two recipients were recognized in the biological sciences category and two in the physical science category.

"Judges for the April 16 TJAS meeting were Dr. Preston J. MacDougall and Dr. Gore Ervin from MTSU, Dr. Lewis Myles of Tennessee State University, and Dr. Chih-Che Tai of East Tennessee State University (ETSU).

"Mr. Luke Diamond has been named the recipient of the 2010 Tennessee Academy of Science Distinguished Science Teacher Award. Luke, who currently teaches three sections of Conceptual Physics (grade 9) and one section of AP Physics (Mechanics) at Pope John Paul 11 High School, Hendersonville, will receive the award on November 19, during the Tennessee Academy of Science Annual meeting at TTU. 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, Mr. Diamond will receive from TAS a \$500 cash award, a plaque and a certificate. (A press release 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 are:

- Alan Redmond (1997) John Sevier Middle School, Kingsport, TN

- Linda Phelps (1998) Camden Central High School, Camden, TN
- Jane Whitaker (1999) Lenoir City High School, Lenoir, TN
- Pat Carpenter (2000) McDonald School, Mohawk, TN
- Gary Barrigar (2001) Elizabethton High School, Elizabethton, TN
- Kathryn Gemmer (2002) University School, Johnson City, TN
- Constance Brown (2003) McEwen High School, McEwen, TN
- Jan Coley (2004) Jefferson County High School, Dandridge, TN
- Marion Pitts (2005) Westview High School, Martin, TN
- Jennifer Dye (2006) Pope Paul 11 High School, Hendersonville, TN
- Ronnie L. Nixon (2007) Greenbrier High School, Greenbrier, TN
- Sarah Elizabeth Millsap (2008), Blackman High School, Murfreesboro, TN
- Laura Robertson (2009) University School, Johnson City, TN
- Luke Diamond (2010) Pope Paul 11 High School, Hendersonville, TN”

Director Rhoton distributed copies of the *Handbook and Proceedings of the Tennessee Junior Academy of Science 2010* to Executive Committee members and offered formal thanks to Belmont University for hosting the spring meeting. There was a discussion regarding whether the Junior Academy of Science papers could be posted on the TAS website. The consensus was that since the papers were not peer reviewed, the papers should not be available on the website. Education Chair Kim Cleary Sadler reminded Executive Committee members of the MTSU videotaped interviews with Junior Academy participants at the 2010 spring meeting.

Visiting Scientist Program—The directorship of the Visiting Science Program is currently open pending appointment by the TAS President. The Visiting Scientist Program Director maintains a database of scientists willing to participate in the program, develops flyers and brochures, disseminates information to teachers that might take advantage of the program, and provides updates for the TAS website. Currently the Visiting Scientist Program is divided into three regions, east, middle and west. President-Elect Jeff Boles suggested that STEM (Science, Technology, Engineering, and Mathematics) Center Directors might be able to recommend to the TAS potential candidates to serve as Director of the Visiting Scientist Program. State Department of Education Liaison Linda Jordan offered to send names of STEM Center Directors to President Michael A. Gibson. President Gibson appointed an ad hoc committee to identify candidates for the Director of the Visiting Scientist Program. Serving on that committee are State Department of Education consultant Linda Jordan, President-Elect Jeff Boles, Education Chairperson Kim Cleary Sadler, and Director of the Junior Academy of Science Jack Rhoton.

REPORTS FROM REPRESENTATIVES

State Department of Education—Science consultant Linda Jordan updated members of the Executive Committee on the status of the state science standards. Consultant Jordan stated that currently science is not a course in which adequate yearly

progress or AYP is measured, and for that reason, elementary programs may not place an emphasis on science education. She indicated that science standards may soon be measured for adequate yearly progress. Consultant Jordan reported on Race to the Top funding. The State of Tennessee received approximately 500 million dollars. Half of those monies will go to the districts with half remaining with the State Board of Education earmarked for revision of standards, accountability and streamlining. UT-Battelle is working with Oak Ridge Associated Universities (ORAU) in a partnership to serve STEM leaders throughout the state and in the development of Platform Schools. Platform Schools will incorporate best practices for STEM education and will share those practices with other schools. One Platform School will be a virtual school to serve rural populations. Race to the Top money is also being used to fund the UTeach Institute to develop and train more teachers in STEM areas.

AAAS Section Y Representative—Michael Redding was not in attendance and will report on the AAAS Annual meeting at the April 2011 Executive Committee meeting.

REPORTS FROM COMMITTEES

Financial Oversight—Treasurer Murphree submitted a financial review on behalf of Thomas C. Wooten, Ph.D. Professor of Accounting at Belmont University. The findings of this review were as follows:

“We noted appropriate support was available for all deposits and all disbursements that we selected for testing. We found that the bank account appeared to be properly reconciled, and after adjustment, the Vanguard account agrees to the balance reported by Vanguard on the June 30, 2010 statement.”

Treasurer Murphree continues to inquire as to bonding and liability insurance for the Academy. He agreed to contact treasurers of other state academies of science concerning the type(s) of insurance that they maintain and report at the spring 2011 Executive Committee meeting. Managing Editor Stedman made a motion to accept the Financial Oversight Report. Gore Ervin seconded the motion and the motion carried.

Nominating Committee—Chairperson Gore Ervin submitted the following slate of officers for 2011: Andy Andrews—President-Elect, Teresa Fulcher—Secretary, and Steve Murphree—Treasurer. These nominees will be submitted for approval at the 2010 Annual Business Meeting on Friday 19 November 2010.

Education Committee—Chairperson Kim Cleary Sadler submitted the following report:

“The education committee members are as follows: Dr. Kim Cleary Sadler, Chair (MTSU); Dr. Jack Rhoton (ETSU); Dr. Cindi Smith-Walters (MTSU); Dr. Linda Jordan (Tennessee Department of Education); and newly appointed Dr. Peter Zhao (ETSU). An invitation to join the TAS Education Committee has been accepted by Beth Shussler, Department of Biology, UT Knoxville.

“The largest science teacher associated group is hosting their regional meeting in Nashville, Dec 4–6. National Science Teachers Association (NSTA) has an affiliated group of scientists with an educational interest that also meet during the conference called the Society for College Science Teachers (SCST). SCST oversees the publication of the *Journal for College Science Teaching*.

"A multi-institutional MSP NSF proposal was recently submitted by partner institutions in Tennessee which is designed to train high school science teachers on "modeling instruction" in physical world concepts (PWC), chemistry, and biology. If funded, this initiative will lead to an inverted high science curriculum (PWC-freshman year of high school, chemistry-sophomore year of high school, and biology-junior year of high school) for many school districts in the state.

"No Child Left Inside is the catchphrase for a national movement to reconnect children and nature. A coalition has formed in Tennessee to promote and support opportunities that encourage children to engage with the outdoors. For more information about children and nature you can go to Every Child Outdoors TN (<http://www.everychildoutdoorstn.org/>) or to the National Website <http://www.childrenandnature.org/>. The National Wildlife Federation (NWF) has released a report entitled Children and the Outdoors State Policy Solutions Guide. The report is meant to serve as a resource to state affiliates and all the other organizations and coalitions seeking policy solutions to connect children and families with nature. Many creative policy initiatives have been launched spanning the policy areas of education, public health, parks and recreation, and the built environment. This single document brings these policies together, and synthesizes them. A copy of the full report is available at the NWF web site at http://www.nwf.org/nwfwebadmin/binaryVault/State_Policy_Solutions_Guide_FINAL.pdf.

"For the past three years Tennessee State Parks and Tennessee Wildlife Resources Agency (TWRA) along with Tennessee Environmental Education Association have hosted an annual Tennessee Outdoor Classroom Symposium (TOCS) at various locations in Middle Tennessee. Each year between 200 and 300 participants attend along with presenters, exhibitors and volunteers. Participants are largely classroom teachers, although youth leaders, informal educators, and agency/organization staff educators also attend. Past locations have been Ellington Agricultural Center (Nashville), Montgomery Bell State Park, and Wilson County Fairgrounds (Lebanon). For information on the next TOCS contact Patricia Miller (TWRA) at Patricia.Miller@tn.gov.

"An effort is underway in the state to encourage Environmental Literacy (EL) at all grade/age levels within public schools. Contacts have been made with Linda Jordan at the State Department of Education, a timeline developed to have EL approved/connected to Tennessee State Standards, and fundraising through grants has begun. For more information you can go to the Tennessee Environmental Literacy Project (<http://www.enviroliteracy.org/subcategory.php/89.html>) or contact the Working Group Chair Hilary Hargrove at hargroveh@bellsouth.net.

"The Tennessee Naturalist Program (TNP) is a corps of volunteers providing education, outreach, and service dedicated to the beneficial management of natural resources and natural areas within their communities. Tennesseans interested in this program become Tennessee Naturalists through training and volunteer service. The first TNP training is currently being held at Owl's Hill Nature Center in Nashville. The training consists of 10 'courses' focusing on various aspects of Tennessee's natural world; forests, geology, amphibians, birds, etc. Each course is 4 hours long with at least 50% of the time 'in the field'. Upon completion of the 40 hour training participants must also provide 40 hours of approved 'volunteer' work. Choices include, but are not

limited to: classroom presentations, working with youth, All Taxa Biodiversity Inventory (ATBI), and trail maintenance. Currently steps are being taken to expand the program and secure additional funding. For more information go to: <http://www.owlshill.org/tnpcourse> and/or contact David Hill of Tennessee State Parks/TDEC (David.R.Hill@tn.gov) or Cindi Smith-Walters (csmithwa@mtsu.edu)."

Fellows Committee—Chairperson Charles McGhee submitted no nominations.

Long-Range Strategic Planning Committee—Chairperson Gore Ervin discussed potential locations for future TAS meetings. The 2011 meeting is scheduled to be held at Union University in Jackson. The 2012 centennial meeting will be held in Nashville. The 2013 meeting is scheduled for the middle region of the state and possibilities include UTSI (University of Tennessee Space Institute), and Fisk University. President-Elect Jeffrey Boles agreed to schedule a meeting with someone at UTSI for a tour to help determine if the UTSI facilities are appropriate for our meeting. Publicity Chairperson Mandy Carter-Lowe will forward contact names to President-Elect Boles.

Membership Committee—Chairperson Karen Kendall-Fite submitted the following report:

"Previous plans to address membership numbers have included an attempt to identify a membership contact at each institution where we have more than ten current members, surveying current members to determine what factors influenced them to join initially and providing an electronic newsletter to make TAS activities known to the membership. Initial attempts at identifying contacts at institutions to introduce new faculty have not been successful. I would like to survey members this spring regarding their decision to join TAS. This would be a survey conducted through email. The initial plan to send the newsletter quarterly proved to be difficult and I am considering a shorter version, three times a year to provide information about the annual meeting activities, to address any activities associated with the Junior Academy and Collegiate Division, and to encourage attendance at the annual meeting."

Necrology Committee—Chairperson George Murphy was not in attendance. The following names were submitted for mention at the Annual Meeting: Dr. Michael Daley, Dr. Clay Chandler, and Dr. Robert Martin.

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

"George Webb prepared a press release for TTU public affairs staff which focused on the history of TAS and TTU. Mandy Carter-Lowe relayed additional meeting details. A resulting article was sent out through the TTU campus electronic news publication on 12 November 2010. Dr. Webb suggested local newspapers may have also printed it. Additionally, a standard press release was sent via email to daily newspapers, radio stations, and TV stations in Tennessee announcing the 120th annual meeting to be held at Tennessee Technological University in Cookeville."

Resolutions Committee—Chairperson David Pitts submitted a Resolution of Appreciation to be read at the Annual Business Meeting.

OLD BUSINESS

Local Arrangements Committee Chairperson Wayne Wofford from Union University reported on plans for the

2011 meeting. Chairperson Wofford reported that the meeting will be held 27–28 October 2011 and several rooms have already been reserved. There is an available room which holds 500 people for the plenary lecture. Chairperson Wofford will work to negotiate rates at hotels in Jackson and will work with Aramark food services to come up with menu choices for the luncheon. President Michael A. Gibson recommended that a field trip to the Coon Creek Science Center in McNairy County be arranged.

NEW BUSINESS

It was announced that the spring Executive Committee meeting will be held 15 April 2011 at Belmont University.

Publicity Chairperson Mandy Carter-Lowe encouraged Executive Committee Members to work with Section Chairs to make sure that student presenters are clearly identified for award purposes. Only the student presenting the paper is eligible for the award. George Webb announced that there will be a round table discussion on centennial planning held at 3:45 PM in room 260 and invited all Executive Committee members to attend. At 10:30 PM CST Mandy Carter-Lowe made a motion to adjourn the meeting. The motion was seconded by George Webb and the motion carried.

Respectfully submitted,

Teresa L. Fulcher

Secretary, TAS

Pellissippi State Community College