

PROCEEDINGS OF THE TENNESSEE ACADEMY OF SCIENCE 2006

SARAH H. SWAIN, SECRETARY TAS

Middle Tennessee State University, Murfreesboro, Tennessee

TENNESSEE ACADEMY OF SCIENCE
EXECUTIVE COMMITTEE MEETING
21 April 2006

President John W. Harris called the meeting of the Executive Committee of the Tennessee Academy of Science (TAS) to order at 6:40 PM CDT in the Massey Business Building on the campus of Belmont University, Nashville, Tennessee, 21 April 2006. Attendees were Past President Stephen Wright, Meeting Coordinator Michael Redding, President-elect and 2006 Program Chair George Webb, Treasurer Steve Murphree, Secretary Sarah Swain, Managing Editor Gore Ervin, Director of the Tennessee Junior Academy of Science (TJAS) Jack Rhoton, Director of Electronic Communications James Howard, Member-at-large 2005-2007 and 2006 Local Arrangements Chair Steve Hamilton, Member-at-large 2006-2008 Jeffrey Boles, Publicity and Research Committee Chair Mandy Carter-Lowe, and Reelfoot Lake Fieldtrip Planning Committee Member Andy Sliger.

President Harris welcomed Executive Committee members and introduced new committee members. President Harris thanked TAS Treasurer Steve Murphree and Belmont University for the delicious meal and comfortable meeting space provided for the committee. Secretary Swain had sent minutes of the November 2005 meeting to all committee members. A motion to approve the minutes passed.

REPORTS FROM OFFICERS
AND DIRECTORS

President-elect and 2006 Program Chairperson—George Webb discussed plans for the November 2006 annual meeting to be held 16-17 November on the campus of Austin Peay State University, Clarksville, Tennessee. A symposium on the role of science in global security has been proposed and will be finalized in the near future. Discussion of the selection of a suitable keynote speaker followed. President-elect Webb will notify the Executive Committee when the Local Arrangements Committee reaches a final decision and an invitation to speak has been accepted.

Treasurer—Steve Murphree discussed the following report:

CASH BALANCE—JULY 1, 2005	\$5,144.29
RECEIPTS	
Membership Fees	6,115.00
Institutional Dues	4,500.00
Library Subscriptions	1,710.00
Interest Earned, US Bank	8.59

Contributions	140.00
Annual Meeting Registration and Meal Fees	4,749.00
Page Charges	1,800.00
TJAS Trust Fund	4,343.09
Miscellaneous Income	53.60
TOTAL RECEIPTS	23,419.28
TOTAL CASH AVAILABLE	28,563.57
DISBURSEMENTS	
<i>Journal</i>	8,783.15
Tennessee Junior Academy of Science	7,602.39
Treasurer's Expenses	19.97
Secretary's Expenses	10.00
Travel	1,437.69
Annual Meeting Expenses	4,041.88
Plaques and Awards	135.50
Dues and Fees	556.48
Web Site Maintenance	89.95
Science Fairs and Olympiads	1,190.00
Collegiate Division	600.00
Miscellaneous Expenses	816.37
TOTAL DISBURSEMENTS	25,283.38
CASH BALANCE—April 21, 2006	3,280.19
Receipts	23,419.28
Disbursements	25,283.38
Cash Decrease	-1,864.10
BREAKDOWN OF HOLDINGS	
US Postal Service, Cookeville, TN	161.14
US Postal Service, Lawrence, KS	196.25
Checking Account, US Bank	3,202.11
TAS HOLDINGS—April 15, 2004	3,559.50
TJAS TRUST FUND (Vanguard Star Fund)	
(9,266.457 shares—4/21/06)	
Account Value—12/30/05	187,004.59
Disbursements (Dividend Distributions) 12/19/05	2,679.78
Account Value—4/21/06	189,684.37
TOTAL VALUE OF HOLDINGS— April 21, 2006	\$193,243.87

Treasurer Murphree reported that names of dues-delinquent members would be removed from the TAS membership roster after two years of non-payment. A second reminder via email will be sent to delinquent members in mid May. Meeting Coordinator Redding recommended that an inactive

member database be maintained so that occasional invitations to update membership could be issued. Annual solicitation of dues will be mailed to the membership in June. Most of the current cash balance shown in the Treasurer's Report will be used in the near future for *Journal* expenses. Treasurer Murphree asked the Executive Committee to offer ideas for generating revenue to help meet the *Journal* expenses. Page charges were increased during 2005, but the effect was offset by rising publication and mailing expenses. Managing Editor Ervin pointed out that thirty or so pages needed to print TAS Proceedings in each year's January issue were totally at TAS expense. A motion to accept the Treasurer's report passed.

Managing Editor—Gore Ervin discussed the following report:

"There were a total of seven manuscripts submitted during calendar year 2005. Four of these have been published or are 'in press', two are awaiting author revisions, and one paper was rejected. There have been two papers submitted thus far in 2006 and both of these are in zoology. One was returned to the authors for revision and one is currently being reviewed. Due to the low number of manuscript submissions, the January and April 2006 issues were combined as 81(1-2) and should be mailed by the end of April. This issue contains the proceedings and abstracts of the 2005 Academy meeting and one research paper. Unless there is a near-term increase in submissions, the July and October 2006 issues will be combined and will include at least two research papers plus the Abstracts of the spring 2006 Collegiate meetings."

Decline in manuscript submissions stimulated committee discussion. Most committee members agreed that page charges were reasonable and comparable to other similar journals. Manuscript submission should be promoted in the newsletter and by section chairs at annual meetings. A motion to accept the Managing Editor's report passed.

Meeting Coordinator—Michael Redding will provide a full report of annual meeting plans at the November 2006 Executive Committee meeting.

Collegiate Division—Director Fred Matthews did not submit a report. A report of the activities of the TAS Collegiate Division is expected at the November 2006 Executive Committee meeting.

Electronic Communications—Director James Howard reported that the web site at www.mtsu.edu/~tnacadsc is functioning and pages are being updated as materials are provided. The member database is up-to-date according to the membership list provided by Treasurer Murphree in December. The Fellows database is awaiting more details to allow searches according to various criteria. The web site continues to serve as a source of contacts for science project help through the Networks Program link. Director Howard expects to update the membership database twice each year as changes are received from the TAS Treasurer. The suggestion to expand promotion of TJAS on the web site was discussed briefly. A motion to accept the Director's report passed.

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

"The spring 2006 TJAS meeting was held on Friday, April 21, 2006, at Belmont University in Nashville. A total of twenty-four students were invited to present their research papers. This year, ninety-one students were involved in TJAS research from throughout the state.

"During the April meeting, a framed certificate, and a small honorarium (\$100) was presented to an outstanding science teacher from each region of the three divisions of the state. The recipients of this year's awards are as follows: Ms. Elaine B. Colson (chemistry and physical science), McMinn Central High School, Etowah; Candy Miyake (eighth grade science), Franklin Middle School, Franklin; Rosemary A. Neville (biology and scientific research), Westview High School, Martin. These TAS Outstanding Science Teaching Awards recognize teachers for their outstanding contribution to science education and for stimulating and inspiring students to an active interest in science.

"The TAS recognized four students in the Upper East Tennessee Science Fair held on the campus of East Tennessee State University on April 6, 2006. Two top prizes were given: one to the student who placed first in the Biological Sciences category and one to the student who placed first in the Physical Sciences category. In addition, two students won Honorable Mention recognition: one from the Biological Sciences and one from the Physical Sciences category."

Director Rhoton expressed appreciation to Belmont University for hosting this year's TJAS meeting, for providing a comfortable and convenient meeting facility, and for generously providing lunch for all the participants. A motion to accept the Director's report passed.

Visiting Scientist Program—Director Michael Daley submitted information regarding activities in the Visiting Scientist and Networks Programs. A total of 378 email communications requesting information for the construction of the Tennessee Science Teachers Association (TSTA) Digest were sent. Thirty-seven responses included 9 negative responses, 60 invalid email addresses, and 37 positive responses. The 37 positive responses (14, 14, and 9) were received from the East, Middle, and West state regions, respectively. Director Daley plans to contact the 272 non-responders again in May. Director Daley would appreciate additional suggestions that might make the data collection more successful. A motion to accept the report passed.

State Science Consultant—Consultant Linda Jordan did not submit a report.

AAAS Section Y Representative—Representative Michael Redding discussed the following report:

"Representing the TAS, I attended the Annual Meeting of the American Association for the Advancement of Science (AAAS) in St. Louis on February 17-19, 2006. The following comments summarize my activities and information deemed pertinent to the TAS.

"At the AAAS Affiliates meeting representatives of the AAAS staff commented on some of their most recent organizational efforts, including a brief analysis of the federal science budget. Eugenie Scott, Director of the National Center for Science Education, gave a brief account of the importance of the recent Dover, Pennsylvania court decision, which struck a local school board decision to teach Intelligent Design in science classes.

"The Section on General Interest in Science and Engineering (Section Y) held its annual business meeting on February 18. Chairperson Rick Borchelt, presided. Carol Rogers, current Chair-Elect introduced Lynn Elfner, CEO of the Ohio Academy of Science, as the 2008 Chair-Elect. John Safko, Section webmaster, led a discussion on the ineffective linkage and use of the Section's website now hosted by the

AAAS at <http://science.aaas.org>. Section Secretary JoAnn Valenti announced the 2007 AAAS meeting theme would be "Sustainability: Science, Technology, and Well-Being". There followed a discussion about potential Section sponsored workshops for the 2007 AAAS meeting. State academies of science were asked to promote efforts to increase Section Y affiliation by AAAS members who do not specify a primary affiliation with a particular section. Affiliations may be designated during annual renewal or at any time via the member services options on the AAAS website.

"Past-President Ed Brogie (Nebraska) presided over the annual Assembly of Delegates of National Association of Academies of Science (NAAS) in place of President Dr. Kathleen Donovan (Oklahoma) who was being inducted at that time as a Fellow of the AAAS. Reports were received from all NAAS officers. Barbara Gadegebeku (New Jersey) was elected President-Elect and will follow 2006 President Michael Strauss (Virginia). The primary function of the NAAS is the organization of the annual American Junior Academy of Science (AJAS). The AJAS has a budget of about \$100,000 per annum generated from corporate fundraising and registration fees. This year fundraising generated approximately \$40,000. The 2006 AJAS program included 112 students, about the average participating for the previous five years.

"The NAAS Delegates Workshop was held on February 18. The workshop, a reprise of a similar effort in 2005, consisted of a panel presentation by representatives of the member organizations of the NAAS. Three of the member academies are honorary in nature, including the National Academies of Science, Engineering, and Medicine. The fourth and largest member, the National Research Council (NRC), is a group commissioned by Congress to provide guidance to the Congress whenever requested. Its primary responsibility is to organize and manage working groups composed of volunteer experts to analyze and recommend solutions to important problems relating to public policy. The NRC produces a steady stream of reports, books, and other publications relating to their research projects, many of which are available free-of-charge online or in hard copy. The full list of available publications can be found at www.nationalacademies.org. One recent publication, 'Rising Above the Gathering Storm', commissioned by Tennessee Senator Lamar Alexander and Representative Bart Gordon, describes the dire state of decline of science and engineering education in the United States and its ramifications for the future prosperity of the country. The report includes a list of prioritized actions to remedy the decline; some of the report's facts and actions were incorporated into the State of the Union address by President George Bush. If the President's words are followed by committal action, science and math educators in Tennessee and elsewhere should soon see dramatic increases in funding to support the education of thousands of new teachers and the career development of many thousands more."

After brief discussion, the Executive Committee approved a motion to accept the report.

REPORTS OF COMMITTEES

Auditing and Financial Oversight Committee—Dr. Robert Grammer, chair. Treasurer Steve Murphree reported on behalf of the Auditing and Financial Oversight Committee that a revision of the accounting categories had been recommended

by an accounting professor at Belmont University. Treasurer Murphree also discussed the possibility of allowing a graduate accounting class at Belmont University to be involved in the audit. A motion to follow the recommendations of the auditor was approved by vote of the Executive Committee. The report was accepted.

Education Committee—Chairperson Cindi Smith-Walters did not submit a report. A report from the committee is anticipated for the November meeting.

Long-range Strategic Planning Committee—Chairperson Steve Wright (as Past President) reported committee concerns regarding the Industry/Government Committee award. The role of the committee is unclear and the committee has been unable to identify appropriate award recipients in recent years. The value of such a committee to the purpose and goals of TAS is questionable. Past President Wright and President Harris outlined the history of the committee for the benefit of new Executive Committee members. After brief discussion a motion to discontinue the Industry/Government Committee was approved.

Publicity and Research Committee—Chairperson Mandy Carter-Lowe discussed the following report: "Digital pictures were taken at the November 2005 meeting at the University of Tennessee Martin by Karen Kendall-Fite and Mandy Carter-Lowe and placed on a CD-ROM for long term storage. Pictures of Marion Pitts and Michael Redding were emailed to Gore Ervin for use in the TAS journal. As requested by Dr. Ballal, digital pictures of him during his presentation at the November 2005 TAS meeting were sent to Michael Redding and forwarded. Certificates were prepared and mailed to student winners of oral and poster presentations at November 2005 annual meeting. Included with the mailing was an explanatory letter and application for TAS membership. The application was marked "FREE" with my initials in the payment area to indicate the complimentary student membership. A revised certificate was mailed to Dr. Willodean Burton of Austin Peay State University. The original certificate contained the name of "A. Atmar" who was listed as first author and third place poster winner for the Zoology section. It was her wish that the certificate be awarded to "Ecology Class Dr. Willodean Burton". Dr. Burton was told that she could select one student winner from the class to receive the free TAS student membership. Clarification as to where to send certificates for "J. Tinsley, Volunteer State Community College" and "D. Roberts, Misawa Air Force Base Japan" was provided by Michael Redding. Certificates were prepared and mailed to Michael Daley for winners of the Memphis-Shelby County Science Fair." The report was accepted.

OLD BUSINESS

Austin Peay State University (APSU) Local Arrangements Committee Chairperson Steve Hamilton discussed plans for the 2006 annual meeting. Area hotel rooms are being held and meeting spaces on campus are being arranged. Meeting Coordinator Mike Redding and President-elect George Webb will work with the APSU Local Arrangements Committee to finalize plans. Information on area hotels and other meeting registration information will be forwarded to Electronic Communications Chair James Howard for publication on the TAS web site.

Past President Steve Wright presented an official letter of invitation from the administration at Volunteer State Community College to hold the 2007 annual meeting on their campus in Gallatin, Tennessee. A motion to accept the invitation was approved.

Michael Gibson, Austin Peay State University, discussed the drafting of a position statement on the teaching of evolution. President Harris will ask Charles McGhee (MTSU), George Webb (TTU), and Michael Gibson (APSU) to serve as a committee to review a similar AAAS position statement and to advise Gibson on the composition of a similar statement for TAS as well as where such a statement would be published. The completed draft will be presented to the Executive Committee for review.

On behalf of the fieldtrip planning committee composed of TAS members Michael Gibson, Andy Sliger, and Wintfred Smith, Sliger discussed the TAS-sponsored Reelfoot Lake Fieldtrip. The fieldtrip was originally scheduled for November 19, 2005 at the annual meeting held at the University of Tennessee at Martin. The tentative date for the re-scheduled fieldtrip is September 9-10, 2006. Sliger and his committee made the following requests to the Executive Committee: approval to post information and an application form on the TAS web site; approval to use the TAS mailing list to announce the event to the membership; approval of limited funds (\$1200) to support student attendance and to provide travel expenses for fieldtrip leaders. A maximum number of 20 attendees and a minimum number of 10 attendees were recommended by the fieldtrip planning committee. Sliger provided planning details and a list of potential fieldtrip leaders. A motion to endorse the concept of the fieldtrip and to provide financial support, up to a maximum of \$1200, was approved.

NEW BUSINESS

President Harris discussed the possibility of another joint meeting with the Tennessee Science Teachers Association (TSTA). Harris and Past President Steve Wright attended the TSTA board meeting in February 2006. Also in attendance as members of the TSTA board were TAS Executive Committee members Jack Rhoton and Linda Jordan. Glen Burton, TSTA President, agreed to appoint a committee to explore a joint meeting with TAS. With the consent of the Executive Committee, President Harris would like to appoint a TAS committee to meet with the TSTA committee to prepare a proposal for presentation at the November 2006 annual TAS meeting. A plan approved by the Executive Committee would be presented to the TAS membership for approval at the annual business meeting. President Harris appointed Michael Redding (chair), Steve Murphree, and James Howard to serve as the committee.

President Harris discussed the locations for future meetings. The 2007 meeting will be held on the campus of Volunteer State Community College, Gallatin, Tennessee. The feasibility of a joint meeting with TSTA in November 2008 is being considered. A location in the East region is needed for the 2009 meeting. President Harris will contact TAS member Al Hazari with a request to pursue the possibility of holding a meeting at the University of Tennessee at Knoxville. Other locations also will be considered.

With the retirement of Secretary Swain at the end of 2006, nominations for the position of TAS Secretary are needed. Secretary Swain agreed to mentor the new secretary as needed during the first year of service.

President Harris adjourned the April meeting of the 2006 TAS Executive Committee at 9:30 PM CST.

TENNESSEE ACADEMY OF SCIENCE EXECUTIVE COMMITTEE MEETING 16 November 2006

President John W. Harris called the meeting of the Tennessee Academy of Science (TAS) Executive Committee to order at 7:35 PM CDT in the Iris Room of the University Center on the campus of Austin Peay State University (APSU), Clarksville, Tennessee. Attendees were President-elect George Webb, Past President Stephen Wright, Treasurer Steven Muphree, Secretary Sarah Swain, Managing Editor Gore Ervin, Junior Academy of Science Director Jack Rhoton, Collegiate Division Director Fred Matthews, Visiting Scientist Program Director Michael Daley, Meeting Coordinator Michael Redding, Electronic Communications Director James Howard, Education Committee Chairperson Cindi Smith-Walters, Publicity and Research Committee Chairperson Mandy Carter-Lowe, Members-at-large Al Hazari, Steve Hamilton, and Jeffrey Boles, Local Arrangements Committee Chairperson John Foote, and observer Teresa Fulcher. Prior to the meeting the Executive Committee enjoyed a reception at the APSU President's residence, Archwood, and dinner provided by APSU in the University Center Iris Room. On behalf of the Executive Committee, President Harris expressed appreciation for the generous hospitality extended by the host university.

A motion to approve the minutes of the April 2006 meeting of the Executive Committee passed. President Harris introduced APSU Local Arrangements Committee Chairperson John Foote and expressed appreciation to APSU for hosting the annual meeting. Chairperson Foote and Steve Hamilton, a member of the APSU Local Arrangement Committee, discussed meeting details and logistics, and answered questions related to meeting plans.

REPORTS FROM OFFICERS AND DIRECTORS

President-elect and 2006 Program Chairperson—George Webb discussed plans for the plenary session. Assistant Commissioner of Teaching and Learning, Susan Bunch, Tennessee Department of Education, will replace Governor Phil Bredesen as the keynote speaker. Commissioner Bunch is expected to discuss the status of science education in Tennessee.

Meeting Coordinator—Michael Redding provided summary data for oral and poster presentations at TAS annual meetings 2002-2006. The number of presentations scheduled for the 2006 annual meeting is the largest number in the last five years, but close to the average for mid-state meeting sites. Redding announced the placement of a program addendum in participant folders.

Past President—Stephen Wright reported a request from the National Association of Academies of Science for an

update of contact information for TAS Executive Committee members. Wright will respond with an updated list of members and email addresses.

Treasurer—Steven Murphree discussed the Treasurer's Report provided below:

CASH BALANCE—JULY 1, 2006	\$12,855.10
RECEIPTS	
Membership Fees	4,420.00
Institutional Dues	4,500.00
Library Subscriptions	810.00
Contributions	80.00
Annual Meeting Registration and Meal Fees Collected	2,225.00
Miscellaneous Income	95.00
TOTAL RECEIPTS	12,130.00
TOTAL CASH AVAILABLE	24,985.10
DISBURSEMENTS	
<i>Journal</i>	300.00
Tennessee Junior Academy of Science	1,220.00
Treasurer's Expenses	32.91
Annual Meeting Expenses	2,228.50
Dues and Fees	495.98
TOTAL DISBURSEMENTS	4,277.39
CASH BALANCE—November 16, 2006	20,707.71
Receipts	12,130.00
Disbursements	4,277.39
Cash Increase	7,852.61
BREAKDOWN OF HOLDINGS	
US Postal Service, Cookeville, TN	20.24
US Postal Service, Lawrence, KS	341.34
Checking Account, US Bank	20,707.71
TAS HOLDINGS—November 16, 2006	21,069.29
TJAS TRUST FUND (Vanguard Star Fund)	
(8,527.541 shares—11/15/06)	
Account Value—12/30/05	181,622.56
Check redemption	15,000.00
Disbursements (Dividend Distribution on 6/23/06)	1,876.06
Account Value—11/15/06	181,721.90
TOTAL VALUE OF HOLDINGS—November 16, 2006	\$202,791.19

Treasurer Murphree reported success with the recent use of Quicken software and praised the Belmont University student accounting organization for their help. A motion to accept the Treasurer's report passed.

According to the Treasurer's records TAS membership currently stands at 506 paid members. Treasurer Murphree will continue to notify delinquent members that their membership will be dropped if dues are not paid in a timely manner.

Managing Editor—Gore Ervin discussed the following report:

"Seven manuscripts were submitted for review during calendar year 2005. Three papers were published, one is in press, two await return of author revisions, and one was rejected. An additional seven papers have been submitted for

review thus far in 2006. Four of these are in zoology, with one each in botany, mathematics and computer science, and microbiology. Six of these papers have been accepted and are in press, and one is under review.

"The January–April 2006 issue (81(1–2)) of the *Journal of the Tennessee Academy of Science* included the proceedings and abstracts of the 2005 Academy meeting, Academy announcements, and one research paper for a total of 48 pages. Due to the low number of submitted/accepted manuscripts, the July and October 2006 issues were combined (81(3–4)). This combined issue contains six manuscripts and the abstracts from the spring 2006 Collegiate meetings for a total of 46 pages. The first proofs for 81(3–4) were returned by Allen Press on November 15 and invoices for page charges will be mailed before Thanksgiving. The total return from page charges should be \$3060 (34 pages @ \$90/page). Publication and mailing should occur in early December."

A motion to accept the report passed.

Managing Editor Ervin announced that he would resign from the position as Managing Editor after publication of the January 2008 issue of the *Journal*. He encouraged members of the Executive Committee to begin the search for someone to fill the position. President Harris thanked Managing Editor Ervin for his years of admirable service to the Academy.

Electronic Communications—Director James Howard reported activities on the TAS website. Meeting Coordinator Mike Redding commended Director Howard for timely posting of requests to the site.

Tennessee Junior Academy of Science—Director Jack Rhoton distributed copies of the 2006 *Handbook of the Junior Academy of Science* to Executive Committee members. He discussed the role of Tennessee Junior Academy of Science (TJAS) judges and described the procedures for selection of student winners. Typically 90–100 papers are submitted each year for review. Director Rhoton discussed his written report that is printed in full below:

"The 2006 annual meeting of the TJAS was held on Friday, April 21, 2006, at Belmont University in Nashville. A total of twenty-four students were invited to present their research papers. This year, ninety-one students were involved in TJAS research from throughout the state. Prior to the April 21 meeting, a panel of readers selected twenty-four student papers for presentation at the annual meeting. The panel of judges at the annual meeting selected two top presenters. They were: Dawn Zhao, White Station High School, Memphis, and Blake H. Clift, Camden Central High School, Camden. The title of Dawn's paper was "Contribution of gp91^{phox} in Cardiac Apoptosis and Remodeling Post-Myocardial Infarction." Mr. Clift's paper was titled "Producing Prototype Skateboards from Optimum Skateboard Qualities and Comparison with Professional Boards." Both papers were published in the 2006 *TJAS 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 presentations 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 by the Tennessee State Department of Education's Directory of Public Schools, Approved Non-Public and Special State Schools. All students and teachers who participated in the 2006 TJAS program received a copy of the Handbook.

"The TAS recognized four students in the Upper East Tennessee Science Fair held on the campus of East Tennessee State University on April 6, 2006. Two top prizes were given: one to the student who placed first in the Biological Sciences category and one to the student who placed first in the Physical Sciences category. In addition, two students won Honorable Mention recognition: one from the Biological Sciences and one from the Physical Sciences category.

"It is customary each year for the TJAS to recognize three outstanding science teachers, one from each region of the state. During the spring 2006 TJAS meeting, a framed certificate and a small honorarium (\$100) was presented to the following recipients: Ms. Elaine B. Colson (chemistry and physical science), McMinn Central High School, Etowah; Candy Miyake (eighth grade science), Franklin Middle School, Franklin; Rosemary A. Neville (biology and scientific research), Westview High School, Martin. These 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.

"Ms. Jennifer Dye has been named the recipient of the 2006 TAS Distinguished Science Teacher Award. Dye, an advanced placement biology and physics teacher at Pope Paul II High School, Hendersonville, will receive the award on November 17, during the TAS Annual meeting at APSU in Clarksville. She also will be recognized during the TSTA Annual Award's Breakfast in Nashville on November 18. 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. Dye will receive from TAS a \$500 cash award, a plaque and 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; Linda Phelps (1998) Camden Central High School, Camden; Jane Whitaker (1999) Lenoir City High School, Lenoir City; 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; Jan Coley (2004) Jefferson County High School, Dandridge; Marion Pitts (2005) Westview High School, Martin; Jennifer Dye (2006) Pope Paul II High School, Hendersonville."

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

Director Rhoton expressed appreciation to Belmont University for hosting the April 2006 TJAS meeting. The excellent facilities, central location, and an opportunity for high school students to visit a college campus made Belmont University a great meeting site. Plans are being made to hold the 2007 meeting there as well.

Collegiate Division—Director Fred Matthews reported sponsors and locations for each of the regional meetings: Eastern Division: 2006 Pellissippi State Community College, Teresa Fulcher; 2007 Southern Adventist College, Ann Foster. Middle Division: 2006 and 2007 Tennessee State University, E.

Lewis Myles. Western Division: 2006 University of Tennessee at Memphis, Eldridge Johnson; 2007 Lemoyne-Owens College, Delphia Harris. Sites and dates will be confirmed later.

A motion to accept the report passed.

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

"The present number of listings in the Visiting Scientist Digest is thirty-eight. The East and Middle regions of the state each have fourteen members listed and the West area has ten members. With the assistance of Jack Rhoton, the present Digest was sent to Barry Farris, Treasurer of the TSTA for distribution to TSTA members.

"I received an email asking if participation in the program cost money and could a non-member participate as a Visiting Scientist. I responded to this inquiry by indicating that the cost of the program was covered by TAS and that I would bring the question of whether a non-member could be listed in the Digest to the Executive Committee.

"The question was raised as to whether we should send area Digests to local schools? If so, we will need East and Middle Visiting Scientist Directors."

Discussion followed related to the questions raised in the report. The Executive Committee members agreed that persons listed as Visiting Scientists in the TAS-sponsored program should be TAS members. To encourage participation in the Visiting Scientist Program (VSP), TJAS Director Rhoton will solicit help from TSTA members when he attends the next TSTA board meeting. Rhoton also suggested the Digest be sent to teachers involved in TJAS as a focus group. An information flier will be developed for distribution at the next TSTA meeting. Education Committee Chairperson Cindi Smith-Walters will help design the flier within the next three months.

A motion to provide up to \$500 to print and mail a one-page flier to advertise the VSP Digest to state teachers was approved.

In a related discussion it was determined that use of the Networks Program on the TAS website should be evaluated. Electronic Communications Director James Howard will determine the number of contacts to the site and report to the Executive Committee at its April 2007 meeting.

State Department of Education—Science Consultant Linda Jordan did not submit a report.

REPORTS FROM COMMITTEES

Auditing and Financial Oversight Committee—Chairperson Robert Grammer submitted a letter prepared by the auditor, Thomas C. Wooten, PhD, Associate Professor of Accounting, Belmont University, on behalf of the Accounting Clinic, Belmont University Chapter of Beta Alpha Psi who reviewed the cash receipts and disbursements of TAS. The review is for internal use by the TAS Executive Committee in evaluating the financial condition of TAS and is not to be considered a formal audit. Treasurer Murphree guided the Executive Committee through the details of the report.

Fellows Committee—Chairperson Charles McGhee reported that no nominations were received by the Fellows Committee.

Long-range Strategic Planning Committee—Chairperson Steve Wright had no specific recommendations from the committee to present; however, he reported several areas of

concern discussed by his committee. The committee agrees that, in spite of rising costs for *Journal* publication, TAS proceedings should continue to be published in the *Journal*. The committee believes TAS membership and publication in the *Journal* should continue to be encouraged and promoted among university faculty for the important role TAS plays in science education and research in the state.

Education Committee—Chairperson Cindi Smith-Walters discussed the following report:

“TAS information was sent to the TSTA newsletter and the Tennessee Environmental Education Association (TEEA) newsletter. Additional activities include the following. Sent monthly notes to TAS Education Committee Members concerning teacher and student scholarships as well as grants currently available for science and environmental education purposes. Corresponded with Project CENTS which is working with TEEA to establish a website and statewide calendar with Science and Environmental Education information, trainings, etc. Continue to represent TAS and Middle Tennessee State University on the Governor’s Keep Tennessee Beautiful Steering Committee. Represented TAS at the “Meeting of the Minds”, Tennessee’s first statewide summit on conservation and environmental education. The summit provided a foundation for dialogue concerning the importance of “Environmental Literacy” in our state and plans to follow-up on the idea. Was contacted by the Re-elect Bredesen Committee to provide input developing his campaign platform regarding conservation and education issues.”

Chairperson Smith-Walters asked the Executive Committee for suggestions for new efforts by the Education Committee and distributed fliers announcing a seminar by Eugenie Scott, Executive Director, National Center for Science Education, to be held April 2, 2007 on the campus of Middle Tennessee State University. Chairperson Smith-Walters asked the Executive Committee to begin a search for a new Education Committee chairperson. President Harris commended Chairperson Smith-Walters for her work on behalf of TAS.

A motion to accept the report passed.

Membership Committee—Chairperson Karen Kendall-Fite provided a report presented by Executive Committee member Mandy Carter-Lowe. Chairperson Kendall-Fite has developed an electronic newsletter now available on the TAS website. Another issue is planned for the near future. As an encouragement to join TAS Chairperson Kendall-Fite plans to place posters recognizing the accomplishments of Tennessee scientists at the annual meeting registration table. Membership information will be available to all registrants.

Necrology Committee—Chairperson Alexander Wells reported the names of four known deceased TAS members: Paul Parmalee, Albert Phil Myers, H. Craig Site, and Mario Caprio. Each name will be read at the Business Meeting and a moment of silence will be observed in honor of these TAS members.

Nominating Committee—Chairperson and Past President Steve Wright presented the following slate of officers for 2007 for approval by the Executive Committee: President-elect: Cindi Smith-Walters, Middle Tennessee State University; Treasurer: Steve Murphree, Belmont University; Secretary: Teresa Fulcher, Pellissippi State Technical Community College. A motion to approve the slate passed.

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

“Press releases were sent via e-mail/fax to daily newspapers, radio stations, and TV stations in Tennessee announcing the annual meeting to be held at Austin Peay State University. In addition, press releases were sent to Nashville Public Radio, WSMV-Channel 4, WTVF-Channel 5, and WKRN-Channel 2.

“King-Thom Chung reported that his student, P. Makena, of the University of Memphis did not receive a student award certificate for his poster presentation in the Cell and Molecular Section. The certificates for University of Memphis had been sent to Mike Kennedy for distribution. A new certificate was prepared and mailed directly to Dr. Chung.

“No requests for regional science fair certificates were received since the spring Executive Committee meeting. Certificates for the Memphis-Shelby County Science Fair were prepared during the spring.”

Brief discussion regarding the problems associated with the distribution of student award certificates followed the report. Chairperson Carter-Lowe will continue to look for ways to insure timely delivery to student award winners. A motion to accept the report passed.

Resolutions Committee—Chairperson Sallie Noel submitted the following Resolution of Appreciation for consideration by the Executive Committee:

“Whereas, the Tennessee Academy of Science is enjoying the most pleasant, profitable, and well-organized series of meetings at Austin Peay State University at Clarksville, and

“Whereas, the success of these meetings has resulted mainly from the efforts of the officers of the respective sections; the Local Arrangements Committee, Dr. John Foote and Dr. Steven Hamilton; the 2006 TAS Executive Committee, composed of Dr. John W. Harris, President, Dr. George E. Webb, President-Elect, Dr. Stephen M. Wright, Past-President, Ms. Sarah H. Swain, Secretary, and Dr. C. Stephen Murphree, Treasurer; and from the recognition given the meetings by the press, television, and radio stations; and from the generous hospitality of the host institution, Austin Peay State University, and its President, Dr. Sherry Hoppe;

“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 passed. The Resolution of Appreciation will be presented for approval and adoption by the membership at the TAS annual business meeting, 17 November 2006.

OLD BUSINESS

Local Arrangements Committee Chairperson John Foote, APSU, discussed meeting details related to the plenary session, technical sections, poster sessions, parking, and registration. Contact information was shared so that Executive Committee members could reach John Foote or Steve Hamilton for assistance as needed. President Harris thanked John Foote and the APSU Local Arrangements Committee for their commitment to a well-planned meeting.

Michael Gibson distributed to members of the Executive Committee copies of a draft related to the development of a “Teaching of Evolution Position Statement” prepared by Gibson and other committee members. The Executive Committee chose to defer a decision on acceptance of the draft to allow time for its careful review. A motion to post the draft on the TAS web site and in the TAS newsletter, and to

solicit feedback from the TAS membership, was approved. The Executive Committee will consider the draft along with the membership response at its April 2007 meeting.

Discussion related to a joint meeting with TSTA led to a motion to approve such a meeting in 2008. The motion passed. President Harris and TJS Director Rhoton had met previously with the TSTA board who welcomed the idea of a joint meeting with TAS.

NEW BUSINESS

The American Association for the Advancement of Science (AAAS) accepts a limited number of honorary members recommended by state science academies. The TAS can recommend deserving high school and/or college students. Jack Rhoton, TJS Director, submits the names of two winners of the TJS research awards. The Executive

Committee agreed college student nominees from TAS also would be appropriate.

A motion to submit to AAAS for honorary membership the names of the top student presenter, selected from each of the three Collegiate Division regions, passed. The AAAS covers the cost for honorary memberships for two college students; TAS will pay for the third membership.

Future meeting sites for TAS annual meetings are Volunteer State Community College, Gallatin, for the 2007 meeting and a joint meeting in Nashville with TSTA for 2008. A location for the 2009 meeting will be selected in the East region of the state. President Harris charged Member-at-large Al Hazari to make the necessary contacts to encourage an invitation from the University of Tennessee in Knoxville.

The 16 November 2006 meeting of the Executive Committee of the Tennessee Academy of Science was adjourned by President Harris at 10:10 PM CST.