

**Tennessee Academy of Science**

*TAS*

**Program  
of the  
115<sup>th</sup> Meeting**

**The University of Tennessee at Martin  
Martin, Tennessee  
November 17-18, 2005**

## **Institutional Sustaining Members of the Tennessee Academy of Science**

Austin Peay State University

Middle Tennessee State University

Rhodes College

Tennessee Technological University

The University of Tennessee at Martin

## **Affiliated Societies of the Tennessee Academy of Science**

American Association for the Advancement of Science

Barnard Astronomical Society

Clarence T. Jones Memorial Observatory

National Association of Academies of Science

Tennessee Association of Science Department Chairs

Tennessee Entomological Society

Tennessee Psychological Association

Tennessee Junior Science and Humanities Symposium

Tennessee Science Teachers Association

## **TAS Home Page Information**

For information about TAS, including information for the annual and collegiate division meetings, the Tennessee Visiting Scientist Program, the membership list, and more, visit the TAS website at:

<http://www.tnacadsci.org/>

## **TAS Future Meeting Sites**

2006 Austin Peay State University

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## ANNOUNCEMENTS

**Registration:** Meeting attendees may register by mail (see previous mailing) or onsite in the Lobby of the Watkins Auditorium in the University Center on November 18, 2004, 7:30 A.M.–1:00 P.M.

**Luncheon Tickets.** Extra tickets may be available for \$10 at the Registration Desk.

**Membership:** Application forms for membership in the Tennessee Academy of Science will be available at the Registration Desk. A completed application accompanied by first year dues may be left with the TAS Treasurer at the Registration Desk or mailed to: Dr. Steven Murphree, Department of Biology, Belmont University, 1900 Belmont Blvd., Nashville, TN 37212-3758. Current annual dues by category are: Regular \$30; Sustaining, \$35; Supporting, \$40; Life, single payment \$300; Student or Emeritus, \$10. Membership includes a subscription to the TAS Journal.

## MEETING SCHEDULE

### Thursday, November 17, 2005

5:30 - 10:00.

**Executive Committee Meeting and Dinner**  
Chancellor's Residence

### Friday, November 18, 2005

7:30 – 1:00

**Registration**  
Watkins Auditorium Lobby, University Center

8:00 – closing

**Vendors Display**  
First floor hallway, University Center

8:15 - 10:00

**Reelfoot Lake Symposium II**  
University Center 111

8:30 - 3:00

**Posters Session** (attended 8:45-10:15)  
Ballroom Lobby, University Center, Second Floor

10:00 - 10:15

**Break**  
Watkins Auditorium Lobby, University Center

10:15 – 11:30

**TAS Plenary Session**  
Watkins Auditorium, University Center

11:30 - noon

**TAS General Assembly and Business Meeting**  
Watkins Auditorium, University Center

Noon - 1:00

**Luncheon**  
Ballroom Lobby, University Center, Second Floor

Noon - 1:00

**Annual Science Chairs Luncheon Meeting**  
University Center 125

1:10 - closing

**Section Business and Technical Sessions**  
Locations as listed in the program

**TAS GENERAL ASSEMBLY**  
Friday, November 18, 2005  
Watkins Auditorium, University Center

**WELCOME**

**10:15**

Dr. Nick Dunagan, Chancellor  
The University of Tennessee at Martin  
and  
Mr. Randy Brundige, Mayor  
City of Martin, Tennessee

**2005 TAS PLENARY ADDRESS**

10:30-11:30

**“Tsunami 2004”**

S. K. Ballal, Ph.D.

Dr. Ballal received his Ph.D. in Botany in 1964 from the University of Tennessee.  
He is a Fellow of the Tennessee Academy of Science and served as its President in 1982.  
In 2004 he was a Fulbright Fellow in Sri Lanka. Presently, he serves as Professor of Biology at  
Tennessee Technological University.

**BUSINESS MEETING**

11:30-noon

Stephen M. Wright, 2005 President TAS, Presiding

## **TAS SYMPOSIUM**

### **REELFOOT LAKE II**

**University Center 111**

**8:15 – 10:00**

**Michael A. Gibson, Presiding**

**Freshwater Turtle Populations Of Reelfoot Lake.** V. Cobb, B. Glorioso, and E. Young, Middle Tennessee State University.

**An Adult Digenetic Trematode (Fluke) Parasite of Crayfish Inhabiting the Wetlands Around Reelfoot Lake.** H. Turner, The University of Tennessee at Martin.

**Geologic Aspects Of The Battle Of Island No. 10.** R. Stearns, Vanderbilt University.

**New Tools Applied To The New Madrid Seismic Zone.** R. Van Arsdale and R. Csontos, University of Memphis.

**Paleontology Of The Reelfoot Lake Region.** M. Gibson, The University of Tennessee at Martin.

This symposium is the sequel to a symposium held at the 2003 TAS Annual Meeting

### **REELFOOT LAKE FIELDTRIP**

**organized by**

**Michael A. Gibson and Wintfred Smith**

**The University of Tennessee at Martin**

Participants at the 2005 Annual Meeting are invited to register for a special fieldtrip to Reelfoot Lake on Saturday November 19. The fieldtrip will feature a series of stops around Reelfoot Lake that highlights the lake's natural features. Presenters in the Reelfoot Symposium will be on hand to expand upon their oral presentations. The trip begins with a look at the Mississippi River, its levee system, and influence on the development of Reelfoot Lake (Michael Gibson, UT Martin) and the Civil War Battle of Island 10 (Richard Stearns, Vanderbilt University). Earthquake history and recent scientific advancements will be the focus of several stops in the Tiptonville area and along the Chickasaw Bluff line (Roy VanArsdale and Ryan Csontos, University of Memphis). The sites where fossilized land snails and Pleistocene vertebrates, such as mastodons, will be visited (Michael Gibson, UT Martin). Amerindian settle as represented by the mounds they built will also be included (Bill Lawrence, TN State Parks). Reelfoot Lake's biological resources, especially fish and vegetation, will be highlighted at several of the stops (Andy Sliger and Tom Blanchard, UT Martin). Finally, management issues associated with the lake will be discussed.

**BOTANY**  
**University 230A**  
**Nicole Turrill Welch, presiding**  
**Middle Tennessee State University**

- 1:10 pm      **Section Business Meeting: Election of Officers for 2006**
- 1:15            **A Comparative Study of GIS Monitoring Techniques for Tracking *Arundinaria gigantea* and *Justicia americanum* Restoration Sites Used for Stream Habitat Enhancement.** J. McMahan\*, M. Finley, and A.N. Barrass, Austin Peay State University.
- 1:30            **The Effects of Water-Soluble Chemicals in *Kalmia latifolia* on *Pinus pungens* Seed Germination.** O. Dees\*, C. Meyer\* and N.T. Welch#, Middle Tennessee State University (OD, NTW) and University of Southern California (CM).
- 1:45            **Distribution of *Lemnaceae* and Taxa in Coastal South Carolina.** B. Alley\* and S.K. Ballal, Tennessee Technological University.
- 2:00            **Ecology of *Castanea dentata* on the Cumberland Plateau of Kentucky and Tennessee.** M. Vance\*, J. Schibig, S. Cumming\*, and L. Fly\*, Tennessee Technological University (MV) and Volunteer State Community College (JS, SC, LF).
- 2:15            **An Update on the Ecology of *Castanea dentata* at Mammoth Cave National Park.** J. Schibig, J. Tinsley\*#, A. Osborn\*, and M. Vance\*, Volunteer State Community College (JS ,JT, AO) and Tennessee Technological University (MV).
- 2:30            **Ecology of *Castanea pumila* on the Eastern Highland Rim and Cumberland Plateau of Tennessee.** J. Schibig, L. Fly\*#, S. Cumming\*, and M. Vance, Volunteer State Community College (JS, LF, SC) and Tennessee Technological University (MV).
- 2:45            **Some Ecological Aspects of *Tomanthera auriculata*, Earleaf False Foxglove, on the Southern Pennyroyal Plain.** E.W. Chester, Austin Peay State University.
- 3:00            **Break**
- 3:15            **The Status of *Clematis morefieldii* (Huntsville Vasevine) in Tennessee.** C. Bailey and D. Lincicome, Jackson State Community College (CB) and Tennessee Department of Environment and Conservation, Division of Natural Heritage (DL).
- 3:30            **The *Carex crinita* Lam. Complex (Cyperaceae Section Phacocystis) in Tennessee.** Dwayne Estes\*, The University of Tennessee.
- 3:45            **The Endemic Vascular Flora of the Interior Low Plateau Physiographic Province.** Dwayne Estes\* The University of Tennessee.
- 4:00            **An Ecological Assessment of Standing Stone State Forest.** R. McCoy, Tennessee Division of Natural Heritage.

continued

**BOTANY**  
(continued)

- 4:15 **All Taxa Biodiversity Inventory Update at Edgar Evins State Park, Dekalb County, Tennessee.** W. Hesson\* and R. Barber, Volunteer State Community College.
- 4:30 **Forest Composition and Communities of Edgar Evins State Park, Dekalb County, Tennessee.** R. Barber and W. Hesson\*, Volunteer State Community College.
- 4:45-5:15 **20<sup>th</sup> Anniversary of the Tennessee Rare Plant Protection and Conservation Act of 1985.** D. Lincicome, Tennessee Department of Environment and Conservation, Division of Natural Heritage.

\* student author

# presenting author, if not first author



**CELL and MOLECULAR BIOLOGY,  
HEALTH and MEDICAL SCIENCES, and  
MICROBIOLOGY**

**Room 206 A**

**D. Grant Willhite, presiding, Cell and Molecular Biology  
Tennessee Wesleyan College**

**Lisa Cobb, presiding, Health and Medical Sciences  
Cumberland University**

**John M. Zamora, presiding, Microbiology  
Middle Tennessee State University**

- 1:10 pm      **Section Business Meeting: Election of Officers for 2006**
- 1:15            **Enzymatic Activity of *Spirodela Oligorrhiza*.** J. Harris\* and S.K. Ballal,  
Tennessee Technological University. (Cell and Molecular)
- 1:30            **Human Papillomavirus Proteins and Their Role in Cancer Progression.** J. T.  
Thomas, Belmont University. (Cell and Molecular)
- 1:45            **Human Factors Analysis of a Fighter Aircraft Avionics Upgrade.** M. Coakwell, D.  
Roberts\*#, and B. Funke, Misawa Air Base, Japan. (Health and Medical Sciences)
- 2:00            **Both *Borrelia Burgdorferi* (Lyme Disease) And *Borrelia Lonestari* (STARI) Are  
Established in Middle Tennessee.** K.R. Onks\*, S.W. Hamilton, and S.M. Wright,  
Middle Tennessee State University and Austin Peay State University. (Health and  
Medical Sciences)
- 2:15            **Differentiation of Influenza a Viruses Using Host-Specific Probes Based on  
Conserved Nucleotide Regions.** R.S. Davis\* and S.M. Wright, Middle Tennessee State  
University. (Health and Medical Sciences)
- 2:30            **Evaluation of Antigen-Antibody Interaction through Microarrays: Potential for a  
Novel Biosensor.** V.M. Master\*, T.R. Denton, C.E. Holman, W.M. Robertson, and S.M.  
Wright, Middle Tennessee State University. (Health and Medical Sciences)
- 2:45            **Break**
- 3:00            **Allelopathic and Antimicrobial Properties of the Ayuverdic Herbs, Neem and Gotu  
Kola.** Christina L Nelson\* and John M. Zamora. Middle Tennessee State University,  
Murfreesboro, Tennessee. (Microbiology)
- 3:15            **The Isolation and Identification of Antimicrobial-Producing Organisms.** Brandon  
Naquin\* and John M. Zamora. Middle Tennessee State University, Murfreesboro,  
Tennessee. (Microbiology)
- 3:30            **In Interdisciplinary Research: An Investigation of Heart Beat Signal (EKG) Using  
Nonlinear Dynamics.** C. Erkal, University of Tennessee at Martin (Physics)

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**CHEMISTRY**  
**Engineering and Physical Science Building 202**  
**Phillip H. Davis, presiding**  
**The University of Tennessee at Martin**

1:10 pm      **Section Business Meeting: Election of Officers for 2006**

1:15      Oral presentations to be announced. See Addendum distributed at the meeting.

\* student author

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**ENGINEERING and ENGINEERING TECHNOLOGY**  
**University Center 206B**  
**Michael Daley, presiding**  
**The University of Memphis**

- 1:10 pm      **Section Business Meeting: Election of Officers for 2006**
- 1:15      **Reform of Engineering Technology in Taiwan.** C.Z Chen, Austin Peay State University.
- 1:30      **Using NJCATE Curriculum Model For Engineering Technology Education.** A Salama, C.Z Chen, A. Saad, Austin Peay State University (AS, CZC) and Georgia Institute of Technology (AS)
- 1:45      **Web-based Evaluation of STEM Projects.** I. Fidan, Tennessee Technology University.
- 2:00      **Computer-Aided Knowledge-Based Process Planning for SMT Rework.** I. Fidan, Tennessee Technology University.
- 2:15      **The Importance Of Professional Practice And Project Management For Engineering Education.** A. Saad and A. Salama, Georgia Institute of Technology (ASAA) and Austin Peay State University (ASAL)
- 2:30      **Diffusion In Polystyrene: Experimental Results And Multi-Scale Modeling.** W. McDonald\*, S. Schulz\*, J. Platfoot\*, P. Kannan\*, J. Neilan, D. Visco and J. Biernacki, Volunteer State Community College (WM, SS, JP, PK, JN) and Tennessee Technological University (DV, JB).
- 2:45      **Break**
- 3:00      **Electrochemical Impedance Spectroscopy Study on Alloys for Total Joint Replacements.** G. Lewis, R. Vejerla, and S. Mishra, The University of Memphis.
- 3:15      **Finite Element Analysis of Models For Use in Screening Materials For Vertebroplasty and Kyphoplasty.** J. Xu\* and G. Lewis, The University of Memphis.
- 3:30      **Validation of System Identification Model of Cerebrovascular Pressure Transmission.** N. Narayanan\* and M. L. Daley, The University of Memphis.
- 3:45      **Optimal Mass Ratios in Semi-Active Variable Mass Tuned Mass Dampers in Multi-story Buildings.** J. Keel\*, T. Hanna\*, B. Woods\*, R. Rast\*, J. Prince\*, J. Boyd\*, J. Bell\*, J. Sipes\* and R. Helgeson, University of Tennessee at Martin.

\* student author

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**GEOLOGY and GEOGRAPHY**  
**Johnson Engineering and Physical Science Building 219**  
**Mark Simpson, presiding, Geology/Geography**  
**The University of Tennessee at Martin**

- 1:10 pm      **Section Business Meeting: Election of Officers for 2006**
- 1:15      **Stratigraphy Of The Ford Construction Company Gravel Pit.** J. Barnes\*, M. Tabarez, K. Castleman, E. Covington, W. Denman, L. Hughes, K. Truett, L. Williams, B. Windsor, M.A. Gibson, University of Tennessee at Martin.
- 1:30      **Stratigraphic And Structural Modeling Of The Mississippi Embayment.**  
R. Csontos\*, and R. Van Ardale, University of Memphis.
- 1:45      **Correlation And Sequence Stratigraphy Of The Claiborne Group In The Tri-State Area Of Western Tennessee, Eastern Arkansas, And Northern Mississippi.**  
A. Owen\* and D. Larsen#, University of Memphis.
- 2:00      **Mineralogical Analysis Of Barite Nodules And Quartz Veins Within The Chattanooga Shale Formation Of The Eastern Highland Rim Region, Tennessee.**  
S.B. Smith\*# and H.W. Leimer, Tennessee Technological University.
- 2:15      **Geochemistry Of The Metaigneous Pumpkinvine Creek Formation, Allatoona Lake, Georgia.** H. G. Churnet#, and C. Emily\*. The University of Tennessee at Chattanooga
- 2:30      **Carbon Sequestration In A West Tennessee Watershed.** P.M. Gale, M. Goddard, and M. Phillips. University of Tennessee at Martin and University of Tennessee at Knoxville.
- 2:45      **Modeling Dark Nebulae: Structure, Reddening Law, and VeLLOs.** L. Crews, T. Huard, and B. Stiles, University of Tennessee at Martin (LC, BS) and Harvard-Smithsonian Center for Astrophysics (TH).
- 3:00      **Break**
- 3:15      **Drainage Basin Studies Of Dallas-Fort Worth International Airport Using Geographic Information Systems.** Justin Whipple\*, University of Tennessee at Martin.
- 3:30      **Low Cost, Low Altitude Aerial Photography.** R. G. Litchford and E. Wolf\*. University of Tennessee at Chattanooga.
- 3:45      **Winter Minimum Temperatures In West Tennessee: Evidence Of Global Warming?**  
R. M. Simpson and M. L. Browning#, University of Tennessee at Martin.

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**HISTORY of SCIENCE**  
**University Center 232 (with Math and Computer Science)**  
**Brother Kevin Ryan, presiding**  
**Christian Brothers University**

- 1:10 pm      **Section Business Meeting: Election of Officers for 2006**
- 1:15          **Conrad Jamison, Jr.: The Life of a Tennessee Naturalist.** Thorunn A. McCoy and Roger A. McCoy. University School of Nashville and Tennessee Division of Natural Heritage
- 1:35          **Medieval Studies of Motion.** Brother Kevin Ryan, Christian Brothers University

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**MATH and COMPUTER SCIENCE**  
**University Center 232 (with History of Science)**  
**John J. Schommer, presiding**  
**The University of Tennessee at Martin**

- 1:10 pm      **Section Business Meeting: Election of Officers for 2006**
- 1:55          **Arguing The Axioms Of Set Theory.** J. Schommer, University of Tennessee at Martin.
- 2:15          **Computer Simulation Model Applied In Teaching Agricultural Economics.**  
H. Djunaidi, Middle Tennessee State University.
- 2:35          **Plummer-Whitney Systems: Some Preliminary Results On A Generalization Of  
Matroids And Well-Covered Graphs.** S. Campbell and J. Rowe, Belmont University  
and The Harpeth Hall School.

\* student author

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**PHYSICS and ASTRONOMY**  
**Lionel Crews, Section Chair**  
**The University of Tennessee at Martin**

**Papers submitted to this Section appear in Chemistry, Health and Medical Science, and Geology and Geography sessions. There will be no business meeting for this Section in 2005.**

**SCIENCE and MATH TEACHING**  
**University Center 229**  
**Mandy Carter-Lowe, presiding**  
**Columbia State Community College**

- 1:10 pm      **Section Business Meeting: Election of Officers for 2006**
- 1:15            **Statistical Concepts Applied in Teaching Agribusiness.** Harjanto Djunaidi, Middle Tennessee State University.
- 1:30            **Use Of Web Based Repository And Other Technologies In Enhancing Undergraduate Mathematics Teaching,** F. Majid, Alabama A&M University, Huntsville, Alabama.
- 1:45            **Wake Up Your Math Classes: Tips And Tricks On Using Technology To Enhance Student Learning.** Meredith McCoy and Tammy Borren, Columbia State Community College.
- 2:00            **Integration of FTIR Spectroscopy in General Chemistry Laboratory Curriculum: An NSF-Funded Project.** F. Setayesh, Nashville State Technical Community College.
- 2:15            **Student Perspectives on Dual Credit Geology.** M. Cook\*, A. Saunders, J. Eisterhold, N. Eisterhold, J. Gullett, K. Hooten, K. Kraft., E. Wilson, A. Wilton, M.A. Gibson, University of Tennessee at Martin, Martin, TN
- 2:30            **Integrating Scientific Discovery Research Projects into the Classroom.** Rebecca L. Seipelt and A. Bruce Cahoon. Biology Department. Middle Tennessee State University.
- 2:45            **Break**
- 3:00            **An A Student Centered Outreach Program – A Community College's Experience A.** Crook\* # and J. Neilan, Volunteer State Community College.
- 3:15            **Inquiry Driven Lab Series In Cellular Biology Based On Membrane Domain Components In Yeast.** G. Willhite, Tennessee Wesleyan College.
- 3:30            **Utilization Of *C.elegans* For The Study Of Metabolism.** N. Ragsdale and Ashley Dozier\*, Belmont University.
- 3:45            **Using Current Events to Bring the Big Picture View to Students in Biology Courses.** Karen Kendall-Fite, Columbia State Community College.
- 4:00            **Lawrenceburg Meets Columbia: Integrating And Web-Enhancing Human Anatomy And Physiology Classes Using WebCT.** Mandy Carter-Lowe, Columbia State Community College.

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**ZOOLOGY - I**  
**University Center 230 B**  
**Steven E. Hayslette, presiding**  
**Tennessee Technological University**

- 1:10 pm      **Section Business Meeting: Election of Officers for 2006**
- 1:30            **Association Of Temperature And Capture Of Virginia Opossums (*Didelphis virginiana*).** J. B. Akins\*, A. E. Houston, and M. L. Kennedy, The University of Memphis (JBA, MLK), and Ames Plantation, The University of Tennessee (AEH).
- 1:45            **Variation In Aggressive Behaviors Of *Sciurus carolinensis* During Feeding: Self Recognition Or Kin Recognition?** C. Baugher\* and A. N. Barrass, The Center of Excellence for Field Biology, Austin Peay State University.
- 2:00            **Assessing Temporal Variability In Biodiversity Measures Of Small Mammals Across Vegetational Types.** H. L. LaMountain\* and M. L. Kennedy, The University of Memphis.
- 2:15            **A Survey Of Mammalian Biodiversity At Fort Donelson National Battlefield.** A. Featherston\*, H. LaMountain, D. McDermott, N. Jordan and M. L. Kennedy, The University of Memphis.
- 2:30            **Breeding And Non-Breeding Home Ranges Of Adult Male Raccoons (*Procyon lotor*): Territoriality And Metabolic Home Range Size.** J. B. Jennings\*, M. L. Kennedy, and A. E. Houston, The University of Memphis (JBJ and MLK), and Ames Plantation, The University of Tennessee (AEH).
- 2:45            **Break**
- 3:00            **Estimating Population Density Of White-tailed Deer Using Thermal Imaging.** P. L. Johnson\*, R. E. Kissell, Jr., S. W. Stevenson, and M. L. Kennedy, The University of Memphis (PLJ, MLK), The University of Arkansas at Monticello, Monticello, Arkansas (REK), and Milan Army Ammunition Plant, Milan, Tennessee (SWS).
- 3:15            **Variability Of Opossum Litter Size In Western Tennessee.** K. Sharma\* and J. R. Hisey, Lee University.
- 3:30            **Spatial And Temporal Variation In Sex-Bias Response Of Raccoons (*Procyon lotor*) To Live Traps.** E. H. Vecchio\*, B. Carver, J. Hisey, T. A. Ladine, and M. L. Kennedy, The University of Memphis (EHV, MLK), Freed-Hardeman University (BC), Lee University (JH), and East Texas Baptist University, Marshall, Texas (TAL).

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**ZOOLOGY - II**  
**University Center 230C**  
**Steven E. Hayslette, presiding**  
**Tennessee Technological University**

- 1:10 pm      **Section Business Meeting: Election of Officers for 2006 (N.B., in Room ?)**
- 1:30            **The Use Of Artificial Nesting Structures In Mourning Dove Nesting Research And Habitat Management.** S. Simmons\* and S. E. Hayslette, Tennessee Tech University.
- 1:45            **Feeding Activity Of Stinkpots (*Sternotherus odoratus*) At Reelfoot Lake, Tennessee.** B. M. Glorioso\*, E. L. Young, and V. A. Cobb, Middle Tennessee State University.
- 2:00            **Freshwater Mussels of the Hatchie River in West Tennessee.** N. Van Tol, D. Manning, D. Hubbs, and D. Kessler#, Tennessee Wildlife Resources Agency (NVT, DM, DH) and Rhodes College (DK).
- 2:15            **The Morphology And Taxonomic Status Of *Leiobunum serratipalpe* Roewer (1910) (Arachnida: Phalangida: Leiobuninae).** C. R. McGhee, Middle Tennessee State University.
- 2:30            **Phylogenetics Of The Tennessee Cave Salamander, *Gyrinophilus palleucus*, Complex In Tennessee.** M. L. Niemiller\* and B. T. Miller, Middle Tennessee State University.
- 2:45            **Break**
- 3:00            **The Effects Of Storm Water And Combined Sewer Overflow On Benthic Macroinvertebrates In Urban Streams.** C. W. Emerson\* and S. W. Hamilton, Center for Field Biology, Austin Peay State University.
- 3:15            **Using Toxicity Test To Assess Stream Water Receiving Storm Water Drainage.** T. Green\* and W. D. S. Burton, Austin Peay State University.

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**POSTERS ON DISPLAY**  
**Ballroom Lobby, University Center**

\*student author # presenting author, if not first author

**BOTANY**

**Stomatal Density in the Exotic Shrub *Lonicera maackii* and the Native Shrub *Symphoricarpos orbiculatus* in Different Environmental Conditions.** B. Thomas\* and D. Panvini, Belmont University.

**Rates of Photosynthesis in Exotic Shrubs and Vines Compared to Native Shrubs and Vines of Middle Tennessee.** K. Wicks\* and D. Panvini, Belmont University.

**How Shading Effects the Growth of Nimblewill (*Muhlenbergia*).** R. Anderson\*, K. Hiatt\*, W. Anderson, J. Walck, and T. Hogan. Middle Tennessee State University (RA, KH, WA, JW) and Stones River National Battlefield, Murfreesboro (TH).

**CELL AND MOLECULAR BIOLOGY**

**Tyrosine 244 Stabilizes the Transition State of the Peptidase Reaction of *Saccharomyces cerevisiae* Leukotriene A<sub>4</sub> Hydrolase.** M. W. Thompson, C. E. Romer\*, and R. L. Seipelt, Middle Tennessee State University.

**A Conserved Tryptophan Residue With an Altered pKa Is Essential for the Peptidase Reaction of *Saccharomyces cerevisiae* Leukotriene A<sub>4</sub> Hydrolase.** E. D. Archer\*, R. L. Seipelt, and M. W. Thompson, Middle Tennessee State University.

**DNA Fingerprinting And The Legal System – Benefits And Problems Of The Polymerase Chain-Reaction (PCR).** Alicia E. Blakley and Barbara Albers Jackson, Tennessee Technological University.

**Biogeography And Divergence Dates Of Murine Rodents.** E. Chan\*, The University of Memphis.

**Genotoxicities Induced by Benzidine And Benzidine Analogues.** P. Makena\* and King-Thom Chung #, The University of Memphis.

**CHEMISTRY**

To be announced. See Addendum

**ENGINEERING AND ENGINEERING TECHNOLOGY**

**A Case Study of Large Scale Biomedical Data Analysis:** B. Hamilton\*, R. Woods\*, and T. Myers\* sponsored by M. L. Daley, The University of Memphis.

**HEALTH AND MEDICAL SCIENCES**

**A Study To Determine If Education And Exposure To A New Product Increases Acceptance In Peanut Allergic Families.** K.J. Krank\*, L.H. Clemens, T.L. Smith#, and P.M. Stevens, The University of Memphis.

## POSTERS ON DISPLAY

### GEOLOGY AND GEOGRAPHY

**Analysis Of Cumberland Plateau Land Use Change In Tennessee Using GIS.** J. Tittle\* and P. Li, Tennessee Technological University.

**Caney Fork Watershed Toxic Release Inventory Analysis.** Jeffery S. Hensley\* and P. Li, Tennessee Technological University.

### SCIENCE AND MATH TEACHING

**A Cedar Glade Plant Population Study With Elementary Students.** K. Metius-House\* and K. Cleary Sadler, Middle Tennessee State University.

### ZOOLOGY

**Meacham Pond: Some Effects Of Eutrophication On Water Pollution Indicators.** A. Atmar, J. Baker III, J. Benson, L. Boyd, J. Gatewood, L. Hagood, N. Harris, C. McPherson, J. Miller, S. Mosley, R. Nichols, J. Percifull, V. Reeves, J. Richardson, T. Sanchez, J. Simpson, A. Williams, R. Wilson, E. Xhaferi, and W. D. S. Burton, Austin Peay State University.

**A Preliminary Survey Of Amphibians And Reptiles At Big Cypress Wildlife Management Area.** T. Blanchard and T. Pratt, University of Tennessee at Martin.

**An Assessment Of Male Spatial Interactions Among Raccoons.** N. E. Jordan\*, J. B. Jennings, and M. L. Kennedy, The University of Memphis.

**Food Habits Of Coyotes In Western Tennessee.** C. L. Kimes\*, T. M. Gabor, and M. L. Kennedy, The University of Memphis (CLK and MLK), and Park University, Parkville, Missouri (TLG).

**Biodiversity Survey Of Shrews (Soricidae) In Western Tennessee.** A. N. McBride\*, H. L. LaMountain\*, and M. L. Kennedy, The University of Memphis.

**Notes On The Reproduction Of The Streamside Salamander, *Ambystoma barbouri*, From Rutherford County, Tennessee.** M. L. Niemiller\*, B. M. Glorioso\*, C. Nicholas\*, J. Phillips\*, J. Rader\*, E. Reed\*, K. L. Sykes\*, J. Todd\*, G. R. Wyckoff\*, E. L. Young\*, and B. T. Miller, Middle Tennessee State University.

## **TAS Standing Committees 2005**

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**Dr. Steven Hamilton, Member-at-large, 2005-2007**

Austin Peay State University

## **2005 Local Arrangements Committee**

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**Dr. Wintfred L. Smith**

### **Driving Directions from Jackson to UT-Martin**

- Take the Highway 45 Bypass North (also called Keith Short Bypass).
- Follow 45 North bypass until you see an exit to Milan (to your right). This will be hwy 45E.
- Take the Milan exit and follow 45E through Milan, Greenfield and on to Martin.
- As you enter Martin, pass Westview High School on your left. Continue on Business 45 E into town.
- Turn left at the 2<sup>nd</sup> stop light onto University Street and continue westbound on University Street through the first stop light. You will turn left at the second stop light onto Mt. Pelia Road.
- See Mt. Pelia Road below.

### **Driving Directions from Nashville to UT-Martin**

- Take I-40 west out of Nashville to the Parker Crossroads Hwy 22 exit (approximately 2 hrs driving time).
- Take Exit 108 (Parker Crossroads/Huntington exit onto Highway 22 North. This will be a right turn onto Hwy 22 north.
- Follow Highway 22 North to Martin city limits (approximately 1 hr driving time). Continue on Hwy 22 to Hwy 43 exit. Exit to the right and immediately turn left over the bypass onto 43 south.
- Travel to the first stop light and turn left onto University Street (This is also hwy 431 South). Continue on University Street to the first traffic light.
- Turn right at the first traffic light onto Mount Pelia Road.
- See Mt. Pelia Road below

### **Driving Directions from Memphis to UT-Martin**

- Follow I-40 East to Jackson, Tennessee (approximately 1 hour, 15 minutes driving time).
- Take Exit 80-B (Milan, Humboldt)
- You will get on Highway 45 Bypass (also called Keith Short Bypass).
- Follow this Bypass until you see an exit to Milan (Hwy 45E to your right).
- Take the Milan exit and follow 45E through Milan to Greenfield and then to Martin.
- As you enter Martin, you will see Westview High School. Keep on 45 E into town.
- Turn left at the 2<sup>nd</sup> stop light onto University Street (this is a dead end).
- Go through the first stop light. You will turn left at the second stop light onto Mt. Pelia.

### **Common Directions from Mt. Pelia Road and Parking**

- Take Mt. Pelia to the third building on the left (Paul Meek Library). There will be parking on both sides of the street. You may park in any parking space available. Signs should be posted for TAS parking. Park in either lot (Enter the Boling University Center glass doors nearest the drop-off circle.) Boling University Center is labeled #39 on the campus map.
- Overflow parking will be available in the Hardy M. Graham Stadium parking lot. See #12 on the campus map. A shuttle will operate from this lot to the Boling University Center until 12 noon on Friday.

Insert Campus Map for UT- Martin on this page. See separate file.