

**PROCEEDINGS OF THE  
NINTH SYMPOSIUM  
on  
The Natural History of  
Lower Tennessee and Cumberland River Valleys**

**Brandon Spring Group Camp  
Land Between The Lakes  
March 9 and 10, 2001**

**Sponsored by**

**Austin Peay State University**

**The Center for Field Biology**

**and**

**Murray State University**

**Center for Reservoir Research**

**and**

# U. S. Department of Agriculture, Forest Service

## Land Between The Lakes

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*Inside Coverpage*

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**PROCEEDINGS OF THE EIGHTH SYMPOSIUM  
ON THE NATURAL HISTORY OF  
LOWER TENNESSEE AND CUMBERLAND RIVER VALLEYS**

Held at Brandon Spring Group Camp  
Land Between The Lakes  
March 9 and 10, 2001

Sponsored by:

The Center for Field Biology  
Austin Peay State University, Clarksville, Tennessee

and

The Center for Reservoir Research  
Murray State University, Murray, Kentucky

and

U.S. Department of Agriculture, Forest Service - Land Between The Lakes  
Golden Pond, Kentucky

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**PREFACE**

The Ninth Symposium on the Natural History of Lower Tennessee and Cumberland River Valleys was held at Brandon Spring Group Camp in Land Between The Lakes on 9 and 10 March 2001. This biennial gathering of naturalists and field biologists was sponsored by The Center for Field Biology at Austin Peay State University, The Center for Reservoir Research at Murray State University, and the U.S. Department of Agriculture, Forest Service, Land Between The Lakes. A total of 95 people representing 24 institutions registered at this symposium.

The symposium began Friday afternoon with welcoming comments from representatives of sponsoring institutions. Dr. Benjamin P. Stone, Director of the Center for Field Biology at Austin Peay State University, welcomed all participants. Additional comments were offered by Dr. David S. White, Director of the Hancock Biological Station at Murray State University, and William Lisowsky, Area Supervisor, Land Between The Lakes.

Two invited speakers presented papers addressing the afternoon theme of "Land Between the Lakes: Four Decades of Tennessee Valley Authority Stewardship." The first speaker, Rick Lowe, Deputy Area Supervisor, Land Between The Lakes, reviewed various Tennessee Valley Authority programs in wildlife management, forestry, environmental education, and others. The second speaker, William Lisowsky, Area Supervisor, Land Between The Lakes, discussed tentative plans for management of Land Between The Lakes, now under management of the U.S. Department of Agriculture, Forest Service.

The Friday evening presentation was by Drs. Jerry and Carol Baskin, The University of Kentucky. They gave a well-illustrated talk on plants and plant communities of the Negev Desert, Israel, based on a recent visit there.

Three sessions of contributed papers were presented Saturday morning. Session I included 15 botany papers; this session was moderated by Dr. Edward W. Chester, Austin Peay State University. Session II was moderated by Dr. Susan Hendricks, Murray State University, and included 11 papers in the areas of aquatic biology and water quality. Dr. Floyd Scott, Austin Peay State University, moderated the eight papers in Session III, Zoology. All contributors were invited to publish an abstract, short communication, or full manuscript in the 2001 proceedings.

The style and format of these proceedings follow that established in proceedings of previous symposia. Dr. Edward W. Chester organized and edited the Invited Papers and edited abstracts and papers from Session I (Botany). Dr. Floyd Scott edited abstracts and papers from Sessions II (Aquatic Biology and Water Quality) and III (Zoology).

## ACKNOWLEDGMENTS

The editors thank Marilyn Griffy for her assistance in organizing and coordinating activities leading up to and throughout the symposium. We also recognize the participation of current APSU Center for Field Biology undergraduate and graduate research assistants for their help before and during this biennial event. Many abstracts and manuscripts were typed and corrected by Griffy, who also saw to details of the proceedings organization. The help of these individuals and others was critical to the success of this symposium and completion of these proceedings. All complete manuscripts were reviewed fully. We appreciate the comments of all reviewers as this process greatly enhances the quality of these proceedings. While we (the editors) would wish this publication to be error free, most likely it is not and for this we assume responsibility.

## SYMPOSIUM REGISTRANTS

Following, in alphabetical order, is a list of those individuals who registered at the 2001 symposium. Institutional affiliation (when available), city (of the person's institution or home), and state are also given.

**Christopher Adams**, University of Kentucky, Lexington, KY; **Jason Albritton**, Murray State University, Murray, KY; **Devon Anderson**, Austin Peay State University, Clarksville, TN; **Bill Atkinson**, Hopkinsville Community College, Hopkinsville, KY; **Heather Bagwell**, Austin Peay State University, Clarksville, TN; **Rex Barber**, Volunteer State Community College, Lebanon, TN; **Carol Baskin**, University of Kentucky, Lexington, KY; **Jerry Baskin**, University of Kentucky, Lexington, KY; **Amy Benson**, Murray State University, Murray, KY; **Steve Bloemer**, USDA Forest Service - LBL, Golden Pond, KY; **Crockett Bone**, Austin Peay State University, Clarksville, TN; **Robert Brinkman**, Austin Peay State University, Clarksville, TN; **William Bryant**, Thomas More College, Crestview Hills, KY; **Angelo Bufalino**, St. Louis University, Richmond Hgts., MO; **Willodean Burton**, Austin Peay State University, Clarksville, TN; **Brian Canada**, Austin Peay State University, Clarksville, TN; **Edward Chester**, Austin Peay State University, Clarksville, TN; **Matt Cole**, Murray State University, Hazel, KY; **Michele Cox**, Austin Peay State University, Clarksville, TN; **Amanda Crook**, Murray State University, Murray, KY; **James Davis**, Western Kentucky University, Portland, TN; **Terry Derting**, Murray State University, Murray, KY; **Hal DeSelm**, UT- Knoxville, Knoxville, TN; **William Ellis**, Austin Peay State University, Clarksville, TN; **Larry Estes**, Columbia State Community College, Columbia, TN; **Rhonda Finch**, Murray State University, Murray, KY; **Mack Finley**, Austin Peay State University, Clarksville, TN; **Kevin Fitch**, ACS Conservation, Arnold AFB, TN; **Susan Fletcher**, Austin Peay State University, Clarksville, TN; **Alex Flynt**, Austin Peay State University, Clarksville, TN; **Thomas Forsythe**, TVA, Abingdon, MD; **Kari Foster**, Murray State University, Murray, KY; **Kenny Fralicx**, Between The Rivers, Eddyville, KY; **James Fralish**, Southern Illinois University, Carbondale, IL; **Marilyn Griffy**, Austin Peay State University, Clarksville, TN; **Debbie Hamilton**, Clarksville Academy, Clarksville, TN; **Steven Hamilton**, Austin Peay State University, Clarksville, TN; **Suzan Hamrick**, Murray State University, Murray, KY; **Greg Harris**, Austin Peay State University, Clarksville, TN; **Tracy Hawkins**, University of Kentucky, Jackson, KY; **Janice Helton**, Austin Peay State University, Pleasant View, TN; **Paula Helton**, Austin Peay State University, Pleasant View, TN; **Susan Hendricks**, Murray State University, Murray, KY; **Siti Nur Hidayati**, Middle Tennessee State University, Murfreesboro, TN; **Heather Hollis**, Austin Peay State University, Clarksville, TN; **Rebecca Houtman**, Austin Peay State University, Clarksville, TN; **Robert Hoyt**, Western Kentucky University, Bowling Green, KY; **Ted Ives**, Austin Peay State University, Clarksville, TN; **Richard Jensen**, Saint Mary's College, Notre Dame, IN; **Timothy Johnston**, Murray State University, Murray, KY; **Elizabeth Jones**, Kentucky Wesleyan College, Owensboro, KY; **Joanna Kind**, Murray State University, Murray, KY; **Rob Kingsolver**, Kentucky Wesleyan College, Owensboro, KY; **George Kipphut**, Murray State University, Murray, KY; **John Koons**, Jackson State Community College, Jackson, TN; **Jill Kruper**, Murray State University, Murray, KY; **Shelley Ladd**, Kentucky Wesleyan College, Owensboro, KY; **Larry Latson**, David Lipscomb, Nashville, TN; **Joanna Lau**, University of Illinois, Urbana, IL; **Jeff Lebkuecher**, Austin Peay State University, Clarksville, TN; **William Lisowsky**, USDA Forest Service - LBL, Golden Pond, KY; **Bommanna Loganathan**, Murray State University, Murray, KY; **Rick Lowe**, USDA Forest Service - LBL, Golden Pond, KY; **Laurina Lyle**, Austin Peay State University, Clarksville, TN; **Bill Martin**, Eastern Kentucky University, Richmond, KY; **Eric Meyer**, Kentucky Wesleyan College, Owensboro, KY; **Lorna Morris**, Middle Tennessee State University, Murfreesboro, TN; **Robert O'Daniel**, Western Kentucky University, Bowling Green, KY; **William Oliver**, Western Kentucky University, Bowling Green, KY;

University, Murray, KY; **Erin Rastede**, Kentucky Wesleyan College, Owensboro, KY; **Terry Ray**, Murray State University, Murray, KY; **Dan Reimers**, Memphis City Schools, Memphis, TN; **David Robinson**, Bellarmine University, Louisville, KY; **Baki Sadi**, Murray State University, Murray, KY; **Joe Schibig**, Volunteer State Community College, Portland, TN; **Joe Schiller**, Austin Peay State University, Clarksville, TN; **Floyd Scott**, Austin Peay State University, Clarksville, TN; **Kosta Seaford**, Murray State University, Murray, KY; **Adam Smith**, Murray State University, Murray, KY; **David Snyder**, Austin Peay State University, Clarksville, TN; **Logan Snyder**, Clarksville Academy, Clarksville, TN; **Wheeler Stephens**, Kentucky Wesleyan College, Owensboro, KY; **Ben Stone**, Austin Peay State University, Clarksville, TN; **Cindy Taylor**, Austin Peay State University, Clarksville, TN; **Jeffrey Walck**, Middle Tennessee State University, Murfreesboro, TN; **David White**, Murray State University, Murray, KY; **Howard Whiteman**, Murray State University, Murray, KY; **Amanda Wilding**, Austin Peay State University, Clarksville, TN; **Scott Williamson**, Austin Peay State University, Clarksville, TN; **Ashley Woods**, Austin Peay State University, Clarksville, TN; **Paul Yambert**, Murray State University, Murray, KY.

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## SYMPOSIUM SPEAKERS

### Invited Papers



**Rick Lowe**



**William Lisowsky**



**Dr. Jerry Baskin**

## Contributed Papers



**Session I: Botany** - (from left) H.R. DeSelm, C.C. Baskin, K. C. Fitch, T. S. Hawkins, E. W. Chester, W. S. Bryant, C.A. Adams, D. L. Robinson, S. N. Hidayati, R.J. Jensen, J. L. Walck, and L. L. Morris



**Session II: Aquatic Biology and Water Quality** - (from left) S. Barton, C. J. Albritton, A. Crook, J. Kind, R. Houtman, R.D. Hoyt, S. Hendricks, K. Davenport, G. Kipphut, and G. Harris.



**Session III: Zoology** - S. Williamson, B. G. Loganathan, M. C. Bone, A. F. Scott, T. I. Ives, Jr., M. Pope, A. Benson, and A. Smith.

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Friday, March 9, 2001

### LAND BETWEEN THE LAKES: FOUR DECADES OF TENNESSEE VALLEY AUTHORITY STEWARDSHIP

#### 1. Friday Afternoon

Land Between The Lakes: A Review of the Past - Rick Lowe (oral presentation only)

**Land Between The Lakes: A Look to the Future Under Forest Service Management, March 9, 2001 - William Lisowsky**

#### 2. Friday Evening

**Wildflowers and Plant Communities of the Negev Desert, Israel (ABSTRACT)**  
J. M. Baskin and C. C. Baskin

*Moderator and Editor*

**Edward W. Chester**  
**Austin Peay State University**

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