16th ANNUAL NATURAL AREAS CONFERENCE
11th ANNUAL MEETING OF THE NATURAL AREAS ASSOCIATION

17-20 OCTOBER 1989

Hyatt Regency Knoxville
Knoxville, Tennessee

CONFERENCE HOST: Wildlife and Natural Heritage Resources
Tennessee Valley Authority

SPONSORED BY: Natural Areas Association

EMERGENCY TELEPHONE NUMBER: (615) 637-1234

This number at the Hyatt Regency Knoxville is in service 24 hours a day. Please leave it with your family and office.

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NATURAL AREAS ASSOCIATION

The Natural Areas Association (NAA) was formed in 1978 as a not-for-profit organization of persons concerned with identification, evaluation, management, protection, and study of natural areas and other elements of natural diversity. Members include professional and volunteer researchers, natural areas managers, naturalists, conservationists, and other interested persons working for both public and private organizations. The Association is governed by a 15-member board of directors elected by its members. NAA provides support and informational services to those concerned with protection and long-term stewardship of natural areas. NAA publishes the NATURAL AREAS JOURNAL, sponsors the annual Natural Areas Conference, and promotes public understanding and appreciation of natural areas.

THE NATURAL AREAS ASSOCIATION ANNUAL MEETING

The Natural Areas Conference is cosponsored each year by the Natural Areas Association (NAA), which holds its annual meeting at the conference. All conference participants are invited to attend the annual meeting. Also, be sure to stop by the NAA information desk and take a look at the NATURAL AREAS JOURNAL. Individual membership dues are $25.00. Members include resource managers, ecologists, biologists, naturalists, and volunteers interested in protecting, preserving, and perpetuating our country’s vanishing natural heritage.

ABOUT THE CONFERENCE

Since its inception in 1973, the Natural Areas Conference has become the annual meeting for resource managers, biologists, ecologists, agency administrators, and volunteers concerned with identification, evaluation, management, protection, and study of natural areas and other elements of natural ecological diversity. The Conference continues to maintain a workshop format with plenty of opportunity for interaction between speakers and among participants. Last year’s conference was held on the campus of Syracuse University, New York.

CONFERENCE LOCATION

This year’s conference will be held at the Hyatt Regency Knoxville, located in Knoxville, Tennessee, a moderate sized city of approximately 572,000 people located at the center of the eastern half of the United States. Only a 45-minute drive from Great Smoky Mountains National Park, Knoxville is surrounded by natural beauty and is proud of its rich Appalachian heritage. Three of the Nation’s busiest interstate highways (I-40, I-75, and I-81) intersect at Knoxville, and major airline service is provided to McGhee Tyson Airport, located about 13 miles south of the downtown area.

ACCOMMODATIONS

On a hill high above the city of Knoxville and the Tennessee River stands the unique and dramatic Hyatt Regency Knoxville, a showcase of contemporary architecture and interior design in the midst of an ever-changing panorama of sky and river, city and mountains. Located at Regency Square directly across the street from the Knoxville Civic Auditorium and Coliseum, one mile from The University of Tennessee, 45 minutes from the Great Smoky Mountains National Park, 20 minutes from McGhee Tyson Airport, and 40 minutes from Oak Ridge and the Atomic Energy Museum. Unlimited service, excitement, and ultimate attention to detail—that is the Hyatt Regency Knoxville.

PARKING

The Hyatt Regency’s spacious parking garage is located immediately adjacent to the hotel. Additional parking is available directly across the street at the Knoxville Civic Auditorium.
SESSIONS AND DISCUSSIONS

There will be formal and informal sessions addressing the following topics:

Managing Exotic Species in Natural Areas

Natural Areas Design and Establishment

Characteristics, Management, and Restoration of Old-Growth Temperate Forest Ecosystems

Protection of Riverine Ecosystems as Natural Areas

Global Climate Change and the Implications for Natural Areas Managers

University Nature Preserves Systems

Managing and Protecting Caves and Cave Faunas

Natural Areas Signs - What Works and What Doesn't

Contributed Papers and Posters Related to Natural Areas Identification, Protection, and Management

POSTER SESSION

This year's poster session will be set up in the John Sevier Lobby Area, and will run concurrently with other sessions on Wednesday, October 18. Authors will attend their posters on Wednesday night from 9:30 p.m. until 10:30 p.m. to answer questions and discuss their findings.

CONFERENCE FEES

This year's lodging and meals package totals $195.30 per person, double occupancy (including taxes and gratuities). A single occupancy package is also available for $294.64. These include lodging expenses for three nights plus seven meals (3 breakfast, 1 lunch, 2 dinners, & Thursday's box lunch). An individual meal ticket is available for $99.00 should a guest room not be required. The Thursday evening barbecue dinner and blue grass music social is optional and requires purchase of a ticket for an additional $15.00. The conference registration fee is $50.00 which includes field trip transportation, breaks, audiovisual support, printing and mailing costs, etc. Check in time on Tuesday is 3:00 p.m. with checkout scheduled for no later than noon on Friday. Please submit payment with registration. Conference fees can be paid by check or money order made payable to The Natural Areas Association - sorry, no vouchers permitted.
TUESDAY - OCTOBER 17, 1989

8:00 a.m. - 5:00 p.m.  CONFERENCE REGISTRATION & CHECK IN - Ballroom Level Vestibule

1:00 p.m. - 1:30 p.m.  INTRODUCTIONS, ANNOUNCEMENTS & WELCOMING STATEMENTS
                        Mississippi Room

1:30 p.m. - 3:00 p.m.  SOUTHERN APPALACHIANS OVERVIEW - Mississippi Room
                        Multi-Image Presentation - Dan Pitillo, Western Carolina University
                        Geology - Bob Hatcher, University of Tennessee

3:00 p.m. - 3:30 p.m.  BREAK - John Sevier Lobby

3:30 p.m. - 5:00 p.m.  SOUTHERN APPALACHIANS OVERVIEW (continued) - Mississippi Room
                        Botany & Community Ecology - Peter White, North Carolina Botanical Gardens
                        Zoology - Fred Alsop & Jerry Nagel, East Tennessee State University

6:00 p.m. - 7:30 p.m.  DINNER - Mississippi Room

7:30 p.m. - 8:15 p.m.  NAA PRESIDENT'S ADDRESS - Mississippi Room
                        Glenn P. Juday - President, The Natural Areas Association

8:15 p.m. - 8:45 p.m.  NAA MEMBERSHIP MEETING - Mississippi Room
                        Elections, Annual Awards, etc. - Chaired by Glenn P. Juday, President,
                        The Natural Areas Association

8:45 p.m. - 9:45 p.m.  SPECIAL VIDEO PRESENTATION - Mississippi Room
                        “Saving Nature”
WEDNESDAY - OCTOBER 18, 1989

7:00 a.m. - 8:30 a.m.  BREAKFAST - Kentucky Room

8:30 a.m. - 10:00 a.m.  CONCURRENT SESSIONS

1. Exotic Species - William Blount South

2. Nature Preserves Design and Establishment - Panel Discussions
   Addressing "Principles in Preserve Design: Current Concepts"; and
   "Preserve Design in the Real World" - Andrew Jackson Room

3. Managing and Protecting Caves and Cave Faunas - Introduction to
   Cave Resources - Alvin York Room

4. Characteristics, Management, and Restoration of Old-Growth
   Deciduous Forest in the Southeastern United States -
   William Blount North

5. Contributed Papers - Natural Areas Identification and Preserve
   Design - Mississippi Room

10:00 a.m. - 10:30 a.m.  BREAK - John Sevier Lobby

10:30 a.m. - 12:00 p.m.  CONCURRENT SESSIONS

6. Exotic Species - Biological Control of Weeds - William Blount South

7. Nature Preserves Design and Establishment - Establishing State
   Nature Preserves Systems - Andrew Jackson Room

8. Managing and Protecting Caves and Cave Faunas - Life of the Cave -
   Alvin York Room

9. Characteristics, Management, and Restoration of Old-Growth
   Deciduous Forest in the Southeastern United States - William Blount North

10. Contributed Papers - Community Dynamics in Natural Areas -
    Mississippi Room

12:00 p.m. - 1:30 p.m.  LUNCH - Kentucky Room

1:30 p.m. - 3:00 p.m.  CONCURRENT SESSIONS

11. Exotic Species - Exotics Control By Management - Andrew Jackson Room

12. Nature Preserves Design and Establishment - Natural Areas Registry
    Programs - Henry Knox Room


15. Contributed Papers - Policies For Natural Areas Protection I - Mississippi Room

16. Exotic Species - Exotics Control by Regulation - Alvin York Room

3:00 p.m. - 3:30 p.m.  BREAK - John Sevier Lobby

3:30 p.m. - 5:30 p.m.  CONCURRENT SESSIONS

17. Exotic Species - Panel Discussion addressing “Current & Future Actions to Address the Exotics Problem” - William Blount South

18. Nature Preserves Design and Establishment - Panel Discussion addressing “Local and Regional Land Trusts: Natural Areas Preservation” - Henry Knox Room

19. Managing and Protecting Caves and Cave Faunas - Protecting Caves and Cavers - Andrew Jackson Room


21. Contributed Papers - Policies For Natural Protection II - Mississippi Room

6:30 p.m. - 8:00 p.m.  DINNER - Kentucky Room

8:30 p.m. - 9:30 p.m.  CONCURRENT SESSIONS

22. Nature Preserves Design and Establishment - Round Table Discussion on “University Nature Preserves Systems” - Andrew Jackson Room

23. Contributed Papers - Case Histories: Exotic Species Biology and Control - William Blount Room

24. Natural Areas Signs - What Works & What Doesn't: Round Table Discussion - Alvin York Room

9:30 p.m. - 11:00 p.m.  POSTER SESSION AND CASH BAR SOCIAL - John Sevier Lobby

Authors Will Attend Their Posters From 9:30 p.m. To 10:30 p.m. To Answer Questions and Discuss Their Findings
WEDNESDAY CONCURRENT SESSIONS

CONCURRENT SESSION 1
EXOTIC SPECIES
Chairman: Sarah Green

8:35-9:20 a.m.
"The Status of Exotic Species in our National Parks" - Eugene Hester

9:20-9:40 a.m.
"The Purple Loosestrife Biological Control Effort, A History" - Daniel Q. Thompson

9:40-10:00 a.m.
Dealing With Humane and Animal Rights Interests in Controlling Exotic Animals" - William Ehorn

CONCURRENT SESSION 2
NATURE PRESERVES DESIGN AND ESTABLISHMENT
8:30-9:00 a.m.
Panel Discussion - "Principles in Preserve Design: Current Concepts"
Moderator: David Wilcove
Panelists
Michael Duever
Peter White
Joan Walker

9:00-10:00 a.m.
Panel Discussion - "Preserve Design in the Real World"
Moderator: Kathy Seaton
Panelists
Norm Brunswig
Merrill Lynch
Lance Peacock
Steve Gatewood
Hubert Highnote

CONCURRENT SESSION 3
MANAGING & PROTECTING CAVES & CAVE FAUNAS - INTRODUCTION TO CAVE
Chairman: Les Zimmer

8:30-8:45 a.m.
"Cave Wilderness Slide Show" - Ernest & Karen Kastnings

8:45-9:05 a.m.
"What is a Cave Resource?" - Dave Foster & Les Zimmer

9:05-9:40 a.m.
"The Cave Geosphere (Karst Hydrology and Geology)" - To be arranged

9:40-10:00 a.m.
"Significant Caves & the New Federal Cave Law" - To be arranged

CONCURRENT SESSION 4
CHARACTERISTICS, MANAGEMENT, & RESTORATION OF OLD-GROWTH DECIDUOUS FORESTS IN THE RESOURCES
Chairman: Winston Smith

8:15-8:20 a.m.
Opening Remarks, Winston Smith

8:20-8:50 a.m.
"Characteristics of Old-Growth Mixed Mesophytic Forests in the Southern Appalachians" - Bill Martin

8:50-9:20 a.m.
"Characteristics of Old-Growth Forests of the Savage Gulf State Natural Area" - Mike Sherman

9:20-10:00 a.m.
"Characteristics of Old-Growth Forests in Bialowieza National Park, Poland" - Ludwik Tomialcic, Wieslaw Walankiewicz, & Tomasz Wesolowski

CONCURRENT SESSION 5
CONTRIBUTED PAPERS - NATURAL AREAS IDENTIFICATION & PRESERVE DESIGN SOUTHEASTERN UNITED STATES
Chairman: John Nelson

8:30-8:45 a.m.
"Coarse Filters Versus Fine Filters: A Comparison of Two Approaches to Finding Potential Natural Areas" - James Kooser & Ralph J. Garono

8:45-9:00 a.m.
"An Assessment of Significant Botanical Resources in the Vicinity of the Proposed Lassics Botanical Area-Six Rivers National Forest Phase I" - Robert Wunner

9:00-9:15 a.m.
"Status of Carolina Bays in South Carolina" - Stephen H. Bennett & John B. Nelson

9:15-9:30 a.m.
"Natural Communities and Rare Plant Species in Carolina Bays of South Carolina" - John H. Nelson & Stephen H. Bennett

9:30-9:45 a.m.
"Abandoned Railroad Corridor Becoming a Natural Area Preserve in Southwestern Wisconsin" - Mark Leach & Steve Hubner

William Blount South
Andrew Jackson Room
Alvin York Room
William Blount North
Mississippi Room
BREAK

CONCURRENT SESSION 6
EXOTIC SPECIES - BIOLOGICAL CONTROL OF WEEDS
Chairman: Joe Abrell
10:35-10:55 a.m.
"Past Successes and Current Prospects in Biological Control of Weeds" - Jack DeLoach

10:55-11:15 a.m.
"Philosophy, Procedures and Costs of Developing Biological Weed Controls" - John Drea

11:15 a.m.-12:00 p.m.
"Biological Control Prospects for Melaleuca" - Robert Doren

BREAK

CONCURRENT SESSION 7
NATURE PRESERVES DESIGN & ESTABLISHMENT
10:30 a.m.-12:00 p.m.
Panel Discussion - "Establishing State Nature Preserves Systems" Moderator: Bob McCance

Panelists
Carol Baudler
Michael Lipford
Greg Brock

BREAK

CONCURRENT SESSION 8
MANAGING & PROTECTING CAVES & CAVE FAUNAS - INTRODUCTION TO CAVE RESOURCES
Chairman: Les Zimmer
10:30-11:15 a.m.
"Bats" - Bob Currie
11:15 a.m.-12:00 p.m.
"Slithy Toves and Other Cave Creatures" - To be arranged

BREAK

CONCURRENT SESSION 9
CHARACTERISTICS, MANAGEMENT, & RESTORATION OF OLD-GROWTH DECIDUOUS FORESTS IN THE SOUTHEASTERN UNITED STATES
Chairman: Winston Smith
10:30-11:00 a.m.
"Gap Dynamics of Old-Growth Deciduous Forests" - Jim Runkle
11:00-11:30 a.m.
"Dynamics of Solute Movement Through an Old-Growth Covered Watershed in Great Smoky Mountains National Park" - Allen Moore & Wayne Swank
11:30-12:00 p.m.
"Forest Service Research Natural Areas and the Study of Old-Growth in the South" - Margaret Devall & Paul Ramp

BREAK

CONCURRENT SESSION 10
CONTRIBUTED PAPERS - COMMUNITY DYNAMICS IN NATURAL AREAS
Chairman: Arthur Spingarn
10:30-10:45 a.m.
"Patterns and Processes in Northern Hardwoods at Landscape and Single Treefall Scales" - David J. Mladenoff & John Pastor
10:45-11:00 a.m.
"The Effects of Management on Plant Recovery on the Debris Avalanche at Mount St. Helens" - Virginia H. Dale
11:00-11:15 a.m.
"Resistance to Exotic Invasion in Central Indiana Old-Growth Forests" - Timothy S. Brothers & Arthur L. Spingarn
11:15-11:30 a.m.
"Stand Structure of an Old-Growth Sweetgum Stand in the Moro Creek Bottom of South-Central Arkansas" - James M. Guldin, E. C. Burkhardt & Lance Peacock
11:30-11:45 a.m.
"The Barrens of Southern Illinois" - Alice A. Long
11:45 a.m.-12:00 p.m.
"Glades and Rock Barrens of Johnson's Shut-Ins State Park, St. Francois Mountains, Missouri: Geologic Influences on Natural Community Development" - R. Blane Heumann

William Blount South  Andrew Jackson Room  Alvin York Room  William Blount North  Mississippi Room
LUNCH

CONCURRENT SESSION 11
EXOTIC SPECIES - EXOTICS
CONTROL BY MANAGEMENT

Chairman: Randy Nyboer
1:30-3:00 p.m.
Round Table Discussion &
Program Comparisons -
"Natural Areas
Registry Programs"
Participants
Don McFall
Jo-Anne Rzadki
Helen Ballew
1:30-1:50 p.m.
"The National Park Service's
Integrated Pest Management
Program" - Gary Johnston
1:50-2:10 p.m.
"Herbicides with Potential
for Weed Control in Natural
Areas" - Timothy Murphy
2:10-2:30 p.m.
"Exotic Forest Disease impacts
at Great Smoky Mountains
National Park" - Keith Langdon
2:30-3:00 p.m.
"Control of Feral Pigs
at Hawaii Volcanoes
National Park" - Larry Katahira

LUNCH

CONCURRENT SESSION 12
NATURE PRESERVES DESIGN
& ESTABLISHMENT

Chairman: David Foster
1:30-2:15 p.m.
"Managing the Resource:
Inventory, Planning, &
Monitoring" - To be
arranged
2:15-3:00 p.m.
"Managing People: Use
Levels, Access Concerns,
Volunteer Programs &
Interpretation" - To be
arranged

LUNCH

CONCURRENT SESSION 13
MANAGING & PROTECTING
CAVES & CAVE FAUNAS - CAVE
MANAGEMENT TECHNIQUES

Chairman: Paul B. Hamel
1:30-2:00 p.m.
"Effects of Edge & Internal
Patchiness on Avian
Habitat Use in an Old-Growth
Florida Hammock" - Reed Noss
2:00-2:30 p.m.
"Winter Bird Communities
of Old-Growth and
Successional Bottomland
Hardwood Forests in South
Carolina & Tennessee" -
Paul B. Hamel & Bob Ford
2:30-3:00 p.m.
"Do Cavity-Nesting Birds
Suffer from Competition for
Holes in a Primaeval
Deciduous Forest?" -
Wieslaw Walankiewicz

LUNCH

CONCURRENT SESSION 14
CHARACTERISTICS,
MANAGEMENT &
RESTORATION OF OLD-
GROWTH DECIDUOUS
FORESTS IN THE
SOUTHERN UNITED STATES

Chairman: Linda Duever
1:30-1:45 p.m.
"Evaluating Natural Area
Quality in Legal Context" -
Linda C. Duever & William R.
Mabie III
1:45-2:00 p.m.
"Mammoth Cave Area
International Biosphere
Reserve" - George S. Gregory
2:00-2:15 p.m.
"Land Between the Lakes Areas
 Biosphere Reserve" - Thomas D.
Forsythe
2:15-2:30 p.m.
"The Bureau of Land
Management's Vegetation
Management Initiative" -
James M. Colby
2:30-2:45 p.m.
"Management of Areas of
Critical Environmental
Concern" - David C. Williams
2:45-3:00 p.m.
"Recent Cooperative
Developments Between The
Nature Conservancy and The
Bureau of Land Management" -
Mississippi Room James M. Colby

LUNCH

CONCURRENT SESSION 15
CONTRIBUTED PAPERS - POLICIES
FOR NATURAL AREAS PROTECTION

Chairman: Linda Duever
1:30-1:45 p.m.
"Evaluating Natural Area
Quality in Legal Context" -
Linda C. Duever & William R.
Mabie III
1:45-2:00 p.m.
"Mammoth Cave Area
International Biosphere
Reserve" - George S. Gregory
2:00-2:15 p.m.
"Land Between the Lakes Areas
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"Recent Cooperative
Developments Between The
Nature Conservancy and The
Bureau of Land Management" -
Mississippi Room James M. Colby

Andrew Jackson Room
Henry Knox Room
William Blount South
William Blount North
Mississippi Room
Alvin York Room
BREAK
CONCURRENT SESSION 17
EXOTIC SPECIES
3:30-5:00 p.m.
Panel Discussion - "Current & Future Actions to Address the Exotics Problem"
Moderator: John Schwegman
Panelists
K. Andrew West
Gary Johnston
Curtis Sharp
Carl Becker
John Drea

BREAK
CONCURRENT SESSION 18
NATURE PRESERVES DESIGN & ESTABLISHMENT
3:30-5:00 p.m.
Panel Discussion - "Local & Regional Land Trusts"
Moderator: Kathy Blaha
Panelists
Murray Evans
Graham Hawkes

BREAK
CONCURRENT SESSION 19
MANAGING & PROTECTING CAVES & CAVE FAUNAS - PROTECTING CAVES & CAVERS
Chairman: David Foster
3:30-3:50 p.m.
"State Cave Laws" - David Foster
3:50-4:10 p.m.
"Liability and Risk Management" - Joel Stevenson
4:10-4:40 p.m.
"Cave Gates" - Roy Powers
4:40-5:00 p.m.
"Other Cave Protection Techniques" - Les Zimmer

BREAK
CONCURRENT SESSION 20
CHARACTERISTICS, MANAGEMENT, & RESTORATION OF OLD-GROWTH DECIDUOUS FORESTS IN THE SOUTHEASTERN UNITED STATES
Chairman: Paul B. Hamel
3:30-4:00 p.m.
"Characteristics of Wildlife Communities of Old-Growth Southern Hardwood Forests" - Jim Dickson
4:00-4:30 p.m.
"Top Carnivores as Keystone Species in Old-Growth Deciduous Forests" - Mike Pelton
4:30-5:00 p.m.
"Restoration of Old-Growth Conditions to Second-Growth Stands at the Land Between The Lakes" - Larry Doyle & Beth Wellbaum
5:00-5:30 p.m.
"A Long-Term View of Old-Growth Hardwood Forests" - Jim Tanner

BREAK
CONCURRENT SESSION 21
CONTRIBUTED PAPERS - POLICIES FOR NATURAL AREAS PROTECTION II
Chairman: Abigail Rome
3:30-3:45 p.m.
"The Freshwater Wetlands Protection Act: A Regulatory Effort at Preserving Freshwater Wetland Natural Resources" - Lawrence S. Torok & Ernest Hahn
3:45-4:00 p.m.
"The Louisiana Coastal Resources Program: Regulatory Management of the 9.5 Million Acre Louisiana Coastal Zone" - John C. Leslie & James E. Holcombe
4:00-4:15 p.m.
"Protecting Natural Areas Through the Planning Process: The Chesapeake Bay Example" - Abigail Rome
4:15-4:30 p.m.
"Natural Areas Protection Under 404(C) of The Clean Water Act Using Geographic Information Systems (ARC/INFO) and the Landsat Thematic Mapper" - Gregory M. Hellyer & Marcy Berbrick
4:30-4:45 p.m.
"Protection of Vernal Pools Under Massachusetts Wetlands Protection Act" - Steven Roble
CONCURRENT SESSION 22  
UNIVERSITY NATURE PRESERVES  
sYSTEMS - ROUND TABLE  
DISCUSSIONS & COMPARISONS  

Moderator: Rick Paradis  
8:30-9:30 p.m.  

CONCURRENT SESSION 23  
CONTRIBUTED PAPERS - CASE  
HISTORIES: EXOTIC SPECIES  
BIOLOGY & CONTROL  

Chairman: Victoria Nuzzo  
8:30-8:45 p.m.  
"Experimental Control of Garlic Mustard (Alliaria officinalis);  
Use of Fire and Herbicides at  
Different Growth Stages"  
Victoria Nuzzo  
8:45-9:00 p.m.  
"The Use of Fire in the  
Containment of the Exotic  
Three, Melaleuca quinquenervia,  
in South Florida"  
Holly A. Tuck & Ronald L. Myers  
9:00-9:15 p.m.  
"Glossy Buckthorn (Rhamnus  
frangula), A Threat to the  
Vegetation of Northern  
Wetlands"  
James A. Reinartz & Joanne Kline  
9:15-9:30 p.m.  
"Autumn Olive in Illinois:  
A Conflict in Values"  
Guy Sternberg  

CONCURRENT SESSION 24  
NATURAL AREAS SIGNS - WHAT  
WORKS & WHAT DOESN'T -  
ROUND TABLE DISCUSSION  

Moderator: Joyce Bender  
8:30-9:30 p.m.
WEDNESDAY POSTER SESSION*
POSTER TITLES, PRESENTERS, AND AFFILIATIONS
John Sevier Lobby


“Selection of Native Plants for Reclamation in Southeastern New Mexico” - Joneen Cockman

“Successful Culture of the Rare Annual Hemiparasite Tomanthera auriculata (Michx.) Raf.” - Maureen Cunningham & Patricia D. Parr

“Ecology of Three Bottomland Hardwoods Forests in Southern Mississippi” - Margaret S. Devall & Paul F. Ramp

“Urban Natural Areas: A Special Challenge” - Deborah J. Lev

“Status of the Narrow Endemic, Carex oronensis (Cyperaceae)” - Alison C. Dibble

“The Robert Starbird Dorney Ecology Garden” - Katherine Dunster

“The Importance of Cultural Information in the Interpretation of Sandhill Environments in Northeast Florida” - Richard Franz


“In Defense of Wildlife: Preserving Communities and Corridors” - Gay Mackintosh

“Illinois Exotic Species Control Circulars - An Aid to Land Managers and Volunteers” - Don McFall & Mary K. Solecki

“Decline of a Rare Plant Population: Is it Related to Passive Management?” - Patricia D. Parr & Maureen Cunningham

“Restoration of Coastal Dunes at Humboldt County, California” - Andrea Pickart, Linda Miller, Dan Brown, Coleman McClenaghan, & J. O. Sawyer, Jr.

“Identification and Management of Old-Growth Forests on State-Owned Land in Minnesota” - Kurt A. Rusterholz

“Exotic Species Management at the Katherine Ordway Natural History Study Area, Macalester College, St. Paul, Minnesota” - Shelley A. Shreffler

“A Forest Divided” - Betty Ann Tabatabai & Larry J. Smith

“Old-Growth Forest Stands in Maine” - Hank Tyler, Jr.

“An Inventory of Old-Growth Forests on Lands of the National Park Service” - Lucy Tyrrell

“Old-Growth Forest Management for Multiple Use” - Elizabeth M. Wellbaum & Larry Doyle

“Factors Affecting Incidence and Severity of Dogwood Anthracnose in Great Smoky Mountain National Park” - M. Windham, K. Langdon & M. Montgomery

“Control of Paulownia tomentosa and Microstegium vimineum in National Parks” - Frank W. Woods & Elmer L. Ashburn

* Authors will attend posters from 9:30 p.m. until 10:30 p.m.
THURSDAY - OCTOBER 19, 1989

7:00 a.m. - 8:15 a.m.  BREAKFAST - Kentucky Room

8:30 a.m. - 5:00 a.m.  FIELD TRIPS - Buses and vans will depart from in front of hotel

6:00 p.m. - 7:30 p.m.  SOUTHERN BARBECUE DINNER - Backyard Area at Poolside

7:30 p.m. - 9:00 p.m.  NAA AUCTION - Backyard

9:00 p.m. - 11:00 p.m.  CASH BAR SOCIAL WITH LIVE BLUE GRASS MUSIC - Backyard
THURSDAY'S FIELD TRIPS

As a part of Thursday’s activities, seventeen field trips are planned to local natural areas. These trips provide conference participants an opportunity to see outstanding examples of the natural ecological diversity inherent to the region.

**Oak Ridge Cedar Barrens**

Maximum 15 (Must be U.S. citizen)
Floristically rich examples of limestone barrens of the southeast, commonly called cedar barrens. Three sites in the Oak Ridge area, each containing rare and/or disjunct taxa, will be visited. Leaders will address issues related to preservation and management of relatively small natural areas. Very little walking required. Driving time one way 45 minutes. Return mid-afternoon. Trip leader: Maureen Cunningham.

**Doe River Gorge**

Maximum 46
The Doe River meanders through a botanically and geologically interesting, rugged gorge, parallel to the now-abandoned Tweetsie Railroad. Both ends of the gorge are marked by rough-hewn tunnels which are entrances to the gorge. An easy 2-mile hike along the railroad bed gives a fine view of four geologic formations of lower cambrian age, a spectacular view of the river, and the following interesting plants: Climbing fumatory (*Adlumia fungosa*), Fraser’s sedge (*Cymophyllum fraseri*), Heart-leaf (*Hexastylis virginica*), Silverling (*Paronychia argyrocoma*), Canada burnet (*Sanguisorbas canadensis*), Tufted club-rush (*Scirpus caespitosus*), Carolina hemlock (*Tsuga caroliniana*). Driving time one way 2 hours. Trip leader: Ed Schell.

**Frozen Head State Natural Area**

Maximum 46
Frozen Head State Natural Area lies in the coal-bearing Cumberland Mountains of east Tennessee. Frozen Head affords some of the only views of the Cumberlands unaffected by surface mining. Mixed mesophytic forests, stream gorges, and cascades provide habitat for diverse wildlife and plant communities. Rare plants and animals are found here, and the high mountains with mature forest are home to breeding birds typical of areas further north. Land use conflicts over possible coal surface mining adjacent to Frozen Head have triggered a Lands Unsuitable for Mining Petition now under review. Travel time one way 60 minutes. Trip leaders: Betsy Bunting, Duane Wyrick, Roy Jenson.

**Ijams Audubon Nature Center** (pronounced “iams”)

Ijams is a city park and community nature center. In its 20 plus acres, foot trails wind across streams, meadows, fern banks, and past bluffs overlooking Fort Loudoun Reservoir. Excellent habitat for birding. Located 5 miles from Hyatt Regency. Transportation on your own.

**Clinch and Powell Rivers**

Maximum 30 (wading gear desirable)
This trip will introduce participants to the beauty, diversity, and environmental problems associated with free-flowing rivers in the southern Appalachian Mountains. The Clinch River is known worldwide for its diverse fish and mussel fauna. The group will visit sites on the adjacent Powell River impacted by coal mining sedimentation. **No collecting permitted**. Travel time one way 2 hours. Trip leader: John Jenkinson.
Big South Fork National River and Recreation Area

Maximum 46
This is a recently established area of scenic gorges cutting through the relatively flat Cumberland Plateau. It offers white-water boating, hiking, horseback riding, hunting, biking, as well as rare plants and animals. Trip will visit river access site, overlooks, natural bridges, rock houses, historic homesteads. Moderately strenuous short hikes. Travel time one way 2 hours. Trip leader: Chuck Nicholson and Jack Collier.

Norris Dam Cave

Maximum 15 (helmet and light provided)
Norris Dam Cave is habitat for a bachelor colony of federally endangered gray bats, *Myotis grisescens*. To protect the bats from human disturbance, TVA gated and fenced this cave in 1980. Beautiful formation room in back of short passage. No crawls, but chance to go underground and get muddy. Picnic lunch by beautiful Clinch River. Travel time 45 minutes one way. Return mid-afternoon. Trip leader: Richard Wallace.

River Bluff Natural Area

Maximum 30
This 125-acre TVA natural area contains a 3.5 mile trail leading through several community types, including mature mesic slope hardwoods, successional pine forests, and xeric sites dominated by upland oaks and pine. Trail parallels the beautiful Clinch River below limestone bluffs that give the area its name, and climbs to the top of the bluffs for wonderful views of fall colors. Rare plants include Bugbane, *Cimicifuga rubifolia*, Meehan’s mint, *Meehania cordata*. Trail is moderately strenuous. Travel time 45 minutes one way. Return mid-afternoon. Trip leader: Judith Bartlow.

GREAT SMOKY MOUNTAINS NATIONAL PARK TRIPS

Cades Cove

Maximum 30
Largest “cultural zone” in the national park; maintained as a landscape that simulates the 1850-1920 period of that section of the park. Embedded in this popular area are rare natural communities such as caves, marshes, sinkhole ponds, limestone outcrops with rare plants. Issues examined include authenticity of historic landscape, presettlement vegetation, impacts of white-tailed deer on rare plants. Several short (less than 1/2 mile) walks off Cades Cove loop road. *No collecting*. Travel time 70 minutes. Trip Leader: Janet Rock.

Laurel Falls

Maximum 17
Virgin forest stand of several hundred acres. Round trip trail mileage of 4 to 5 miles, depending on length traveled (not a loop). Stand is old-growth tulip tree-hemlock-magnolia at lower elevation, and becomes oak, maple, sourwood further up the trail. Also 1988 wildfire site. Moderately strenuous in some sections. *No collecting*. Trip leader: Terry O'Halloran.
Clingman's Dome - Andrews Bald

Maximum 46 (need rain gear and boots)
Profound changes are occurring at higher elevations in the southern Appalachians. Five-mile round trip to Andrews Bald. Issues: Demise of Fraser fir due to balsam woolly adelgid, red spruce decline, grassy bald restoration. Trail in some sections is rocky and strenuous, elevations up to 6,300'. This hike will "move along." Participants should be reasonably fit. See plants endemic to Southern Appalachians and park. No collecting. Travel time one way 100 min. Trip leader: Paul Durr.

Aquatic Invertebrates

Maximum 17 (need rubber boots)
Join a National Park Service aquatic biologist for an examination of aquatic invertebrates in the national park. First choice is a high-elevation, high-gradient stream which entails a round trip, 3-mile hike that is moderately strenuous. If inclement weather or recent rains prevail, it will be relocated to a lower elevation stream. Issues: Invertebrates in logged vs. old growth watersheds, problems in diversity, acidic precipitation, survey of springs, techniques. No personal collecting. Travel time one way 70-90 minutes. Trip leader: Chuck Parker.

Alum Cave Bluff

Maximum 17
Moderately strenuous, 5-mile round trip hike. Diverse southern Appalachian vegetation types including old-growth hemlock/birch, spruce, heath balds. Rare mosses and vascular plants, spectacular geology. No collecting. Travel time one way 80 minutes. Trip leader: David K. Smith.

Porter Flats

Maximum 30
One of the best examples of uncut, cove-hardwood forest left in the southern Appalachians. Travel time is 70 minutes. This 6-mile round trip hike is not steep, but participants will have to "keep moving." Trip leader: Ed Clebsch.
FRIDAY - OCTOBER 20, 1989

7:00 a.m. - 8:30 a.m.  BREAKFAST - Kentucky Room

8:30 a.m. - 10:30 a.m.  CONCURRENT SESSIONS

25. Nature Preserve Design and Establishment - Protection of Riverine Ecosystems as Natural Areas - William Blount South

26. Panel Discussion - Global Warming, Implications for Natural Areas Management - Carolina Room

27. Contributed Papers - Rare Species Biology - Mississippi Room

10:30 a.m. - 11:00 a.m.  BREAK - John Sevier Lobby

11:00 a.m. - 12:00 p.m.  CLOSING REMARKS - Mississippi Room

12:00 p.m.  ADJOURN
FRIDAY CONCURRENT SESSIONS

CONCURRENT SESSION 25
NATURE PRESERVE DESIGN & ESTABLISHMENT - PROTECTION OF RIVERINE ECOSYSTEMS AS NATURAL AREAS: A PANEL DISCUSSION
Moderator: Lance Peacock
8:30 -10:30 a.m.
Merrill Lynch
Bill Possiell
Brian Anderson
John Jenkins

Chairman: Glenn P. Juday
8:30-9:00 a.m.
"The Central Role of the High Latitudes in Global Change: Some Thoughts from Alaska" - Glenn P. Juday

9:00-9:30 a.m.
"Implications of Global Warming for Preserve Design and Stewardship: Some Thinking at the Nature Conservancy" - Orle Loucks

9:30-10:00 a.m.
"Response of Forest Tree Species to Global Warming Scenarios" - Katherine Zabinski

10:00-10:30 a.m.
"Climate Change, Disturbance Regimes, and Biodiversity" - Reed Noss and Rob Peters

CONCURRENT SESSION 26
GLOBAL WARMING: IMPLICATIONS - FOR NATURAL AREAS MANAGERS - A PANEL DISCUSSION

CONCURRENT SESSION 27
CONTRIBUTED PAPER SESSION - RARE SPECIES BIOLOGY
Chairman: Marcella DeMauro
8:30-8:45 a.m.
"The Universal Transverse Mercator System: A Method for Increased Precision in Recording the Locations of Rare Species and Communities" - Ellen A. Cypher & Brian L. Cypher

8:45-9:00 a.m.
"Status and Distribution of Endangered and Threatened Plants at the Indiana Dunes National Lakeshore in Relation to Natural and Anthropogenic Disturbances Processes" - Marcella M. DeMauro, Noel Pavlovic & Ronald Hiebert

9:00-9:15 a.m.
"Experimental Demography of Fame Flower (Talinum rugospermum), A Midwestern Endemic Succulent Plant" - Noel B. Pavlovic

9:15-9:30 a.m.
"The Ecology of Two Northern Disjunct Populations of Chelis tenuifolia Nutt. and Implications for their Protection and Management" - Katherine Dunster

9:30-9:45 a.m.
"Population Biology of Silene regia, A Prairie Plant in a Fragmented Landscape" - Eric S. Menges

9:45-10:00 a.m.
"Genetic Population Structure of Aster fucatus (Asteraceae), A Threatened Plant of Wisconsin" - Donald H. Les & James A. Reinartz

(continued, next column)

William Biount South Carolina Room

Mississippi Room