

Cumberland Trails Conference's

Cumberland Trail State Park Connector Program Summary

The right side of our work returns our organization to our early roots as we begin building the framework and infrastructure for the 2nd Tier Community Connectors and 3rd Tier East-West Connectors as originally laid out in the 1999 Cumberland Trails Conference (CTC) Cumberland Trail State Park (CTSP) Acquisition and Development Plan, i.e. the Oak Ridge and Knoxville Connectors, Morgan County Loop, Sequatchie Valley and Fall Creek Falls Connectors, John Muir and Trail Of Tears, Rail to Trails, and the Great Eastern Trail (not inclusive). CTC will drive the formation of an organizational committee and dedicated staff that will complete a Corridor Connector Study, in cooperation with corridor counties, cities, managing agencies, and NGO's, to understand and define how the Cumberland Trail (CT) will link to our communities. The program will consist of a two-year study, down to the landowner, of all the potential community/landscape connectors to the CTSP, with an end point of a published ranked document defining those approved corridors. We will use the original CTSP team structure to include a heavy emphasis on botanical/natural resources and recreation. Partnerships are critical to the success of the program and in locating and building teams.

Key Barrier

A key barrier to early CTSP work was getting down to the landowner level at each county courthouse. To address this issue, we have partnered with University of Tennessee at Chattanooga's (UTC) GIS Research Lab and Biology, Geology, and Environmental Science Department allowing us to drill down to the individual landowners in every county and to drive this work to a completion in a 2-year time period.

Organizational Structure

8-10 community connector field/discovery teams will be created, as before, with a strong emphasis on natural/botanical/recreational resources to complete the extensive field work. These teams will work under the direction and in cooperation with a dedicated CTC Botanical/Natural Resources Committee, led by Dr. Larry R. Pounds, Ph.D., and in concert with two UTC graduate students, with differing backgrounds in natural resources and community recreation, to build the supporting GIS model and drive this program to completion. The graduate students will be directly supervised by UTC's Dr. Henry Spratt, PhD, Biology, Geology, and Environmental Science Dept. and Dr. Andrew Bailey, PhD, UTC Foundation Assistant Professor and Program Coordinator, Sport and Leisure Service Administration, respectively, with additional oversight provided by Andy Carroll, GIS Manager, Center for Academic and Innovative Technologies. These teams, as with our early CTSP work, will be organized from the local communities with heavy participation expected from Oak Ridge and Chattanooga and the core membership of CTC and Tennessee Trails Association, our sister organization. Critical partnerships will need to be formed with corridor counties, cities, managing state and federal agencies, and non-governmental organizations. Field teams will come in numerous forms, for example, the Sheltolee Trace Association has decided to field a team to study the connector between Big South Fork National River and Recreation Area and the Obed Wild and Scenic River to link the CT in cooperation with National Park Service and CTC has agreed to assist in this initiative.

Botany/Natural Resources/Recreation Connector Field Surveys

The CTC strives to make good decisions about land use and land acquisition related to the CT and connector trails. Field Surveys provide information for these decisions. These decisions effect natural resource conservation, recreational uses, and the visitor experience. Resource conservation and visitor experience may at times be in conflict. This is discussed below.

✓ **Natural Resource Conservation**

Preserving areas with little impact to plants, animals, water, rock formations and cultural/archeological items is important to the CTC. Disappearing natural lands is a serious problem. Field Surveys are invaluable to CTC's conservation work to preserve natural lands.

Botanical surveys are useful for conservation of both plants and animals. Plants are the base of the food chain for much of life and they are basic to the architecture of the habitats for life forms. For example, squirrels require trees both for nuts and for places to flee when threatened by a predator. High quality and diversity of plant communities supports diversity of animals. This is one reason that botanical surveys are useful for natural resource study in general.

The CTC surveys emphasize vascular plants (ferns, conifers and flowering plants) because they are 1) essential to animals as discussed above, 2) comparatively well known to science, 3) easily observed, and 4) esthetically and educationally valuable. Important observations might include rare species and possibly undescribed species, special habitats (e.g. naturally treeless areas, savannahs, wetlands), high quality habitats (mature forests and any areas with few invasive plants), waterways, waterfalls, rock formations, exotic pest plants (or the lack of them), and anything else that might relate to the survey purpose, i.e. conservation and visitor experience input.

✓ **Recreation and the Visitor Experience**

Key to the survey process is discovering and completing the inventory of recreational opportunities and assets in potential connecting corridors. This work needs to be completed in collaboration with all potential visitors and communities to best understand their recreation and rural economic development needs. The visitor to recreational lands is often a hiker but the visitor may be a climber, paddler, biker, in a wheel chair, or viewing the land from a car. The input from surveys and community input has and will aid in making the experiences enjoyable, educational, health promoting and some would say spiritual, but conservation awareness might provide instances where visitor experience must be limited to protect natural resources.

✓ **Types of Surveys:**

Public lands: field teams will gain permission to enter and study existing public lands within the identified corridor study areas, to include existing recreation systems, i.e. trails or other, and conservation systems and their natural resources and how connectivity would benefit these landscapes.

Private lands: field teams will gain permission to enter and study high priority private lands that aerial or other review has identified as critical, to discover the potential recreation or existing natural resources with these lands.

Target Connector Corridors

The expanding partnership teams will ultimately define those corridors and community connectors that will be studied during this program, but numerous corridors are already known to be key targets:

<i>Western Connectors (involved communities):</i>	<i>Eastern Connectors (involved communities):</i>
Fall Creek Falls/Sequatchie Valley (Pikeville)	The Great Eastern Trail (Chattanooga)
South Cumberland Recreation Area (Dunlap, Jasper)	Hiwassee Watershed (Dayton)
John Muir (Rugby, Wartburg)	Chilhowee Recreation Area (Calhoun/Charleston)
Sheltoewe Trace	Oak Ridge/Clinton/Knoxville
Trail of Tears	Clinch/Powell Recreational Areas (Norris Lake/Chuck Swan)
Big South Fork National River and Recreation Area	
<i>Other Community Connector:</i>	<i>Rail to Trails:</i>
Soddy Daisy/Sale Creek	Sequatchie Valley
Dayton/Graysville	Crossville to Crab Orchard/Rockwood/Cookeville
Fairfield Glade	Cumberland Gap
Spring City	
Harriman	<i>Other:</i>
Caryville/LaFollette/Lake City	Morgan County Loop
Harrogate/Tazewell	

Program Timeline:

Preparation for the Connector Program has already begun, to include the extensive field team infrastructure, and we are prepared to ramp-up a partnering graduate program in the fall of 2016 to be ready for the spring 2017 botanical season.

Program Cost and Funding:

We have developed a complete 2-year budget for the Connector Program to support our efforts to better understand the total underlying costs, flush out the hidden aspects of the program, and use as a tool for funding the program. Funding would be provided by CTC and our foundation and private partners. We are receiving good reception for the program and expect a balanced approach of funding support in both the north and south portions of the CTSP.

Endpoints:

1. A deliverable GIS database, indentifying, mapping, and defining those approved connector corridors and their associated natural, botanical, and recreational resource value to our communities. The database, to be hosted at the Interdisciplinary Geospatial Technology Lab (IGTLab) at UTC, will contain all spatial data associated with program on secure UTC servers that are backed up locally and system-wide through the University of Tennessee (Knoxville). IGTLab web-mapping applications for viewing select data components of the project will provide a means to model any potential corridor.
2. Mapping will be provided in both public and non-public secured applications thus available to both CTC and the general public, respectively. Custom cartographic designs will be created and delivered as digital image files, printed large-format paper products, and figures for final project documents or publications.
3. Finally, a comprehensive ranked written document describing the development, justification, and use of the database for making final recommendations for corridor locations based on their natural resources, recreational values, and community support, and potential barriers to success.

The endpoints will provide the foundation for CTC to complete a build-out, to include acquisition and development, of the ranked connector corridors.

Connector Program Organizational Qualifications and Key Personnel

Cumberland Trails Conference:

The Cumberland Trails Conference (CTC) is a membership based 501(c) (3) nonprofit corporation purposed to build, maintain, acquire funding for, and promote the Cumberland Trail. This hiking trail is being built under the auspices of the Tennessee Department of Environment and Conservation (TDEC). In addition to hiking, the Cumberland Trail helps to preserve the historical and cultural heritage of Tennessee, conserve natural resources, provide educational and recreational opportunities, and connect local communities. The Cumberland Trail Conference achieves its mission from the efforts of volunteers, and from financial support from membership contributions, grants and donations from various foundations, state and federal grants, and tax-deductible donations from supportive individuals.

CTC completed and carried out the original Cumberland Trail State Park Acquisition and Development Plan, March 1999, that resulted in \$2.3 million of private and \$21+ million public funds directed toward the project. 163 miles of the corridor are complete with 42 trailheads and 30,000 plus acres under management...138 miles remain to be constructed.

The CTC sponsors various volunteer trail construction and maintenance programs throughout the year. The CTC's largest volunteer events is a trail construction program, Spring BreakAway, involving college and university students doing volunteer trail work during their annual spring break. This program is a part of a nationwide collegiate program that allows college and university students the opportunity to provide various types of worthy volunteer work. The CTC Spring Breakaway program has been held once a year 10 times in the past.

Other ongoing efforts include a different volunteer event, designated as the "Big Dig". This is an intensive construction effort comprised of a few dozen volunteers with added effort and supervision of three CTC Staff. The Big Dig was held once in 2015 with plans to be held twice in 2016.

CTC is currently sponsoring two trail building crews, the central and southern, in the construction of a 7.6 mile corridor in Cumberland County on Daddy's Creek and a 3.6 mile stretch in Rhea County on Roaring and McGill Creek Gorges, respectively. The Rhea County work is partially funded through a Lyndhurst Foundation Grant. Daily crew activity relies heavily on our volunteer infrastructure and programs.

Robert Weber, CTC Chairman

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Signal Mountain, TN 37377
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Education: BA, 1988, Pharmacy, University of Colorado; BA, 1984, Psychology, Colorado State University

Background: Rob is the current Chair and founder of CTC and served as Executive Director, 1997-2003, overseeing the foundation for the acquisition and development of the Cumberland Trail State Park. Rob is a community Pharmacist in the Chattanooga community.

Dr. Larry R. Pounds, Ph.D., Chair CTC Botanical/Natural Resources Committee

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Loudon, TN 37774
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Education: Ph.D., 1995, Ecology, University of Tennessee, MA, 1971, Mathematics, University of Cincinnati, BA, 1967, University of Cincinnati

Professional Experience: Dr. Pounds specializes in endangered plant species, special plant communities and exotic pest plants. He is currently working as an endangered plant specialist for the Oak Ridge National Laboratory and the Tennessee Valley Authority. He has also done research on the relationship between biodiversity and the ability of exotic plants to invade plant communities under a grant from the Environmental Protection Agency. Previous work for the National Park Service includes rare plant and/or exotic pest plant surveys in the Great Smoky Mountains National Park, Cumberland Gap National Historic Park, the Big South Fork National River and Recreation Area and the Obed National Scenic River. His work on the Oak Ridge Reservation includes study of special plant communities, in particular, cedar barrens and wetlands. He helped to revise the natural areas system on the Oak Ridge Reservation that helps to protect quality areas of natural vegetation. He has been working professionally as a botanist for over 20 years.

UTC Natural Resources Graduate Assistant Oversight:

Dr. Henry G. Spratt, Jr., Ph.D.

Microbial Ecology, Biogeochemistry Professor - Department of Biological and Environmental Sciences

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Background: Dr. Spratt is a tenured professor in the Biological and Environmental Sciences Department at University of Tennessee at Chattanooga (UTC). He holds BS and MS degrees from Georgia Tech (1977 and 1980 - Applied Biology), and a Ph.D. from the University of Georgia (1985 - Microbiology). He was a postdoctoral associate at Rutgers University (1985 - 1988), and an assistant professor of Biology at Southeast Missouri State University (1988 - 1994). He joined the faculty at UTC in 1994. His teaching interests lie in the fields of microbiology, environmental biology and undergraduate education.

Research: His research interests focus on microbiology and environmental biology. He has published 14 articles in peer-reviewed national and internationally recognized journals. He also has published a book review, a microbiology lab manual, and has over 80 published abstracts linked to presentations at scientific meetings. Over his career to date, in support of his research Dr. Spratt and associates have received 39 grants totaling \$ 1.63 million. About half of these grants were awarded to him as the sole Principle Investigator.

UTC Recreation Graduate Assistant Oversight:

Dr. Drew Bailey, PhD

UTC Foundation Assistant Professor and Program Coordinator, Sport and Leisure Service Administration

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Education: Ph.D. in Education: Recreation, Parks, & Leisure Studies: *University of Minnesota, Twin Cities*; M.S. in Recreation, Tourism & Hospitality Management, *University of Tennessee, Knoxville*; B.S. in Theology / Education: *Johnson University, Knoxville, TN*.

Research:

- Methods of Experiential Education & Evidence-Based Practice
- Examining quantitative and qualitative research methods in:
 1. Experiential Learning & Youth Development
 2. Theory-based Program Modeling-Quantitative & Mixed-Methods Designs
 3. Community Programs & Social Capital
 4. Adventure Travel & Tourism
 5. Human & Nature Relationships

Graduate Assistant Student GIS Management

Andy Carroll

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Education:

- M.S. Environmental Science, The University of Tennessee at Chattanooga
- B.S. Earth and Environmental Science, Furman University

UTC Graduate Program Coordinator

Dr. Jennifer Boyd, Ph.D.

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Education: Ph.D. - Columbia University