

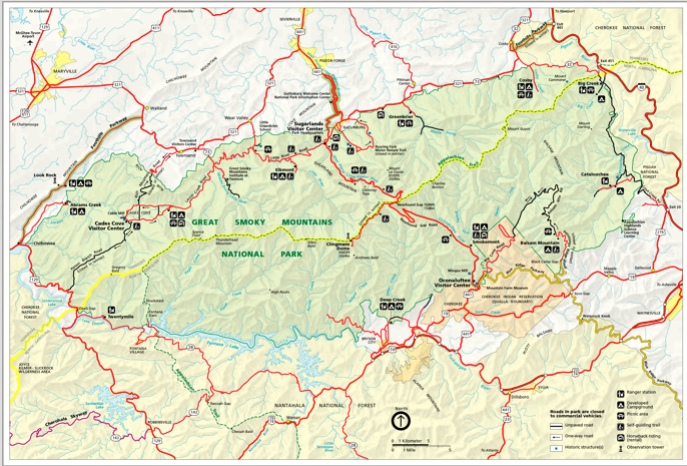
THE POWER OF EXPERIENTIAL LEARNING:
CONNECTING STEM EDUCATION, RESEARCH,
AND OUTREACH IN SOUTHERN APPALACHIA

JENNIFER JONES, PHD
PRESIDENT & CEO

**GREAT SMOKY
MOUNTAINS
INSTITUTE AT
TREMONT**

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TREMONT**

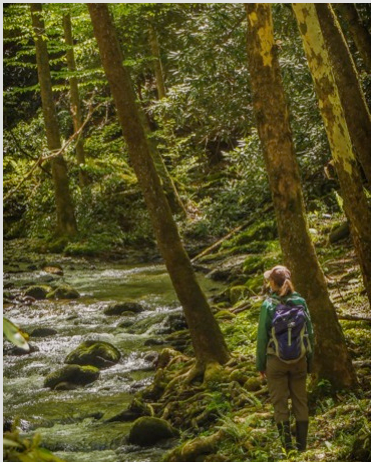
MAKING AN IMPACT





CONNECTING PEOPLE & NATURE

How can people care for nature if they have never been in it?



EXPERIENCE MATTERS



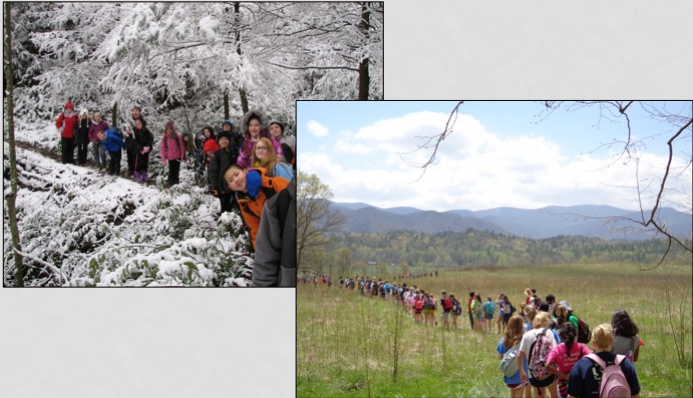
2,500 Educator training days each year

149,141 Hours spent learning outdoors each year





EXPERIENCE THE BENEFITS

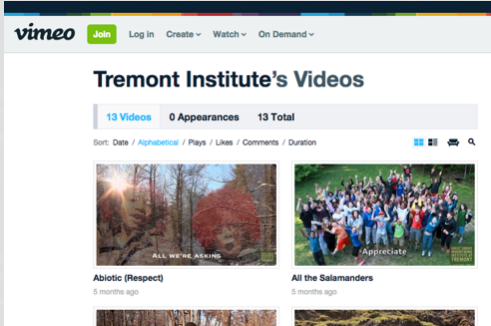


1.75 equivalent # times our participants walk around the earth each year



EDUCATION PROGRAMS

This is the slide with obligatory acronyms:



- STEM
- BEETLES
- #SmokiesCOOL



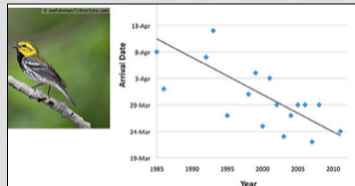
RESEARCH

- Academy
- Conservation decision-making
- Outreach & Citizen Science
- Pedagogy

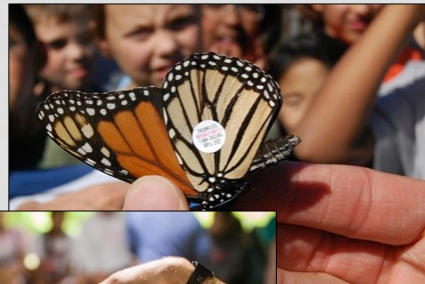


RESEARCH: 30 YEARS OF DATA WITH/FOR THE NATIONAL PARK

Phenology



Monarch tagging



Bird Banding





RESEARCH: STUDENTS & THE COMMUNITY

MAPS: MONITORING AVIAN PRODUCTIVITY AND SURVIVORSHIP

Interactive Map of MAPS Stations

Since the MAPS program began in 1989, over 1200 stations have been operated for at least one year by IBP and our collaborators. Stations have been operated in nearly every province and state. The interactive map below shows the location of our past and present stations. Click on the red dots to find out more about each station.

STATION NUMBER: 15620
STATION ID: GSM1
STATION NAME: Great Smoky Mtn
LAND OWNER: IP
NEAREST TOWN: Townsend
LATITUDE: 35.63972
LONGITUDE: -83.68917
ELEVATION: 430
HABITAT: hardwood riparian forest
HISTORY OF OPERATION: 00-07-1
NUMBER OF YEARS OPERATED: 1



RESEARCH WITH PARTNERS

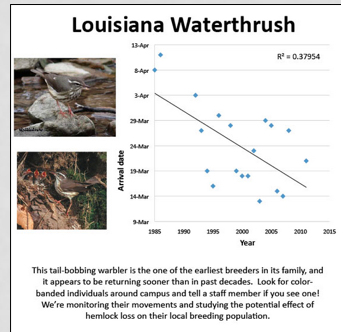
First eDNA results from Tremont
 August 16, 2015

Hey folks! We've just received sequences from our first sampling at the Tremont stream. Unfortunately, we encountered a few complications while applying the DNA barcoding on being done for the first time (although, we have a little more from a higher stream section collected in June). The chart shows the proportion of sequences that matched each salamander species. It was pretty noisy, but here are the common matches associated with each species:

- Desmognathus quadrimaculatus* (Red-bellied salamander)
- Plethodon glutinosus* (Hellgrammite)
- Desmognathus monticola* (Red salamander)
- Desmognathus fuscescens* (Black salamander)
- Desmognathus quadrimaculatus* (Red-bellied salamander)
- Desmognathus monticola* (Red salamander)
- Desmognathus fuscescens* (Black salamander)

Arkansas State University

UTK: Using Environmental DNA and Citizen Science to Monitor Stream Salamanders



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MORE RESEARCH & WRITING

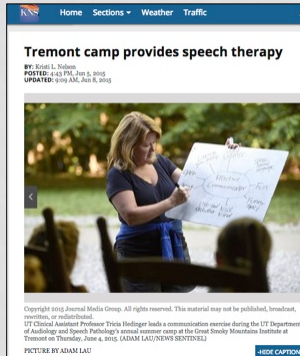


- Teacher Development
 - Mississippi State University
 - Science Scope Journal
- Experiential Pedagogy
 - Virginia Tech
 - Journal of Environmental Education
- Oral histories
 - Maryville College
- Staff books and articles
 - Tremont history
 - Sierra magazine

GREAT SMOKY MOUNTAINS INSTITUTE AT TREMONT

GO VOLS!

- SANCP
- Volunteer Your Voice Summer Camp
- NIMBios
- Early Learning Institute
- Marketing campaigns class
- Coming soon....
 - Earth & Planetary Sciences
 - You?





FINDING YOUR PLACE AT TREMONT INSTITUTE

- New and existing...
 - Fun: Homecoming, scavenger hunt, etc.
 - Research projects
 - Grants
 - Publications
 - Courses and workshops
 - Internships
 - QEP: Certificates, degrees, and more



LETS PROGNOSTICATE TOGETHER



- Health and well-being
 - Personal
 - Community
 - Nature
- Virtualization
 - Complementing the field
- Experiential learning matters
 - Legitimization

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TREMONT

THANK YOU

