

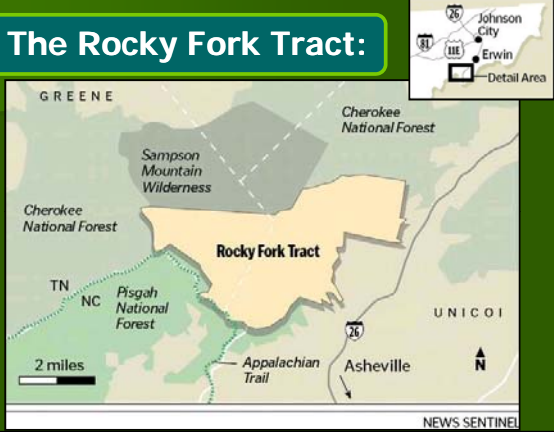


Flora and fauna of the Rocky Fork Tract, with implications for inventorying southern Appalachian nongame species.

Melissa Foster
M.S. Candidate
Forestry Wildlife and Fisheries



The Rocky Fork Tract:



NEWS SENTINEL

Preserving Rocky Fork



Conservationists trying to buy scenic 10,000-acre tract

ON KNOXNEWS.COM
Slide show: More photos of the Rocky Fork tract

BY MORGAN SIMMONS
@morgansimmons

ERWIN, Tenn. — Conservationists can talk for hours about the outstanding qualities of the Rocky Fork tract, but nothing says it better than the view from Buzzard Rock.


Beneath the overlook is Rocky Fork, a 10,000-acre watershed in upper East Tennessee that's as rich in pioneer history and local lore as it is in natural beauty. The creeks cut deep canyons through the mountains, creating a rugged, biologically diverse landscape that's a microcosm of the Great Smoky Mountains National Park.

Except for the faint outline of Interstate 26 in the distant background, the view is unmarked by development as far as the eye can see.

For generations the Rocky Fork tract has been privately owned but open to public hunting and fishing through a lease agreement with the Tennessee Wildlife Resources Agency.

See **ROCKY FORK** on A8

ARTIST: FEE/SPECIAL TO THE NEWS SENTINEL
Conservationists, from left, Rex Bower, Ralph Kroll and Morgan Somerville admire the view recently from the Rocky Fork tract near Erwin.



Short duration, effort-intensive survey

Advantages

- Rapid assessment
- Low cost
- Expert participation
- Citizen involvement

Disadvantages

- Inclement weather can impact results
- Limited capture methods
- Effectiveness?

Justification:

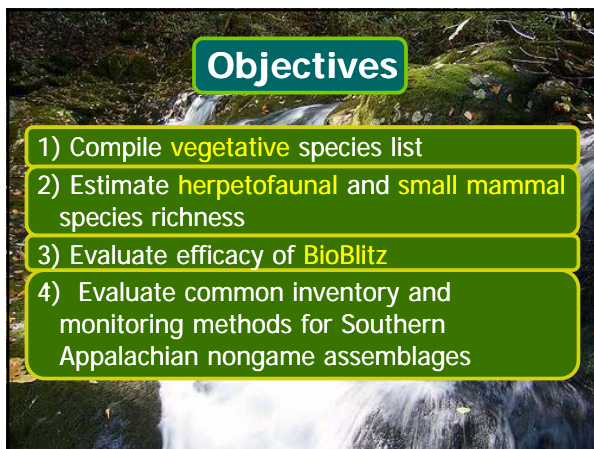
Wanted more info on nongame community
- Great chance to evaluate BioBlitz!

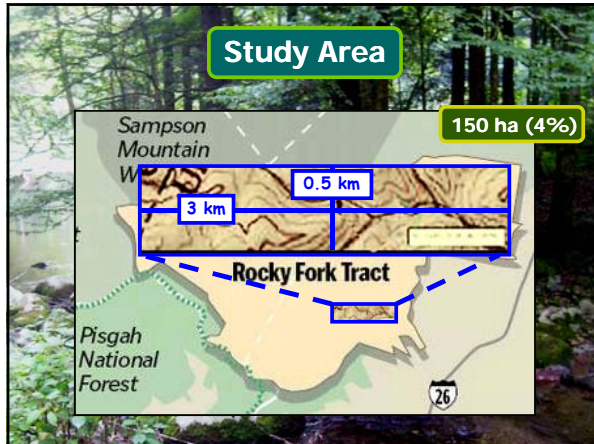
Vegetative community never surveyed

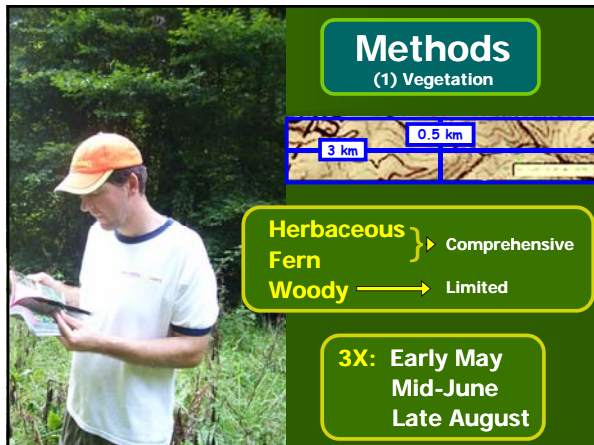


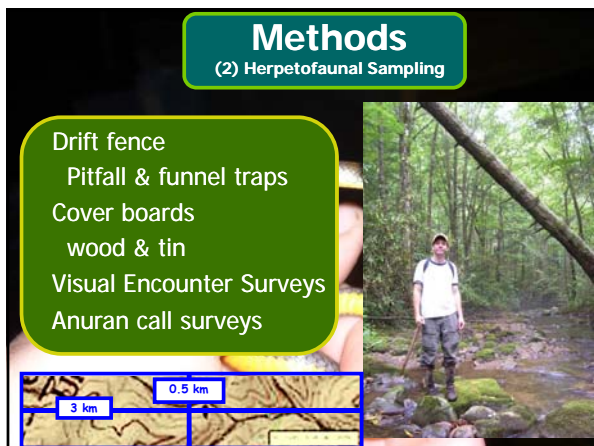
Objectives

- 1) Compile **vegetative** species list
- 2) Estimate **herpetofaunal** and **small mammal** species richness
- 3) Evaluate efficacy of **BioBlitz**
- 4) Evaluate common inventory and monitoring methods for Southern Appalachian nongame assemblages









Methods
(2) Small Mammal Sampling

Sherman live traps
Pitfall Traps

Methods
(2) Estimating Species Richness

Species-Accumulation Curves

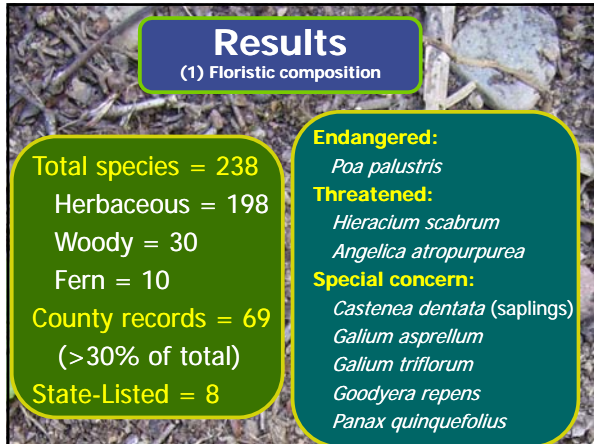
EstimateS
Chao Estimator

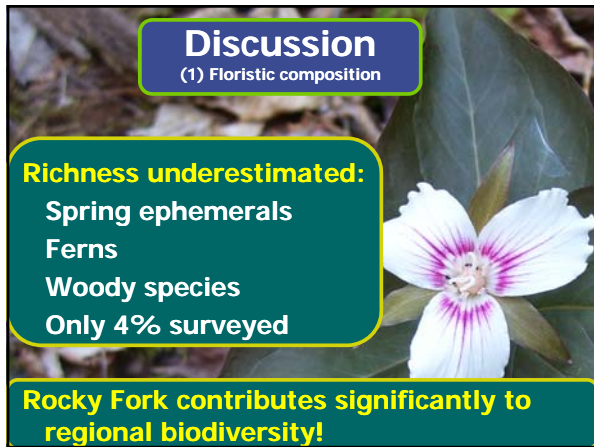
Methods
(3) Evaluate Bioblitz

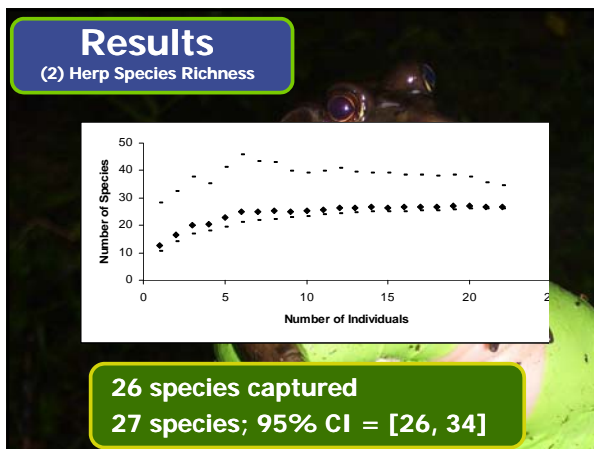
BioBlitz: 20-22 June 2006
Traditional: June-Aug 2007

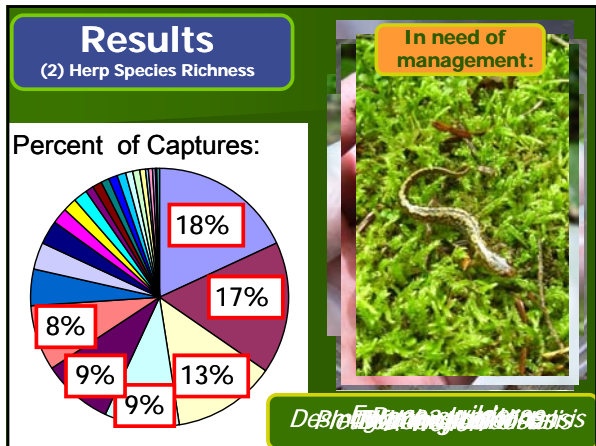
Assumption:
-No extirpation
-No colonization

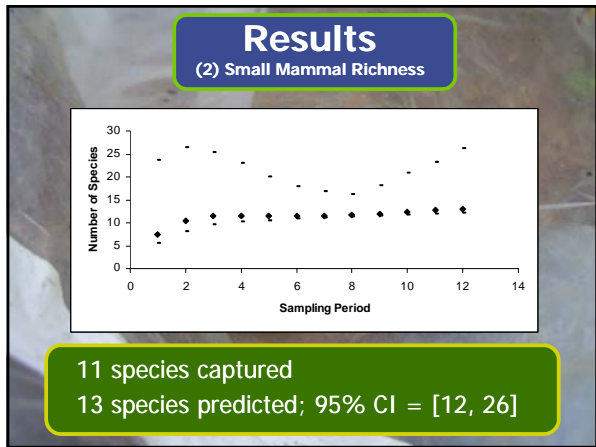
1. Compare species lists
Anurans, Caudates, Snakes, Small Mammals
2. Compare trapping effort

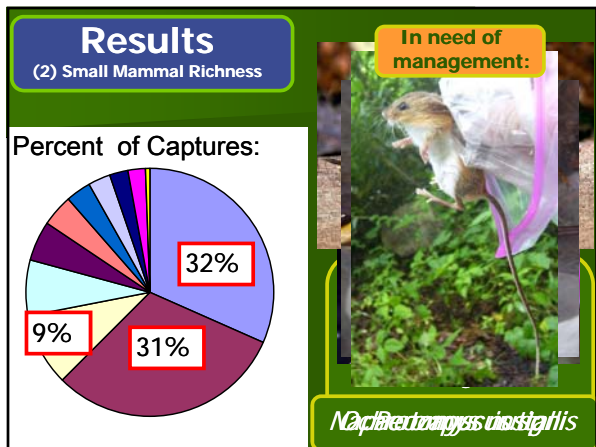


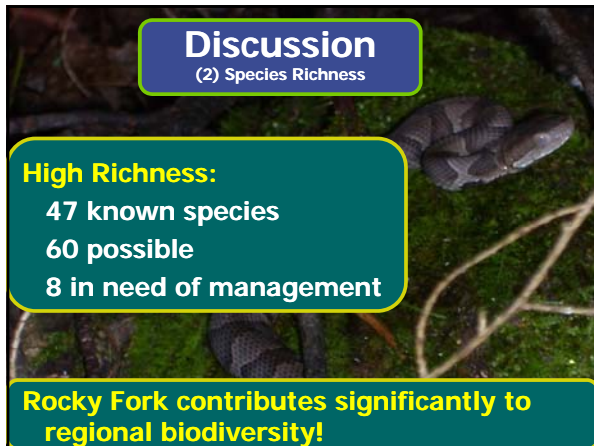








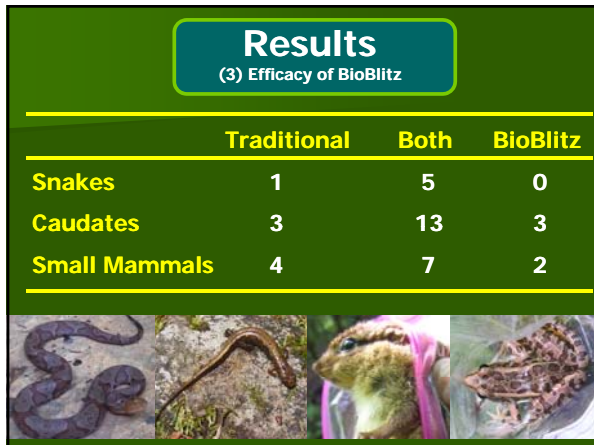




Discussion
(2) Species Richness

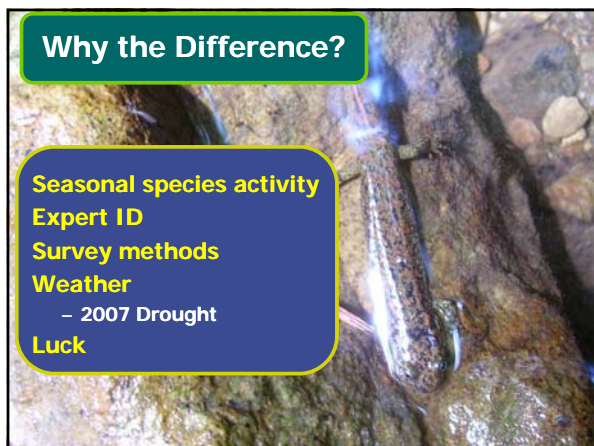
High Richness:
47 known species
60 possible
8 in need of management

Rocky Fork contributes significantly to regional biodiversity!



Results
(3) Efficacy of BioBlitz

	Traditional	Both	BioBlitz
Snakes	1	5	0
Caudates	3	13	3
Small Mammals	4	7	2




Why the Difference?

Seasonal species activity
Expert ID
Survey methods
Weather
- 2007 Drought
Luck

Results

(3) Efficacy of BioBlitz

	Traditional	Both	BioBlitz
Snakes	1	5	0
Caudates	3	13	3
Small Mammals	4	7	2
Anurans	6	2	1



Why the Difference?

Seasonal Detection

- Movements and calls associated with breeding


Recommendation:

Anuran call surveys

- Best detection
- Low effort and cost

NAAMP Guidelines:

- 4 sampling periods



Results

(3) Trap Effort

	Traditional		BioBlitz
Pitfall trap nights	506	>	0
Funnel trap nights	672	>	0
Tin CB "flips"	650	>	240
Wood CB "flips"	1030	>	120
Anuran call surveys	15	>	0
Visual Surveys	88 h	=	84 h
Sherman trap nights	2400	>	600
Mammal Pitfall trap nights	240	>	60

Conclusions...

BioBlitz just as effective with less effort

- Caudates, snakes, small mammals
- Recommend BioBlitz + anuran call surveys

But it depends on your goals...

Caution!

- One site
- Extreme drought
- Further study recommended

Implications:

Biologically important area:

- Vegetation
- Herps, Small Mammals
- Birds (Welch 2001)
- Bats (BioBlitz)
- Blue ribbon trout streams
- High black bear density

Aesthetics....

AT viewshed

Hwy 26 corridor





