



2020 Annual Conference

December 17-18, 2020

Agenda

December 17 – Day 1

8:30 – 8:45

Welcome and Introduction

FEMC Director Jim Duncan and FEMC Steering Committee Chair Peter Church

8:45 – 10:00

Plenary Session



Kate Miller is a Quantitative Ecologist with the National Park Service's Inventory and Monitoring Program (NPS I&M), which conducts long-term monitoring in national parks to help inform management decisions. Kate leads long-term forest monitoring in 20 national parks from Virginia to Maine and freshwater wetland

monitoring in Acadia National Park. Kate also develops tools for analysis and visualization, such as a power analysis for fixed-plot data, ecological indicators of forest and wetland condition, and R-shiny based visualizers. Kate received her BS in Natural Resources from Northland College, and MS and PhD from the University of Maine's School of Biology and Ecology.

10:00 – 10:30

Break

Wonder Room Available to connect with other attendees and meet members of the network in a casual space.



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December 17 – Day 1 (continued)

10:30 – 12:05

Contributed Talks 1

Parallel tracks of 20-minute presentations contributed by cooperators on various forest ecosystem research, monitoring, and outreach activities.

- Forest Pests & Diseases
- Disturbance and Stressors
- Technology

12:05 – 12:35

Break

Wonder Room Available to connect with other attendees and meet members of the network in a casual space.

12:35 – 2:00

Facilitated Sessions and Working Groups

FEMC Listening Session: Help shape the future of the Cooperative

Contributed Talks Day 1 Schedule

	Forest Pests & Diseases	Disturbance & Stressors	Tools & Technology
10:30-10:50		Red Pine Decline in Vermont	Modeling Moose Habitat Suitability by Age, Sex, and Season in Vermont, USA based on GPS Radio-collar Data and Lidar Imagery
		<i>Savannah L Ferreira</i>	<i>Joshua Blouin</i>
10:55-11:15	Trait variation and long-term population dynamics of the invasive <i>Alliaria petiolata</i> (garlic mustard) across three forest microhabitats	Extreme Weather Changes and Implications for Forest Health	Plots to Pixels to Policy: The Intrepid Journey of a Wall-to-Wall Forest Carbon Monitoring and Assessment System
	<i>Laura M. S. Hancock</i>	<i>Jason Shafer</i>	<i>Chris Williams</i>
11:20-11:40	Impacts of Emerald Ash Borer Management on Northern Hardwood Forest Dynamics in New England	And now for something completely different...Climate change effects on forest fire hazards in the wildland-urban-interface of Bhutan	Using electrical circuit analysis to map landscape connectivity for wildlife in Vermont: Implications for transportation planning and mitigation
	<i>Hanusia Higgins</i>	<i>William S. Keeton</i>	<i>Caitlin Drasher</i>
11:45-12:05	Hits, Misses and Incoming: A review of Federal and state pests of concern	Spruce DRIED: Density Reduction and Imposed Extreme Drought	Monitoring Stream Connectivity with Trail Cameras
	<i>Judy Rosovsky</i>	<i>Kelly French</i>	<i>Melissa Czarnowski</i>



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Facilitated Sessions and Working Groups Descriptions

FEMC Listening Session: Help shape the future of the Cooperative
The Forest Ecosystem Monitoring Cooperative turns five next year, and 2021 represents 30 years since the founding of the Vermont Monitoring Cooperative. With the FEMC set to expand again in its work and complexity, we invite all collaborators, from founding members to the newly interested, to join a listening session to share their hopes for the Cooperative and help shape its future in the years ahead. Through a series of guided breakouts and group discussions, this session will focus on what the environmental monitoring and assessment agenda of the Cooperative should include going forward, how best to leverage FEMC for the support of monitoring efforts in the region, and identifying the current and pressing needs in long-term monitoring of change of our large and diverse community. The outcomes of this session will be used to directly inform the FEMC's 5-year strategic planning session that begins in January, 2021, so please join us at this important moment in the evolution of your Cooperative!

December 18 – Day 2

8:30 – 8:35

Welcome and Introduction

FEMC Director Jim Duncan

8:35 – 9:35

Plenary Session



Charles T. Driscoll is a Distinguished and University Professor at Syracuse University, Syracuse NY USA. Driscoll's scholarly work addresses the effects of disturbance on forest, urban, freshwater and marine ecosystems, including air pollution (acid and mercury deposition), land-use, and climate change. Current research focuses on: recovery of eastern forest watersheds from acidic deposition; co-benefits of carbon dioxide emissions controls

from power plants; ecosystem restoration; ecosystem response to changing climate; harmful algal blooms; and atmospheric deposition, watershed and surface water transport and transformations, and biotic exposure of mercury.

9:35 – 10:00

Break

Wonder Room Available to connect with other attendees and meet members of the network in a casual space.

10:00 – 10:30

Poster Session

Flash talks and facilitated Q&A

10:30 – 11:40

Contributed Talks 2

Parallel tracks of 20-minute presentations contributed by cooperators on various forest ecosystem research, monitoring, and outreach activities.

11:40 – 12:00

Closing Remarks

FEMC Principal Investigator Dr. Jennifer Pontius

Contributed Talks Day 2 Schedule

	Wildlife	Long-Term Monitoring	Forest Ecosystems
10:30-10:50	<p>Moose Habitat Selection and Fitness Consequences During Two Critical Winter Tick (<i>Dermacentor albipictus</i>) Life Stages in Vermont, USA</p> <p><i>Joshua Blouin</i></p>	<p>The applications and utility of a unified continuous forest inventory network in Northeastern United States.</p> <p><i>Soren Donisvitch</i></p>	<p>Forests to Faucets 2.0</p>
10:55-11:15	<p>Community trends in forest bird abundance within northeastern National Parks</p> <p><i>Aaron Weed</i></p>	<p>Variability in forest conversion rates and drivers across a diverse socio-ecological landscape: a Vermont Regional Planning Commission case study</p> <p><i>Jennifer Pontius</i></p>	<p><i>Rebecca Lilja</i></p>
11:20-11:40	<p>Lady Beetles of Vermont: Invasions, Extirpations, and Recent Discoveries from Community Scientists</p> <p><i>Julia Pupko</i></p>	<p>Completing the Life Cycle of Trees: Northern Forest Dead Wood and Tree Regeneration in the Context of Forest Resource Assessments</p> <p><i>Christopher Woodall</i></p>	<p>The FEMC Sampler: New releases of regional data and tools from the Cooperative in 2020</p> <p><i>Jim Duncan</i></p>



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Poster Session Day 2

1 2020 FOREST ECOSYSTEM MONITORING COOPERATIVE REGIONAL PROJECTS

Pia Ruisi-Besares

2 ADAPTATION STRATEGIES FOR REDUCING SUSCEPTIBILITY OF
NORTHEASTERN PITCH PINE BARRENS TO SOUTHERN PINE BEETLE IMPACTS

Elizabeth Jamison

3 ADAPTIVE SILVICULTURE ON THE EXURBAN LANDSCAPE

Amanda Bunce

4 ASSESSING TEMPORAL DYNAMICS OF DISTURBANCE INTERACTIONS AS A
DRIVER OF A NOVEL FOREST MORTALITY EVENT

Danielle Tanzer

5 NORTHEASTERN STATES RESEARCH COOPERATIVE 2.0

Breck Bowden

6 SIMULATED DROUGHT REVEALS STRUCTURAL AND PHYSIOLOGICAL
DIFFERENCES IN DROUGHT TOLERANCE STRATEGIES OF NORTHEASTERN
FOREST TREES

Ruth A. van Kampen