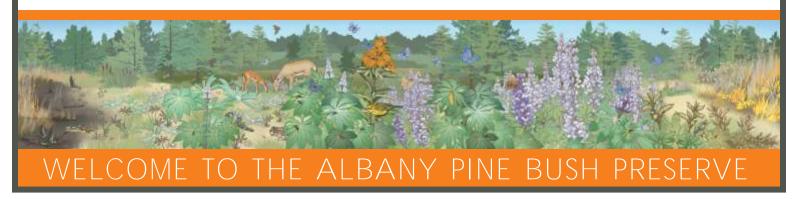
People of Fire in Time and Place



Northeast-Midwest Prescribed Fire Science and Management Workshop Albany, New York August 19-22, 2024



Our Story of People of _____ in Time & Place



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Northeast-Midwest Prescribed Fire Science and Management Workshop

Albany, NY

August 19-22, 2024

PROGRAM SCHEDULE

Monday, August 19 (Pre-workshop Training Opportunities)	Pre-registration required
Smoke TOOLS Workshop - Alexia Prosperi, Air Quality Specialist, Eastern Region (WI), USFS and Ralph Perron, Air Quality Specialist, Eastern Region (NH), USFS	Governor E 10:00 am -5:00 pm
Fire History in the Northeast US: Understanding Long-term Fire Regime and Forest Change with Tree Rings and Fire Scars - Joseph Marschall, Center for Tree-Ring Science, University of Missouri; Daniel Dey, USDA FS Northern Research Station; and Chris Guiterman, CIRES University of Colorado Boulder, and NOAA's NCEI	Governor D 1:00 – 5:00 pm
Early Registration Check-in (check-in early and pick up your badge and packet)	4:00 - 6:00 pm

Day One - "Once Upon a Time" WHY do we Burn NOW? Contemporary Burning & fire history Tuesday, August 20	Capacity, Collaboration & Communications
Registration Check-in	7:00 - 8:30 am
Welcome and Opening Remarks Corey Lehman, Acting Deputy Commissioner, NYS DEC Office of Public Protection; Sean Mahar, Interim Commissioner, NYS DEC; Neil Gifford, Conservation Director, Albany Pine Bush Preserve Commission	8:30 - 9:00 am
Indigenous Firekeeping Moderator: Mike Dockry, Assistant Professor, Forest Resources; Affiliate Faculty, American Indian Studies, University of Minnesota; Bazile Panek, Fire-Plan Research Coordinator, University of Wisconsin-Platteville; Cheyenne Reuben-Thomas, PhD student, Cornell University; Troy Phillips, Enrolled member and Sub-Chief, Hassanamisco Nipmuc Tribe Chairperson. Commissioner, Massachusetts Commission on Indian Affairs	9:00 - 10:30 am
Networking break	10:30 - 11:00 am
WHY do we burn NOW? Part One - Past is Prologue: Fire Ecology and Fire Effects Dan Dey, Assistant Director Research, Northern Research Station, US Forest Service	11:00 - 12:00 pm

Tuesday (continued)	
Lunch (provided)	12:00 - 1:00
WHY do we burn NOW? Part Two - Contemporary Burning: Why and Where Moderator: Chris Guiterman, Assistant Research Professor, University of Arizona, Laboratory of Tree-Ring Research Polly Weigand, NAFSE and Fire Projects Manager Forest Stewards Guild Samuel Gilvarg, PhD student, Applied Forest and Fire Ecology Lab, SUNY College of Environmental Science and Forestry Jessica Cancelliere, Research Scientist/Forest Health Section Chief, NYS DEC Michael Gallagher, Research Ecologist, Northern Research Station, Silas Little Experimental Forest	1:00 - 2:30 pm
Networking break	2:30 - 3:00 pm
Capacity, Collaborations, and Communications: Presentation/Panel Moderator: Polly Weigand, Workshop Coordinator – NAFSE and Fire Projects Manager Forest Stewards Guild Chris Hawver, Executive Director, Albany Pine Bush Preserve Commission Tom Brady, Executive Director, Northeastern Forest Fire Compact Robert Cavanagh, Acting Director, Division of Forest Protection, NYSDEC Amanda Mahaffey, Forest Ecologist, US Fish and Wildlife Service Caren Caljouw, Prescribed Fire Manager, Massachusetts Dept. Fish and Wildlife Jon Bailey, Maine Fire Manager, The Nature Conservancy Todd Breininger, Prescribed Fire Specialist, Pennsylvania Department of Conservation and Natural Resources	3:00 - 4:30 pm
Wrap up for the day	4:30 - 4:45 pm
Social reception with the Exhibitors and Sponsors	4:45 - 6:45 pm



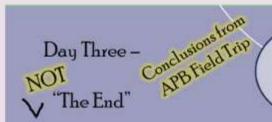






Wednesday, August 21

Morning Briefing - Neil Gifford, Field Trip Coordinator - Conservation Director, Albany Pine Bush Preserve Commission	8:30 - 9:00 am
Field Trip to Albany Pine Bush Preserve (includes transportation and lunch)	9:00 am - 2:00 pm
Return to hotel	2:00 pm
Working group meetings	2:00 - 4:00 pm
Poster Slam and social reception	4:00 - 6:00 pm



What should RX fire training look like for the Region?

Connecting Capacity:
A Facilitated
Discussion to Identify
and Overcome
Barriers to Good Fire

Outstanding Questions -What's Next?

Thursday, August 22

Morning Briefing	8:30 - 8:45 am
Smoke/Air Quality updates Alexia Prosperi, Air Quality Specialist, Eastern Region (WI), USFS Ralph Perron, Air Quality Specialist, Eastern Region (NH), USFS	8:45 - 9:00 am
Training Needs for Prescribed Fire Practitioners Moderator: Zach Prusak, Wildland Fire Training Specialist, Tall Timbers Research Station, Chair, Coalition of Rx Fire Councils Scott Jackson, Fire Management Officer, Division of Forest Protection, NY DEC Jim Elleson, Program Manager and Standards Committee Chair, Wisconsin Prescribed Fire Council George Jensen, Coordinator, Southwest Georgia PBA, Tall Timbers Sara Hart, Project Assistant, Division of Lands and Forests, New York State Department of Environmental Conservation	9:00 - 10:00 am
Networking break	10:00 - 10:30 am
Connecting Capacity: A Facilitated Discussion to Identify and Overcome Barriers to Good Fire Facilitator: Alex Belote, Fire Program Coordinator, Massachusetts DCR	10:30 - 11:30 am
Connecting Capacity Roundup	11:30 - 12:00 pm
Lunch (provided)	12:00 - 1:00 pm
Special Presentation - TBD	1:00 - 2:00 pm
National Policy and Standards Updates Dave Celino, Chief Fire Warden, Massachusetts DCR Steve Goldman, Deputy Director, Fire and Aviation, USFS, Eastern Region	2:00 - 2:45 pm
Workbook Synthesis, Outstanding Questions - What's Next? Jack McGowan-Stinski, Program Manager, Lake States Fire Science Consortium Amanda Mahaffey, Forest Ecologist, U.S. Fish and Wildlife Service	2:45 - 3:00 pm
Workshop Adjourns	3:00 pm

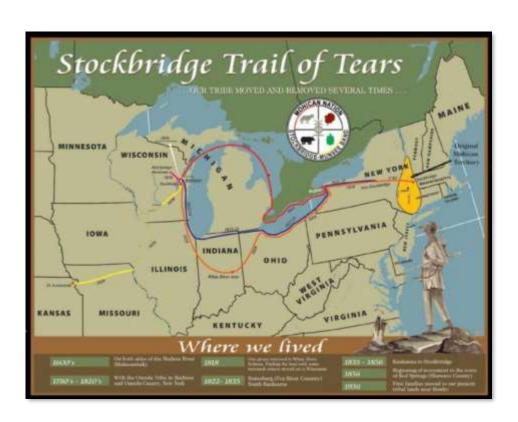
TUESDAY, AUGUST 20 9:00AM-10:30AM

Indigenous Firekeeping

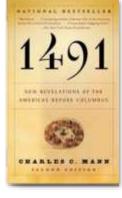
CASE STUDY: Fire history in the Albany Pine Bush (APB)

The Albany Pine Bush Preserve lies within the unceded territory of the Stockbridge-Munsee Community of Mohican Indians and at the eastern door of the Mohawk Nation of the Haudenosaunee Confederacy. Both nations suffered from the forced removal from much of their ancestral homelands.

Muh-he-conneok: People of the Never Still Waters - Mahicannitock (Hudson River).



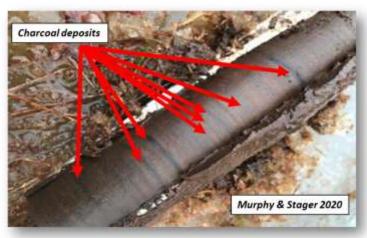




"Rather than thick, unbroken snarls of trees imagined by Thoreau, the greater eastern forest was a kaleidoscope of garden plots, blackberry brambles, pine barrens and spacious groves of chestnut, hickory and oak."

Mann, 1491.

- Research by Paul Smith's College and Concordia University (in press) reveal a 6,600 year continuous record of oak, pine and wildland fire here.
- This history suggests a fire frequency heavily influenced by Indigenous Firekeeping.





Indigenous Firekeeping In <u>Your Place</u>

What were some of your takeaways from the session? How do they apply regionally?
When you go back to <u>Your Place</u> how will you update your organization about your place in fire history and Indigenous Firekeeping? Where will you begin?
How do you develop respectful relationships with Indigenous partners?

WHY Do We Burn NOW?

TUESDAY, AUGUST 20
11:00AM—12:00PM Part One - Past is Prologue: Fire Ecology and Fire Effects

1:00PM-2:30PM Part Two - Contemporary Burning: Why and Where



CASE STUDY: WHY does the APB Burn NOW?

Biodiversity:

- One of the best remaining examples of an Inland Pitch Pine-Scrub Oak Barrens (S1/G2)
- Type locality of the Endangered Karner Blue Butterfly (S1/G1)
- Supports 113 other rare wildlife species (S1-S3) including >70
 NYS SGCN
- One of the most diverse native pollinator and moth communities of any northeastern grassland or barrens (>200 native bees).
- Hundreds of "common" but no less worthy species
- Six rare plants

Wildfire Risk Reduction: reduce hazardous fuel loading.

- >250,000 people visit the preserve annually
- Many more live, commute, and/or work within the APBP Wildland Urban Interface.

Invasive Species Management

- Reduce abundance and alter competitive advantage
- Prevent successful invasion/reinvasion via frequent fire

One Health: reduce ticks and tick-borne disease

Climate Resilience

- Assisted migration: potential source populations and future recipient site.
- Reduce threats from emerging problematic species (e.g. southern pine beetle).

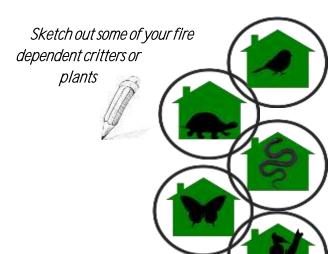
Albany Pine Bush Preserve Designations

- National Natural Landmark
- Maurice D. Hinchey Hudson River
 Valley National Heritage Area Site
- National Recreational Trail Site
- NYS Unique Area

- NYS Birding Trail Site
- NYS Bird Conservation Area
- National Audubon Society Important Bird Area



WHY do You Burn NOW?



What new ideas did you learn from this session?

What is the fire ecology of <u>Your Place</u>? What are your fire-dependent species? What are the desired fire effects? When and where does <u>Your Place</u> need fire to occur in terms of timing (frequency and seasonality), space (extent and scale), and effects (intensity and severity)?

How do you share this knowledge about WHY you or your organization burns?

Capacity, Collaboration, and Communication

TUESDAY, AUGUST 20 3:00PM — 4:30PM Presentation Panel

CASE STUDY: APB working with partners on a proactive approach to build capacity, credibility, awareness, confidence, understanding and acceptance of prescribed fire.

Ongoing Outreach and Interpretive Education.

Annual outreach for the upcoming fire season.

- Postcard mailing to 6k neighbors
- Survey residents
- Personalized letter to stakeholders and officials
- Press release announcing the beginning of the season
- S130 & S190 offered to all Albany County Fire Depts

Discovery Center Exhibits

- Interpretive center has exhibits dedicated to fire
- Landscaping is periodically burned as part of \$130 & \$190 training.

Educational Programing

- Public programs- hikes to see effects of fire
- School curriculum about prescribed fire
- Discovery Kits that are loaned to schools
- Science lectures for those interested in fire research
- Partner Presentations Albany Institute of History and Art, garden clubs, colleges, community organizations, etc.

Special Events that Feature Fire

- Lupine Fest partners have tables and help with public demonstrations
- Smokey Bear Day partner with NYS DEC
- Night at the Discovery Center –volunteers help introduce people to prescribed fire

Community Outreach

- Tabling
- Special exhibits
- Brochures and other materials
- Website pages and vanity url
- Roadside billboards
- Information at trailhead kiosks
- Social Media informational videos on YouTube, Instagram #apbburncrew





Notifications, Alerts and Public Relations for each individual fire.

Recruiting Crew

- Email list of approx. 500 interested wildland fire professionals and officials.
- Call for crew several days prior
- GO/NO-GO day prior

Notifications

- Phone calls to officials, public safety (airport tower, dispatch for police, fire and NYS thruway), businesses and neighbors located in the vicinity of the burn location
- Emails to approximately 600 people who have signed up for Rx fire alerts

 includes trail closures
- Website alert page
- Social Media: Facebook announcement to 21k followers
- If location allows, special invitations to VIPs, media and guests to view a prescribed fire

Why do we do it?

- We're a 3,400 acre preserve surrounded by more than 200,000 households within a 10-mile radius of the Discovery Center.
- It reassures the public and officials that we are professionals.
- Allows businesses and neighbors time to mitigate for smoke. For example: close windows, turn off air handlers, relocate for a few hours, allow for extra travel time, etc.

What are we seeing as a result?

- Reduction in complaint calls
- Greater cooperation from municipalities
- Dispatchers relay information directly to people calling 911
- NYS Thruway posts alerts on digital signage
- Nixle announcements
- An increase in people coming to our defense on social media
- Our staff, partners and volunteers are seen as experts in their field



Capacity, Collaboration, and Communication in <u>Your Place</u>

What barriers and solutions, Villains and Heroes, did you hear in these stories? How do these characters interact?

What ideas did you hear for building capacity around prescribed fire?

How can You be part of the collaboration and communication solution?



"We're saving more than the Karner blue butterfly and other endangered species with these burns; we're saving ourselves."

~Altamont Enterprise Editorial Board 2023

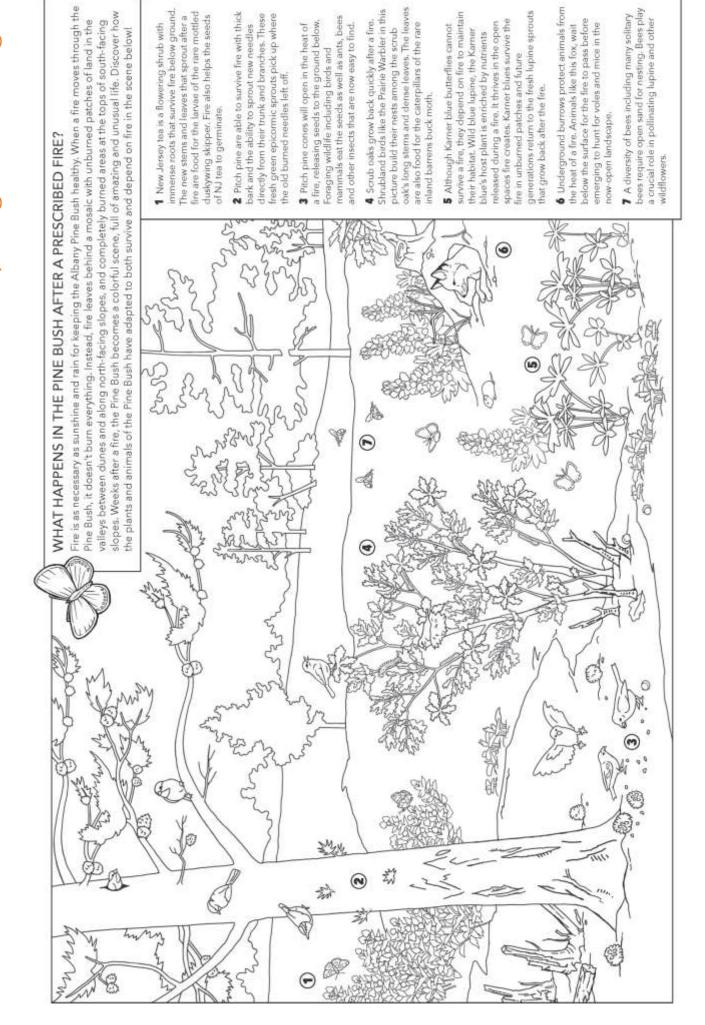








Prescribed fire is central to educational programming.







WEDNESDAY, AUGUST 21 9:00AM-2:00PM

FIELD TRIP: Shifting Paradigms in Restoring Fire Regimes in the Albany Pine Bush Preserve

The Albany Pine Bush Preserve supports one of the best worldwide examples of an inland Pitch Pine–Scrub Oak barrens (PPSOB S1/G2) and provides habitat for 114 rare animal species including more than 70 NYS wildlife Species of Greatest need. Since 1991 management focused on reducing wildfire risk and improving ecosystem health (composition, structure, function) by restoring altered fire regimes and recovering the endangered Karner Blue (*Plebejus melissa samuelis*) has proven challenging but successful. High quality PPSOB has grown to nearly 1000 ha (~2,500 acres) and the annual Karner metapopulation has exceeded the 3000-butterfly federal minimum for 11 years, and the 7,600-butterfly target for 10 years.

However, as managers transition more acreage from a restoration regime to maintenance, questions remain about setting seral stage targets and their respective ideal fire frequency. How much of each seral stage should be maintained and how frequently should we burn them to maintain appropriate fuel loads, and prevent/reduce invasive species and overabundant natives (e.g., scrub oak, pitch pine, white pine), while facilitating the expansion of desirable native plants, and maintaining habitat for so many rare wildlife species simultaneously?

The field trip will offer an opportunity to discuss these questions while observing the results of prescribed fire and other ecological management techniques in the Albany Pine Bush Preserve, including: Growing season prescribed fire Dormant season prescribed fire Invasive tree removal

Growing season prescribed fire Dormant season prescribed fire Invasive tree removal Native forest thinning Scrub oak mowing and thinning Restoration Seeding

APB Rx Fire 1991—1999

APB Rx Fire 2000—2024

Logistics

- 8-week spring dormant season window
- High rates of spread & flame length in pitch pine-scrub oak barrens fuels
- Light, shifting, and high wind problematic
- Complicated smoke and fire management
- Limited crew, gear and training relative to 2024
- Assumed fire alone would achieve all goals

Logistics

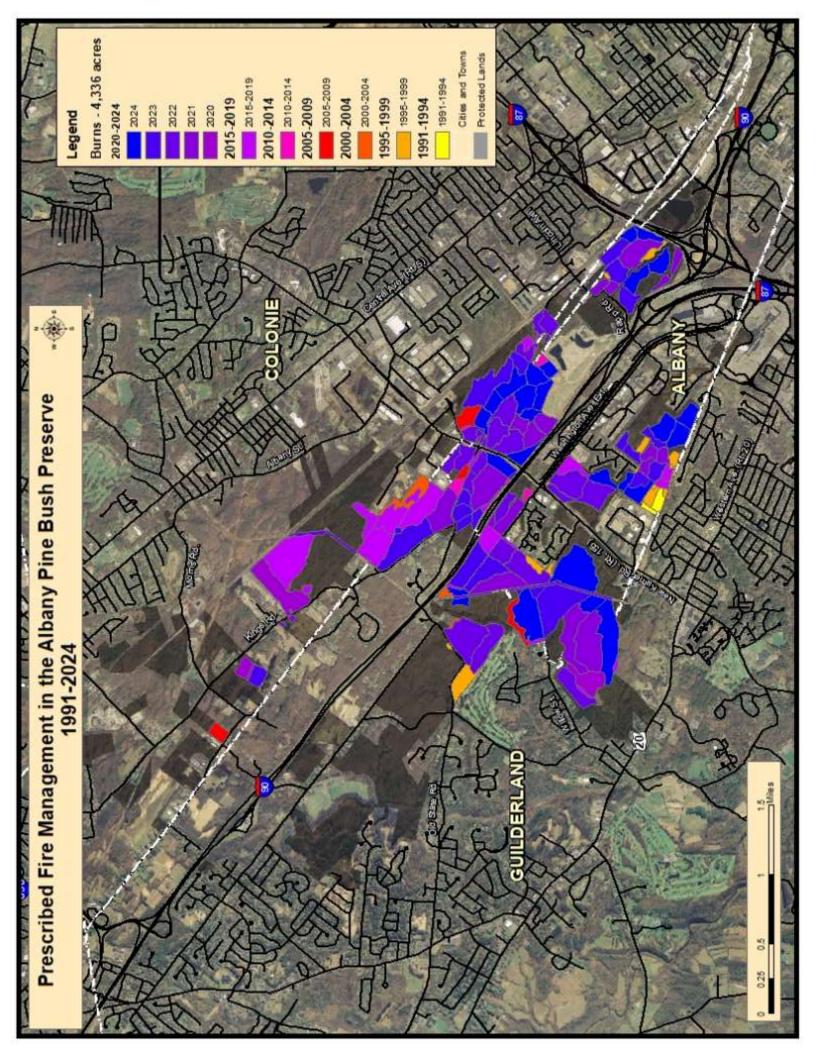
- Mechanical pretreatments to reduce and/or rearrange fuels
- Increased minimum RH and fuel moisture
- Enabled growing season fire
- Opened the wetter end of the prescription
- Mow+Burn produced high heat but lower flame length & rates of spread
- Increased residence time

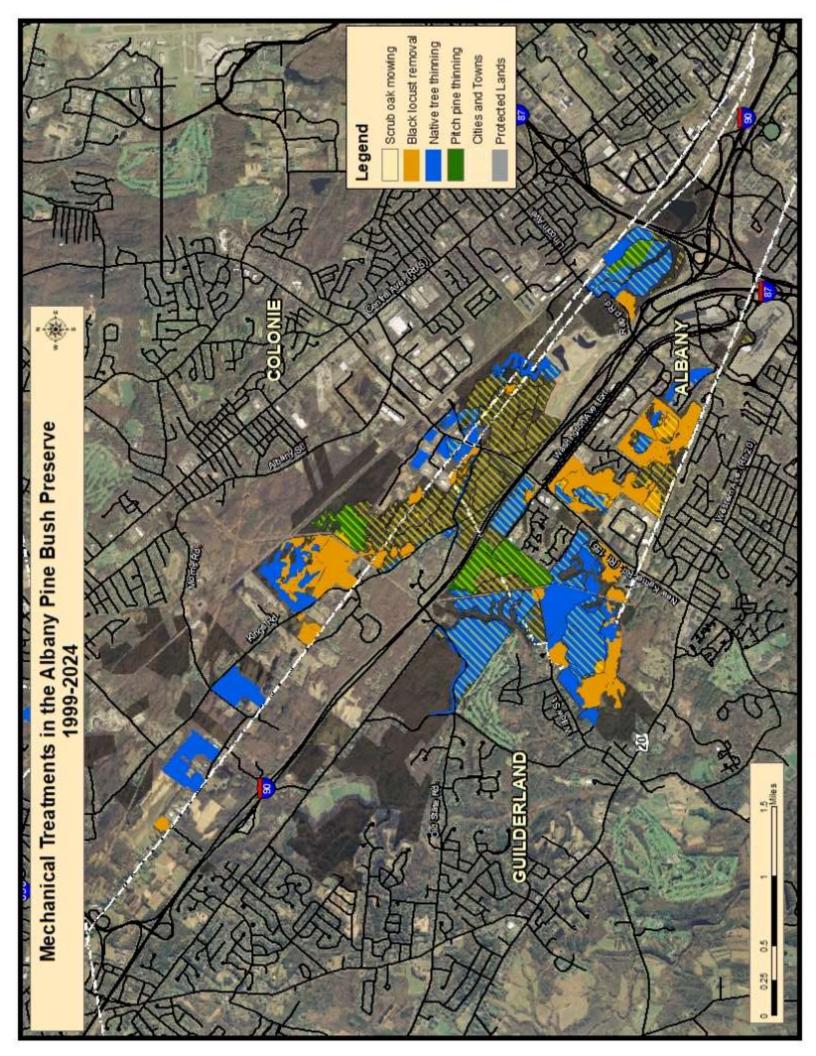
Effects

- Only top-killed woody plants
- Increased 10 and 100-hour dead woody fuel
- Exacerbated invasive plants
- Little duff reduction
- Little mineral soil exposure
- No lupine expansion
- Almost no pitch pine recruitment
- Stressful
- Escaped prescribed fire 4/27/1999

Effects

- Consumed all mowing slash, litter and duff
- Improved smoke and fire management
- Exposed considerable mineral soil
- Improved pitch pine recruitment
- Enabled lupine expansion & Kbb recovery
- Improved habitat structure
- Return of several extirpated plants and animals.
- Less stressful and more enjoyable burns









Field Trip Highlights:

- Restoring ecosystem health after decades of neglect is different from maintaining a healthy ecosystem.
- Fire alone is not enough. Mechanical pre-treatments are essential to creating conditions for safe and effective prescribed fire.
- Growing-season fire is critical to achieving restoration goals.
- Monitoring fire effects along with wildlife dynamics is essential to evaluating changes in ecosystem health.
- Frequent fire (growing–season and dormant-season) is essential to maintaining improved conditions.
- Community engagement at every step is critical.
- IF WE CAN DO IT HERE, YOU CAN DO IT ANYWHERE....One Fire at a Time....

APB Outstanding Questions

- Maintenance fire regime: while better understood than 30 years ago, what is the ideal frequency?
- Climate change: how will a warmer and wetter climate influence burn windows and our ability to achieve desired effects?

Did you know?

- While no Karner blue life stage can survive fire, improved lupine nutrition following fire can improve fitness and population growth.
- Late spring Rx fire
 extends the growing
 season for lupine, scrub
 oak and other native
 plants.
 - Cornell University research found positive public attitudes about the use of Rx fire in the APB.









Field Trip Notes and Reflections

What are some key points You are learning about Fire Program logistics? Examples: site and burn plans, burn parameters, fireline operations, fire effects, volunteers, educational programs, lessons learned....



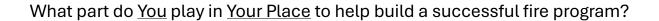
Breaking News!

New York recently updated the labs required for every Regents Biology student.

One lab regarding environmental issues and solutions highlights the Albany Pine Bush and the links between prescribed fire and the endangered Karner blue butterfly.

Information to Share in Your Place

These barriers and successes will be used on Day Three for our Connecting Capacity: A Facilitated Discussion to Identify and Overcome Barriers to Good Fire



What are 3 of Your Barriers and what are 3 of Your Success Stories for overcoming Barriers?



What steps or actions can <u>You</u> do to help someone else build their Fire Program, or overcome their Barriers?





Training Needs for Prescribed Fire Practitioners

THURSDAY, AUGUST 22 9:00AM-10:00AM



APB Fire Crew Training Facts:

- Introduction to Wildland Firefighting training offered to all Albany County Fire Departments
- APB offers First Aid and CPR training
- APB partners with NYSDEC to administer the RT-130 to ~70 wildland fighters each year.

CASE STUDY: APB Fire Training

NWCG PMS 310-1 Qualifications

Position Catalog | NWCG

Burn Boss (RXB2): FFT2, FFT1/ICT5, FIRB, ENGB, ICT4, RXB2-Task Books for all positions

RT-130, Rx-410, S-390

Squad Boss: FFT1/ICT5

RT-130, S131

Firefighter Type 2: FFT2

*RT-130, ICS-100, IS-700, L-180, S-130, S-190

*Annual Fireline Safety Refresher (RT-130) is not required for the first year as a Firefighter Type 2 (FFT2); however, it is required for subsequent years.



Your Fire Training (or Your Organization's Standard)

What fire training needs and opportunities stood out to you from this session?

What do you think would be valuable training elements for prescrit practitioners in <u>Your Place</u> ?	oed fire
What are <u>Your,</u> or <u>Your organizations,</u> prescribed fire training needs that training limit <u>Your</u> ability to implement prescribed fire?	s? What gaps in
	ALBANY PINE BUSH

Connecting Capacity - Identify and Overcome Barriers to Good Fire

THURSDAY, AUGUST 22 10:30AM-11:30AM

What are some lessons learned from the workshop examples of overcoming barriers?
What do you think is the number one barrier to doing more good fire in Your area/organization ?
How are You going to try and overcome this barrier (did you make a specific connection?)

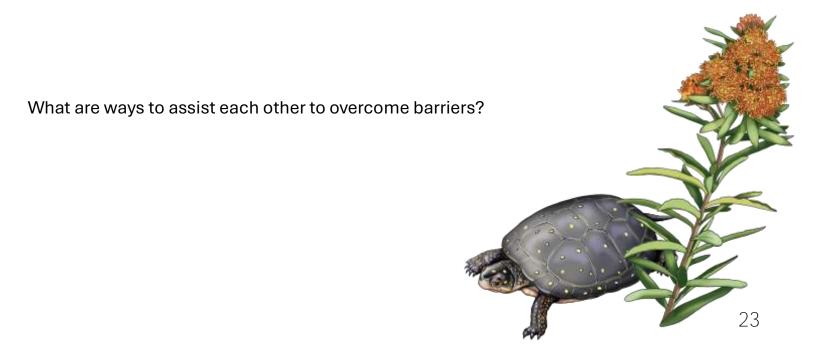


Fill in after the Workshop

Did <u>You</u> make progress overcoming the barrier? What happened? Who helped you?



What role can <u>You</u> play in helping overcome barriers? Provide a success story of one barrier you/your organization has overcome and actions on how you accomplished it.



Policy Updates on a National Level

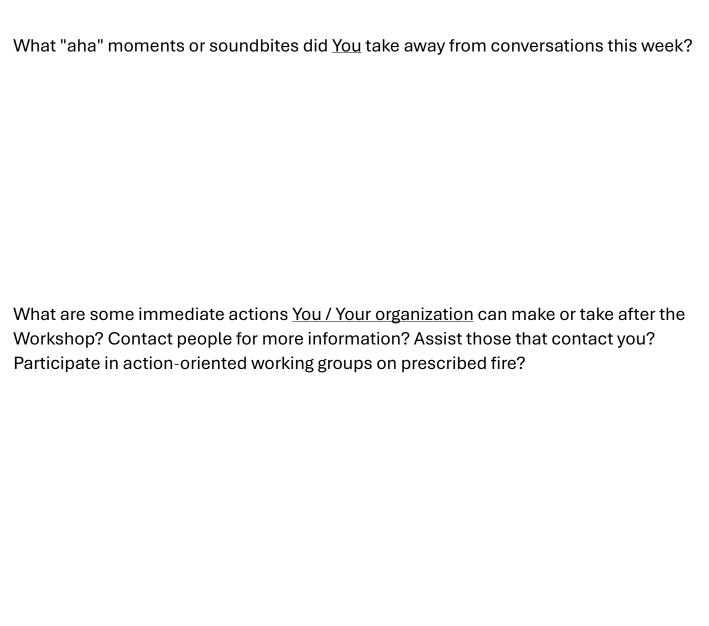
THURSDAY, AUGUST 22 2:00PM-2:30PM

Notes:





Use Your APB Storybook to write or draw Your Own People of Fire in Time & Place Storybook



What will <u>You</u> do to help see that actions and successes lead into the Next Workshop (progress report or new Storybook?)



Background on the Albany Pine Bush

The 3,400+ - acre Albany Pine Bush Preserve (APBP), located in New York's Capital District, protects one of the best remaining inland pitch pine-scrub oak barrens in the world. This extraordinary fire-dependent natural community provides habitat for many plants and animals, including more than 20 percent of New York State's wildlife Species of Greatest Conservation Need, such as the endangered Karner blue butterfly.

The APBP is a National Natural Landmark, Maurice D. Hinchey Hudson River Valley National Heritage Area, National Recreation Trail Site, a New York State Unique Area, Birding Trail Site, Bird Conservation Area, and a National Audubon Society Important Bird Area. Characterized by rolling sand dunes and over 20 miles of trails, the APBP offers visitors many recreational opportunities including hiking, bird watching, cross-country skiing, horseback riding, mountain biking, hunting, fishing and canoeing. The Albany Pine Bush Preserve Commission is a public-private partnership created by the NYS Legislature in 1988 to protect and manage the APBP and provide the public with educational and recreational opportunities. The Management Plan for the APBP guides all aspects of expanding and managing the preserve. The Commission's goal is a preserve of 5.380 acres.

As the gateway to the Pine Bush, the Discovery Center at 195 New Karner Road, Albany, is a "green" certified

interpretive center where visitors come to understand why the Pine Bush is rare and special. A visit to this unique destination is an exciting exploration where learning comes naturally through interactive exhibits, an outdoor Discovery Trail, and numerous programs on the ecology, natural history, cultural history and management of the Pine Bush. Admission to the Discovery Center is free (there is a fee for some programs). The center is open daily weekdays 9am-4pm and weekends 10am-4pm. For more information, visit www.AlbanyPineBush.org or call 518-456-0655.

ALBANY PINE BUSH PRESERVE COMMISSION



Ex Officio Members

NYSDEC

NYSOPRHP

Albany County

Guilderland

Colonie

Albany

The Nature Conservancy

4 Community Members
 Appointed by the Governor
 Approved by the NYS Senate



















The 20th Capital Walls mural.

"Pem-po-tu-wuth-ut (Place of the Council Fire) Biocoenosis" by Juliana Haliti is on The Yard, on the corner of Chapel St. and 16 Sheridan Ave. in downtown Albany. The mural features plants and animals that live in the Albany Pine Bush Preserve.



Fire first

Lack of snowfall and early warm temperatures allowed the APBPC to begin the 2024 fire season with a first of a kind February burn in the Blueberry Hill section of the preserve on February 28th. APBPC staff were assisted by volunteers and staff from OPRHP, NYSDEC, and TNC. Additionally, ABC NEWS10 and WAMC both attended the burn for their respective broadcasts. The 18 acres burned included the Glacier (12 acres) and Grackle (10 acres) management units.

Community support

Albany Fire/EMS recruits entered their final month of their academy in June, learning various skills along the way in many disciplines of emergency responses.

Recruits were able to learn the capabilities of Albany Airport Professional Firefighters IAFF Local I-65, meet with Albany Pine Bush Preserve in regards to wild land firefighting, train with Colonie EMS Department in technical rope rescue skills, learn water rescue techniques along with many other skills.





Did you know?

The Albany Pine Bush has a series of prescribe fire trading cards.

Planning Team

























Thank you to our hosts:





