# 2025 SCIENCE LECTURE SERIES

## at the Albany Pine Bush Preserve

**Free! Registration required.**
**Sign up by calling 518-456-0655 or visit**
**www.AlbanyPineBush.org/events**

**Presented in-person and online. Suitable for tweens, teens and adults.**



### Historical wildland fire in the Northeast as reconstructed from tree rings

Thursday, March 20, 2025 at 7PM

A crisis of wildfire has emerged over much of western North America, raising concerns that fire could become a problem in the Northeast as the climate changes. Many studies, however, point to a lack of fire in the region over the last century and the prevalence of pyrophobic "asbestos" forests that are difficult to burn. New research, however, is beginning to demonstrate that fire was much more common in many forests of the region, and that without it forests are changing to lower flammability. These changes signal the need for greater fire management, including the implementation of prescribed fire in many areas. A major benefit would be reduced fuel loads, while also promoting greater forest diversity and resilience, all of which are critical to preventing a future wildfire crisis here. Presented by Chris Guiterman, with the Cooperative Institute for Research in Environmental Sciences at the University of Colorado-Boulder and member of the paleoclimate team at NOAA's National Centers for Environmental Information.

### Butterfly and moth diversity in the Albany Pine Bush Preserve

Thursday, May 15, 2025 at 7PM



Pitch pine – scrub oak barrens (PPSOB) are important habitats for rare Lepidoptera (butterflies and moths). This is due to a unique combination of acidic, sandy soils and xeric conditions, as well as the structure, diversity, and phenology of the plants that comprise barrens communities. Many barrens in the Northeast exist only as remnant fragments due to human development and have often transitioned into hardwood forests due to historical fire suppression. The loss of this incredible ecosystem has also led to the decline of several distinct species of Lepidoptera. The Albany Pine Bush Preserve protects one of the remaining inland PPSOB in eastern New York, and through conservation and active management, has become a refuge for rare Lepidoptera, including the well-known Karner blue butterfly (*Plebejus samuelis*). Beyond the Karner, twenty-seven Lepidopteran species of conservation concern that depend on barrens and shrubland habitat have been documented in the preserve. This lecture will explore the reasons behind the high diversity of Lepidoptera in barrens habitats, highlight the species found in the preserve, and explain how these species are managed and monitored to both protect them and to learn how management decisions are affecting the preserve overall. Presented by Alex Soldo, Field Ecologist and Entomologist with the Albany Pine Bush Preserve.

ALBANY PINE BUSH PRESERVE COMMISSION

Hosted at the
Albany Pine Bush Discovery Center
195 New Karner Road, Albany, NY

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Friends OF THE PINE BUSH COMMUNITY

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### Origin and activity of Albany Pine Bush dune field
### Thursday, July 17, 2025 at 7PM

Well-preserved stabilized parabolic dunes occur in the Albany Pine Bush, New York State, Northeast USA. This integrated study examines the morphology, grain mineralogy and micromorphology, stratigraphy, and chronology of the "Overlook Dune" in the preserve. The bulk of evidence indicates that the distance and time of dune transport was very short, and that the dune was active for about 500 years, between 12,500 and 11,000 years ago. The well-preserved morphology of dunes, and an absence of paleosols and stratigraphic truncations, all support dune stability throughout the Holocene, even with recurrent wildfire to which the local ecology has adapted. Presented by Stephen Wolfe, research scientist with the Geological Survey of Canada.

### Avian response to the restoration and management of the Albany Pine Bush Preserve
### Thursday, September 18, 2025 at 7PM

Inland pine barrens are a rare yet important habitat for shrubland birds in the Northeast. The Albany Pine Bush Preserve protects the fragments of an inland pine barrens that remain following decades of loss, fragmentation, and degradation of the ecosystem due to human development, species invasions, and fire suppression. Since the preserve was created in 1988, the Albany Pine Bush Preserve has been actively working to increase the size of the preserve and restore pine barrens through mechanical, chemical, and fire management. To understand the effects of our efforts on birds, we have been monitoring bird response to management at both the community and species level. This presentation will provide a synopsis of the individual studies, but the overall result is that our management is having a positive effect on the shrubland bird community and is contributing to the regional conservation of many birds. Presented by Steve Campbell, Conservation Biologist with the Albany Pine Bush Preserve and adjunct professor at University at Albany.



### Why did they do that? Restoring health to our globally rare inland pine barrens
### Thursday, November 20, 2025 at 7PM

Fire is the heartbeat of pyrogenic ecosystems, but attempting to restore ecosystem dynamics and endangered wildlife habitat by simply applying what we know of post-colonial disturbance regimes can be logistically challenging and ecologically ineffective. Applying a dual front approach while simultaneously tracking rare wildlife populations has helped us define and monitor ecosystem health. It has also resulted in increased distribution and abundance of rare wildlife - including the complete recovery of the local Karner blue population and the return of the Eastern Whip-poor-will, while dramatically reducing wildfire risk and improving prescribed fire logistics in a congested and politically complicated wildland urban interface at the NYS Capital District. Presented by Neil Gifford, Conservation Director and lead scientist with the Albany Pine Bush Preserve.

