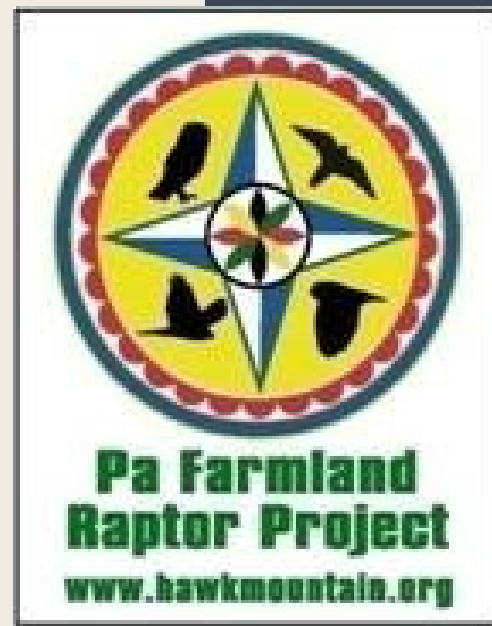




PA Farmland Raptor Project

2023 Season



**Pa Farmland
Raptor Project**

www.hawkmountain.org

Prepared by
Bracken M. Brown
Biologist-Naturalist



The Goal

Hawk Mountain's PA Farmland Raptor Project aims to conserve the four grassland associated raptors undergoing statewide declines by promoting best practices on private and public lands and by actively engaging the public in their conservation. The four species face unique challenges as they hunt open grasslands that are under increasing pressure from development and intensive farming. These practices reduce habitat for these dynamic denizens of open landscapes. Recruit a natural rodent specialist to keep a balanced ecosystem on your property and enjoy the sense of uncultivated vitality they bring.



Short-eared Owl B. Moses

Become a Raptor Resource

Support the Effort

Donations allow the project to.....

- Build nestboxes.
- Print pamphlets for distribution.
- Share our mission at conferences and community programs.
- Expand our *network!*

Contact us

570-943-3411 x103

brackenbrown@hawkmountain.org

Report your Sightings

hawkmountain.org/farmlandraptorsightings



Female Barn Owl. TL Sepkovic

The Year in Review



Adult female Northern Harrier B. Moses

In 2023 Hawk Mountain staff had some excellent engagement opportunities as the project continued to educate landowners, to improve habitat for Pennsylvania's grassland raptors, and the grassland specialists that benefit from this. Highlight engagements were presenting to boy scouts, an educator nestbox workshop, helping kickoff a Tennessee farmland raptor project, and sharing our approach with organizations interested in replicating our model. Last year the project responded to 60 landowner-initiated queries about raptors spotted on their properties. I look forward to the conversations in the coming year to both returning and new farmland raptor heroes!

~Bracken Brown
Biologist-Naturalist



Barn Owl education bird during a FRP program to Albany Township EAC

In the Community

Everyone is an ambassador for farmland raptors, whether it is sharing a checklist, a story about kestrels in your box, or seeing a harrier drop into the tall grass you left standing, the best outreach is through direct conversations.

Whether it is introducing a student to our raptor ambassadors or talking grassland management with a landowner the thrill of witnessing raptors in the field resonates with everyone. These provide strong foundations for seeding conservation as landowners implement simple measures and share their success with neighbors.



Happy kestrel box hosts



Barn Owl educator with a captive audience at a FRP program to Berks county farm bureau

17,838 statewide farmland raptor reports

Six community programs

Sponsor of sheep fitting at local fair

150 landowner engagements

Nestbox educator workshop with PennState extension office

National and international interest in our project model.

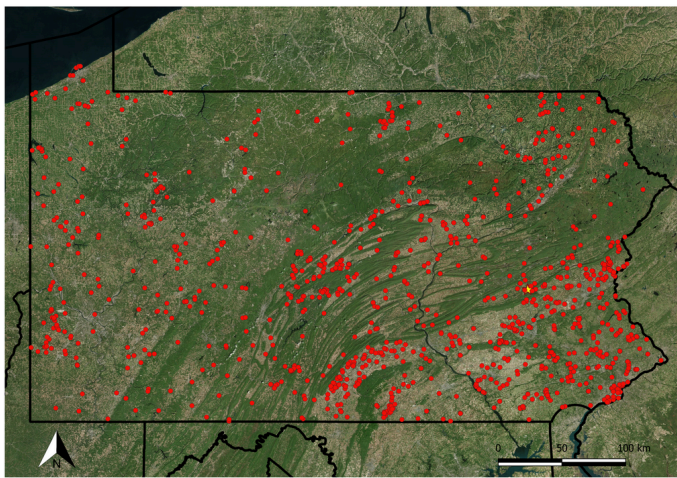


American Kestrel B. Moses

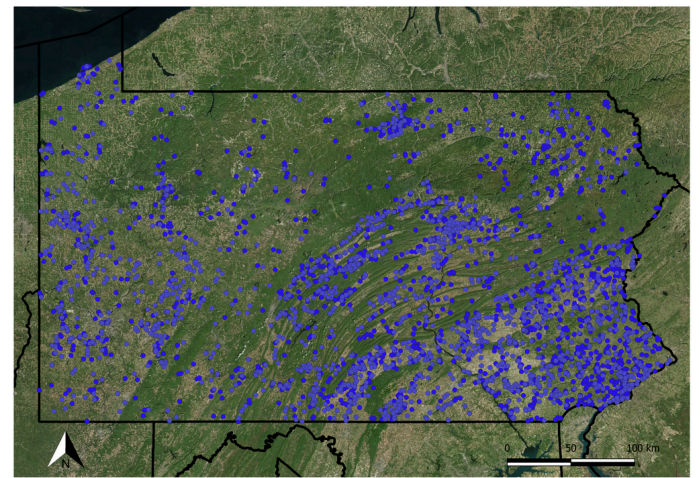
American Kestrel

Falco sparverius

American Kestrel maintained their position as the most reported farmland raptor throughout PA with 13,019 unique encounters submitted in 2023. Their habit of utilizing power lines and road signs as hunt perches coupled with their vociferous vocalizations ensure ready detections of these dynamic falcons.



Breeding Distribution: With a growing popularity in mounting kestrel boxes these cavity nesters are benefiting from artificial boxes placed in appropriate habitat. Closely associated with open grasslands and agricultural fields in the southeastern portion of the state up through the ridge and valley region. The densely forested regions of PA restrict territory availability localizing kestrels through the plateau region.



Non-breeding Distribution: Pennsylvania lays within American Kestrel's winter range. Wintering encounters represented 26% of sightings with 54% falling during the spring and fall migration periods. Widespread distribution reflects migratory individuals winging out of the north that can be encountered in a wider range of habitats. This highlights the importance of preserving PA's kestrel habitat throughout the year.



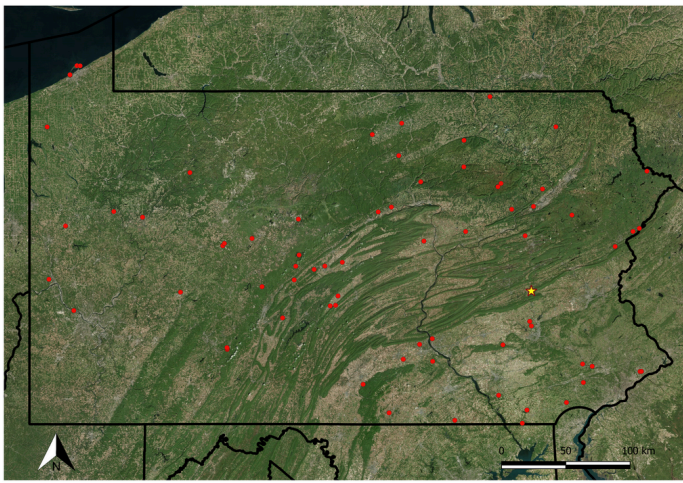
Male American Kestrel on sign D. Brandes



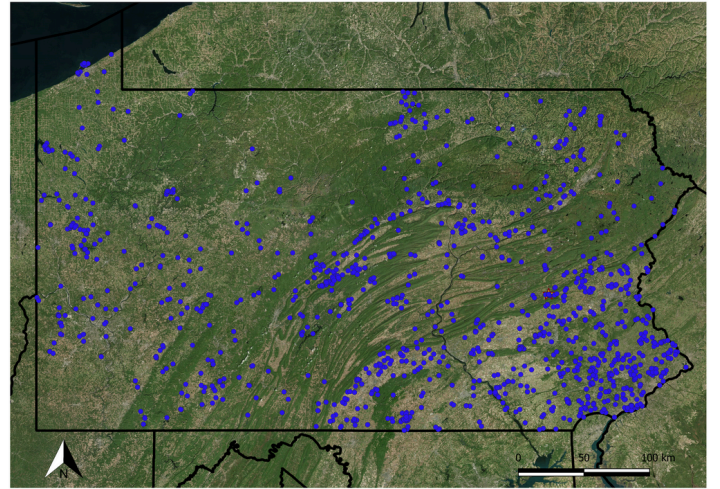
Juvenile Northern Harrier B. Moses

Northern Harrier *Circus hudsonius*

Northern Harrier with their iconic v-silhouettes as they teeter low over grasslands are a particular treat, often reported by motorists driving Pennsylvania roads. Their distinctive flight flashing their white rumps in open habitat netted 4,451 sightings for this threatened PA species in 2023. Being ground nesters harriers rely on taller vegetation to hide their nest in large grassland parcels, which often puts them at risk due to mowing.



Breeding Distribution: Northern Harrier can be found throughout the state, but it is challenging to find them during the breeding season. Last year saw only 90 reports, representing 2% of total sightings during the nesting period. The PA Game Commission did confirm an active harrier nest on one of their WMA. Additional effort is needed for breeding birds as they hold large territories and landowners often don't identify nesting locations when mowing hay.



Non-breeding Distribution: Pennsylvania supports migratory and overwintering Northern Harrier outside the breeding season. Birds out of Canada rely on grasslands and agricultural fields throughout the commonwealth. High quality habitats often see small communal harrier roosts form. Birds will choose an area of dense vegetation, in a marsh or grassland, where they can safely spend the night. This highlights the need for year round management.



D. BRANDES
PHOTOS

Hunting male Northern Harrier D. Brandes



Female Northern Harrier B. Moses

Barn Owl

Tyto alba

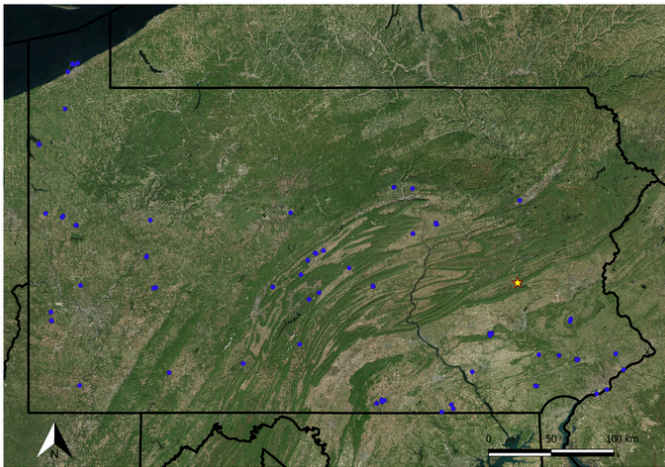


Barn Owl flying D. Mummert

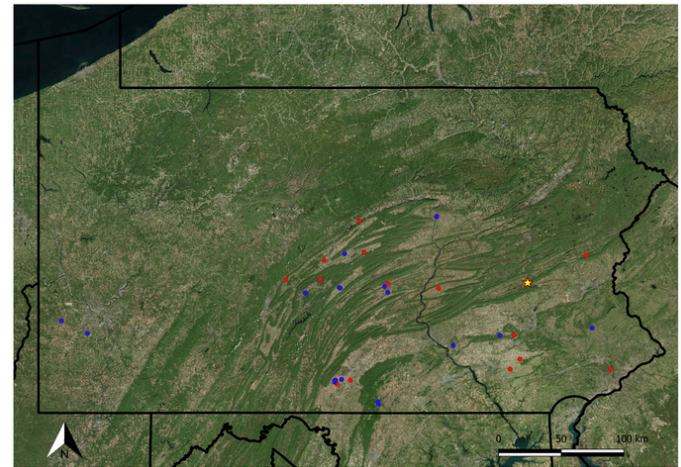
Short-eared Owl

Asio flammeus

Our cryptic nocturnal farmland raptors make a sought-after field encounter for birders throughout the state. Best times to detect these owls is just before sunset when they come off the roosts and begin hunting. Their slow flight low over fields in dim light make them a challenge to detect. Both these species range over a large area hunting rodents by sight and sound.



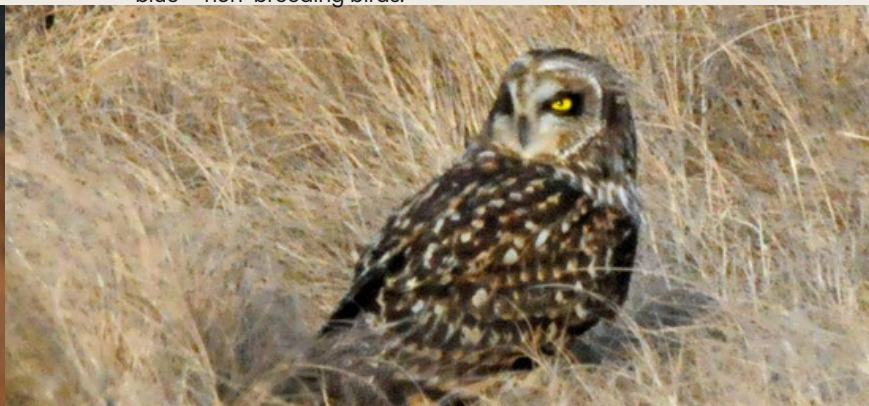
Short-eared Owl: Short-eared Owls were only detected 307 times during the non-breeding period at a few sites. Reliable locations in the state include the marshes along the shores of Lake Erie and managed grasslands and ag fields south of the Kittatinny ridge. Migration saw scattered encounters throughout the ridge and valley region and western PA. It is possible for Short-eared Owls to nest in PA if there are good resources, like harriers they lay their eggs on the ground in large grasslands with young fledging in late June to early July. Hopefully PA's third Breeding Bird Atlas will discover some active territories within the state.



Barn Owl: Being a cavity nester people can hope to attract a nesting pair by placing a nestbox in appropriate habitat. They need large tracts of open fields so most of the state's encounters occur in larger agricultural areas. They were reported 61 times making them our least encountered farmland raptor. Using human structures to nest and roost makes Barn Owl particularly susceptible to rodenticides as they hunt around barns. Not enough is known about PA's birds dispersals in the region, but prime areas often have owls throughout the year. They will nest when the prey availability is high making late fall nesting as rodent populations are peaking, a possibility. On map red = breeding, blue = non-breeding birds.



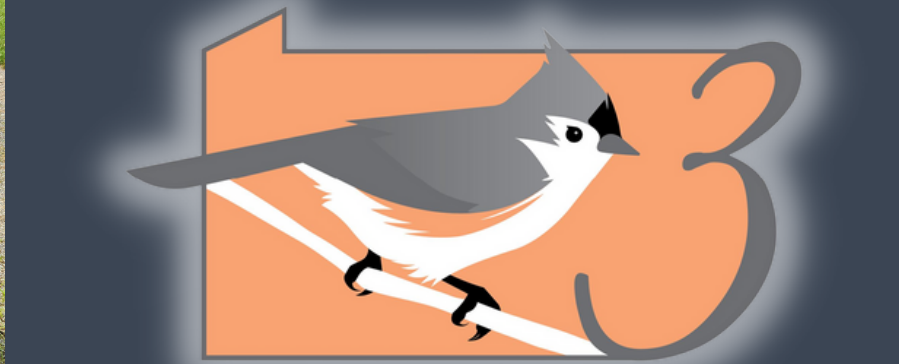
Hunting Short-eared Owl D. Brandes



Resting Short-eared Owl. H. Eskin



HMS PhD student Mercy Melo sharing kestrel banding



The Hawk Mountain Model

Hawk Mountain's approach of data driven education aimed at stakeholders of raptor conservation is a winning model! The last twelve years engaging landowners, school groups, and members of the public continues to grow, despite its shoestring budget. This collaborative approach to conservation is gaining notice.

Last year PA Farmland Raptor project met with coordinators for projects in Maryland, Tennessee, foothills of the Rockies, and the country of Georgia interested in learning our approach to initiate similar programs in their regions. The key comes back to finding ways to engage the people who work and own the land. Sharing findings and management strategies can literally grow a conservation partner from the grassroots, ensuring our farmland raptors have places to hunt and nest for years to come.

PA Breeding Bird Atlas

Pennsylvania's third Breeding Bird Atlas kicked off this year! For the next five years birders will be confirming nesting AND wintering species! The state is divided into 4,938 blocks. The previous two

BBA's tracked the statewide declines for all of our farmland raptors and it will be interesting to see what their heightened focus on breeding season birding brings. If you do host any of our species make sure to record your sightings for the atlas, or you can still report nesting farmland raptors to Hawk Mountain at:

www.hawkmountain.org/conservation-science/resources/raptor-sighting-report-forms

To find out more you can visit the atlas website at:

www.pgc.pa.gov/Wildlife/Birding/Pages/PA-Bird-Atlas.aspx



A joint presentation HMS gave on Farmland Raptors with MTM Environmental and Foothills Land Conservancy in Blount County TN.



Pair of courting American Kestrel. B. Moses

Flying Forward

- Compile Farmland Raptor sightings in Pennsylvania.
- Recruit grants to support outreach activities and update information pamphlets.
- Answer questions about recruiting Farmland Raptors.
- Engage landowners and land trusts with managing for Farmland Raptors.
- Build boxes for landowners to place on their properties.
- Give public programs to interested parties.



Northern Harrier and Short-eared Owl. Joe Papp

Activities



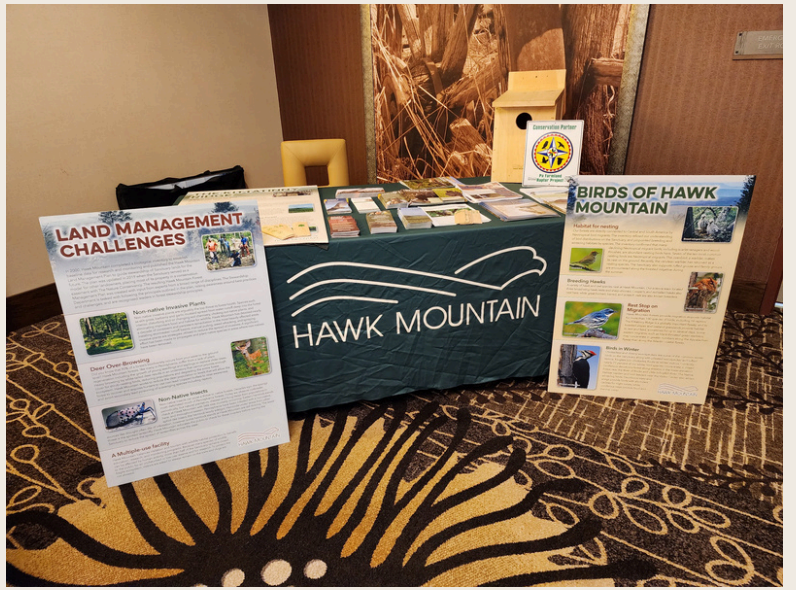
HMS hosted an educator workshop on adding a nestbox curriculum for PA science teachers through the Penn State extension office.

Family group of kestrel on a powerline



Color banded male American Kestrel

A recent box install



Above: PA Farmland Raptor table at the WeConserve PA conference

Below: Kestrel nestboxes ready for the field



Female Northern Harrier B. Moses





Northern Harrier patrolling grassland. D. Brandes

Thank you for being a FRP conservation partner

Photos taken by Bill Moses, Howard Eskin, David Brandes, Joe Papp, Dan Mummert, Richard Schuster, TL Sepkovic, Laurie Goodrich, and Bracken Brown

If you would like to support our efforts please check our website at www.hawkmountain.org/farmlandraptorproject, or contact Bracken Brown.

Remember everyone is an ambassador so share this newsletter or your raptor encounters with a neighbor or report them to Hawk Mountain!

Happy hawk watching!

Female American Kestrel hunting from a utility pole

