

Dear Landowner/ Conservation Organization,

Nebraska Game and Parks Commission needs your help to record sightings of the eastern spotted skunk. The eastern spotted skunk, also known as the civet or polecat, has been in decline across much of their range since the 1940s. This small skunk was once a common sight on Nebraska farms, but has not been recorded in Nebraska since 2017, when one was found as roadkill in Cherry County, Nebraska.



Image of a spotted skunk captured on a camera trap. Spotted skunks are smaller than striped skunks. Their white markings may resemble broken stripes or spots.

We are searching for landowners, conservation organizations, and other groups that are interested in independently setting up and monitoring camera traps to help us successfully capture images of spotted skunks in Nebraska. **Participants must register to volunteer and follow the camera trapping methods listed in the guidelines below in order to contribute to this project.** Images captured by camera traps should be submitted via a Dropbox link that will be provided to you. Images will then be uploaded to *Zooniverse* to be reviewed by public volunteers who will tag the species found in each image.

If this project is something that you are interested in helping with, register at this link:
<https://bit.ly/3tyqxZ0>.

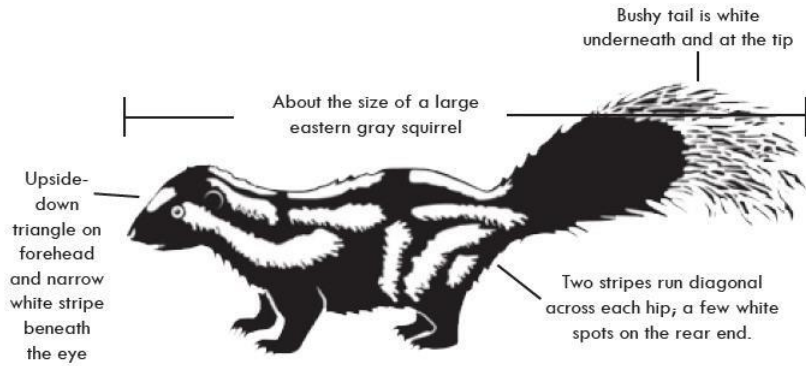
If you have any questions, please contact us at the emails listed below. We look forward to working with you! Thank you,

Landowners please contact:
Alie Mayes
Community Science Specialist
alie.mayes@nebraska.gov

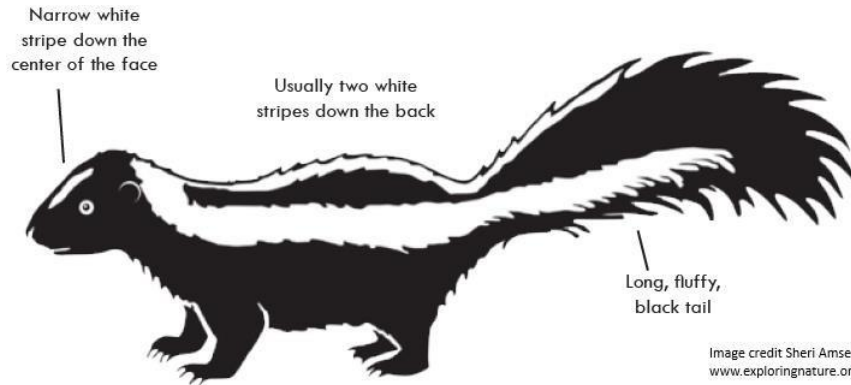
Conservation organizations contact:
Shaun Dunn
Natural Heritage Zoologist
shaun.dunn@nebraska.gov

What do spotted skunks look like?

EASTERN SPOTTED SKUNK



STRIPED SKUNK



Left: Spotted skunks lift their back legs into a headstand when threatened (Image Credit: USFWS)

Above: Tracks of the eastern spotted skunk from a track plate station in Texas (Photo credit: Charles E. Pekins)

Standardized Camera trap Protocol for Capturing Spotted Skunks

- 1. Timing:** ideally, Mid-January through early May. This time period covers mating season, and a short period before and after mating begins and ends. Spotted skunks, especially males, are most active during breeding season. Leave cameras at sites for 1-3 months. If resources allow, we encourage using trail cameras year-round to survey for spotted skunks.
- 2. Location (general):** place cameras in or near woodlands, farmlands, prairies, cliffs/canyons, rocky outcrops, and/or riparian areas. Spotted skunks typically occur in prairies, brushy, rocky, wooded areas, and on farmland with shelterbelt plantings, and where old structures and stacked hay is present. **Shelterbelt plantings on farms seem to be very important for this species.** Other examples include:
 - Abandoned farmsteads
 - Old vehicles, old farm equipment, or junk piles
 - Fence lines, particularly near shelterbelts/trees
 - Hay bales and decaying round bales
 - Rock piles
 - Downed logs near running water or a wetland
 - Old windmills and water tanks
 - In areas where you have previously seen striped skunks or raccoons
- 3. Camera Placement:** place each camera 1-3 feet off the ground, adhered to a tree trunk or sturdy post by a cable lock or other strap. Place the camera facing one of the locations listed above, or other areas that are likely frequented by spotted skunks. This object should ideally be within 8-9 feet (~3m) from camera. In general, it is best to position the cameras to face north in order to reduce glare issues and the number of hazy photos, but that can be difficult when trying to account for other factors. Ensure that all vegetation is cleared to reduce false triggers. Ensure the base of the tree or apparatus with attached bait/lure is in the photo frame. In general, cover is very important to spotted skunks due to risk of predation, so try to place cameras in areas with adequate overhead cover. **Try to spread camera sites out by at least 400 meters (~1300 feet) up to 0.7mi apart.**
- 4. Bait and Lures:** Ideally, baits/ lures will be replaced at camera stations every 10-14 days (about every 2 weeks). Baits/ lures should be placed 3 feet (~1m) from ground. For the purposes of our study, we suggest using canned sardines in oil, coupled with WCS Rosebud Skunk Paste Bait. Other bait/lure combinations are permitted, just make sure to check in with Shaun Dunn or Alie Mayes first. Using a nail, poke two holes into the bottom of a can of sardines in oil and fasten to an object (usually a tree) with a nail (~1m height). 1-2 tablespoons of the bait can be used by placing the bait on the tree (above canned sardines), rock pile, or another object in front of camera. Canned sardines may be effective up to 14 days.

Recommended Baits and Lures:

- WCS Rosebud Skunk Paste Bait:
<https://www.wildlifecontrolsupplies.com/animal/NWS005.html>
- Canned cat food: Friskies shredded canned cat food has been used successfully in other states
- Canned sardines in oil: Used widely by researchers in other states to detect spotted skunks

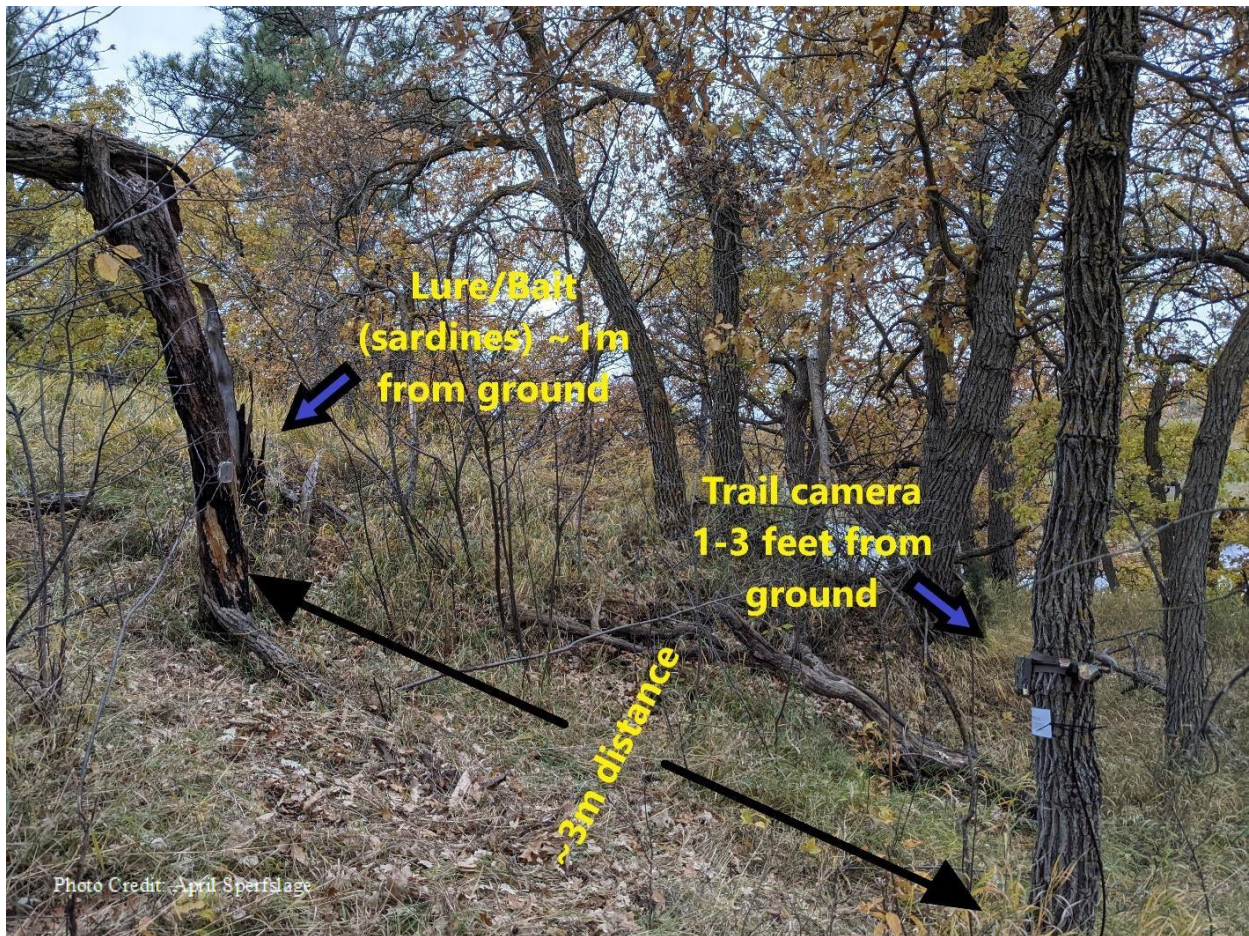
5. **Camera Settings:** Program cameras to record images in bursts of three at a 30 second interval each time the motion sensor activates (i.e., when triggered the camera will take three pictures in succession and then will take no more pictures for 30 seconds). Use the highest resolution settings available on the cameras. Sensitivity should be set to ‘high,’ due to the small size of these critters. “Medium” or “normal” sensitivity may work as well but test your cameras to see if they can pick up small mammals. Recent research suggests that spotted skunks only spend an average of *9 seconds* in front of a camera.
6. **Limiting False Triggers:** Again, plants and other objects blowing in the wind can cause false triggers, which can fill the camera’s SD card with vegetation photos very quickly. To eliminate false triggers, cut or bend back tall grass and obvious problem branches to limit false triggers. Another option is to weed eat a small area in front of the camera; however, do not remove so much vegetative cover that the skunks will not feel secure enough to visit the site.
7. **Checking Cameras:** Check camera trap as needed based on battery life, memory availability, etc. In general, the cameras should be checked every 2 weeks to 1 month.
8. **Identifications:** Images captured by camera traps should be submitted via Dropbox. You do not need a Dropbox account to upload images. A personalized link will be sent to you via email. Images provided for this effort will be uploaded to the online Zooniverse project “Nebraska Wildlife Watch”. This allows community science volunteers to review and tag species seen in the camera trap images. **Participant’s personal information/specific camera locations will not be shared through this project.**
9. **Datasheet:** Use the provided *Spotted Skunk Camera Trap Datasheet* to record site data, camera settings and when camera stations are checked. Also, use this datasheet to record when trail camera photos are uploaded to Dropbox.
10. **Other notes:**
 - On average, spotted skunks spend only 9 seconds in front of the camera, so utilizing proper camera settings is key in detecting this species.
 - Spotted skunks may utilize open prairies more so than striped skunks.
 - Skunks may not heavily utilize game trails or roads like other species do.
 - If you are interested in participating, but need to borrow equipment, please contact Alie Mayes.
11. [Grab your reader’s attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the page, just drag it.]



Left: Example of equipment used at camera trap sites:

- Trail camera
- Cable lock
- Canned sardines (lure)
- Skunk bait paste (bait)
- Hammer and nail
- SD card Viewer
- Keys for locks
- Weed eater/ machete
- Loppers

Camera and Lure/ Bait Placement



Top: Proper camera station set-up

Bottom Left: Canned sardines in oil used as lure at ~1m from ground, Rosebud Skunk Paste may be smeared above canned sardines

Bottom Right: Trail camera at roughly 1m from ground

Examples of Habitat Types for Camera Placement Location Ideas



Top Row: Cliffs or canyons along rivers; riparian areas are important for skunks, and abandoned round bales

Bottom Row: Old homestead with deteriorating barn and rubble (rubble not shown); brush piles or junk piles (junk piles not shown) near old homesteads or barns

***Though not evident in these photos, overhead cover (thickets, for example) may be particularly important for spotted skunks.**

Photo Credit: April Sperflage

Last Document Update: January 17, 2024

Spotted Skunk Camera Trap Datasheet

Use this datasheet to record when cameras are checked and when you upload photos to the shared drive. Record exact site coordinates using a GPS or Google Maps. Please use a separate data sheet for each camera. If you have multiple SD cards, it helps to label them with a unique ID. If possible, match the recommended camera settings from the Participant Guidelines, and record settings used below. **Recommended settings are: camera mode, capture number of 3, 30 second interval (takes 3 images in quick succession and then stops for 30 seconds), normal to high sensor level, highest image resolution.**

Site Name: _____ **Site Coordinates:** _____

Site Description: _____

Camera Settings: _____

#	Date	Time	Previous SD Card #	New SD Card #	Total # of Photos on SD Card	Camera dead when checked? (Yes/ No)	Bait/ Lure Used (i.e. canned sardines, skunk bait)	Field Notes (Was site disturbed? Bait/lure still present? Battery level?)	Images uploaded to Dropbox? (Yes/No)	Date Uploaded
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