



BAT ACTIVITY TRENDS

Community Science Program

PARTICIPATION PACKET

Bat Activity Trends empowers community members to get outside and watch for bats at sunset. By counting bat passes and contributing your data to our project, you can help us learn about where bats are and are not active in our region.

A GUIDE FOR BAT OBSERVATIONS IN WASHINGTON STATE

Getting out into nature and observing our local wildlife is a great way to connect with your local environment. A personal experience, from a safe, comfortable distance, can help us better understand our local wildlife species and inspire us to take actions to protect them. Here are some tips and tricks for going out and observing bats in your area, so you can take part in the Bat Activity Trends (BAT) Community Science Program.



Bats are common in urban areas.



Bats are at peak activity levels June through August.



Bats are best seen between sunset and last light.



Bats are not out in heavy rain or high wind nights.

TO PICK A GOOD OBSERVATION SPOT:

- Find a place with some open sky.
- Stay near home to help us gather data across the area.
- **Get creative!** Some suggested locations for observations include: yard, balcony, window with a view, sidewalks, public parks and community areas, local school yard, rooftop patios.
- Or, take a walk in your neighborhood. Always use the buddy system!
- See our safety tips for more information.

Keep your eyes open! More than just bats like to be out at this time of day. You might spot some other common wildlife species too! Report animals like raccoons, coyotes, opossums and more on Carnivore Spotter at carnivorespotter.org



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HOW TO PARTICIPATE IN THE BAT PROGRAM

1. Use the Bat Observations in the Washington guide to **select a night** for an observation. Bats are active in summer and are best observed on calm nights. Finding a spot where you can see open sky will help spot the silhouettes of bats against the darkening sky.
2. **Pick a spot** close to home! This is safest and helps us create a complete map of the area. If everyone did an observation right outside their front doors we would have perfect data for our trends map! So don't feel like you need to travel far to participate. Balconies, windows, and front steps can work just as well as backyards, parks and driveways. Anywhere you can see the sky might be a place you can spot a bat!
3. **Read the safety checklist** if you are leaving your own property for your observation. Stay smart and stay safe! We highly recommend the buddy system for all observations.
4. If you choose to do your observation as a walk, map out your route ahead of time and walk it once in the daylight so you know if there are any obstacles you will face after dark.
5. Look up the **official sunset time** for the night you are going to do your observation. You can find this information on the Internet (search sunset, the date, and your city), on a weather app, or in the newspaper. You will start your observation 5-10 minutes after the official sunset time.
6. If you are 13 or older, use the QR code or URL on the Data Collection Sheet (next page) to **create a login** on Fieldscope so you can submit your data after you do your observation. We highly recommend you do this before you do your observations. If you are under 13, find an adult or older sibling to create a login for you.
7. Review the Data Collection Sheet and the instructions on the back to be sure you understand the information you will be collecting during your observation.
8. If you are **participating with young kids**, download our **Youth Scientist Participation Packet** which includes a Data Collection Sheet just for kids, a word search and coloring activity to work on while they wait for bats, and a list of recommended podcasts, books, and YouTube videos all about bats to **keep them engaged** during the 30 minute observation. Podcasts are ideal for listening to while keeping their eyes on the sky to see local bats.

TIPS FOR OBSERVATION NIGHT SUCCESS

- Check out your selected spot in the daylight to know what supplies you need.
- Arrive 15-20 minutes before sunset to set up your spot and fill out the first half of the data sheet.
- Use the alarms on your phone to alert you to the start and stop times so that you observe on time and for the full 30 minutes. It's easy to get distracted by your surroundings and lose track of time!
- Be patient! Some bat species emerge early in the night and some emerge late after sunset. Depending on your location and common species, bats could come out any time in those 30 minutes.
- You might not see bats every time you observe, but your data is still important to our project. Please submit your results even if you do not see bats, and visit our website for tips on finding another spot to view bats in your area.
- Observing bats is a great opportunity to appreciate some of the other great things about being out in nature at sunset. Take a few minutes to watch, listen, and feel the changes that happen in our environment as the sun goes down!



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WASHINGTON BATS FACT SHEET

How many bat species do we have in Washington?

There are 14 bat species in Washington. Ten of those species are found all across the state and four occur just in Eastern Washington.

What do our bats eat?

All Washington bats are insectivores, meaning they feed on insects. Some of our bats prefer moths, others like aquatic insects and many will eat any insects they can. Our bats are the number one predator of night-flying pests like mosquitoes and insects that can damage gardens or destroy food crops. Bats can eat up to ½ their body weight in insects every single night. A mother bat can eat her full body weight in insects while she is pregnant and feeding her pup.

How big are bats in Washington?

Quite small. Hoary bats are the largest bats in our state but have a wingspan of just 13-16 in (34-41 cm) and weigh less than an ounce (25-30 g). Our smallest bats are canyon bats, who have a wingspan of 7.4-8.6 in (19-22 cm) and weigh a tiny 0.1-0.2 ounces (3-6 g).

What are baby bats called?

Baby bats are called pups! Bats have babies just once a year, and most bats have just one pup a year, though a few species can have from two to four pups a year. Pups are born in early summer. Many can fly and hunt by the time they are one month old! In many species mama bats form groups known as maternity colonies and live with other mama bats while giving birth and raising their young.

Where do our bats live?

Our bats live everywhere except at the highest elevations. Some species in Eastern Washington prefer canyons, cliffs and other rock heavy dry areas. We have many species that prefer forest and older trees, especially large tall ones, or those in the early stages of decomposition. We also have many bats that have adapted to urban, suburban, and rural areas and can roost under bridges and in other structures. Bats are a very common urban species.

Where do Washington bats go during the winter?

Depending on the species, our bats either migrate south to warmer climates or hibernate in what is called a hibernaculum. A hibernaculum is a warm and protected place where larger groups of bats gather for the winter. One species, our California myotis bats, hibernate only for short periods and will come out to hunt for bugs any night during the winter when temperatures are warmer.



Thank you for participating in the Bat Activity Tracking program. Visit zoo.org/batactivity or wdfw.wa.gov/bats for more bat information.



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SAFETY CHECKLIST

Thank you for taking part in the Bat Activity Trends Community Science Program. While all activities contain some risk, we believe this program can be conducted safely with a little planning. If your planned observation site is outside your home or in a public space, please review our guidelines and plan ahead to ensure a safe experience.

Below you will find a simple health and safety checklist. We ask you to think about the hazards and risk level which may be present for your survey along your planned route. Our aim is to help you improve your own personal safety while carrying out surveys of bats in the field.

This program begins at sunset and ends at or after dark. Please bring protective clothing and lights for your safety and so you can be seen by others.

The aim of this survey is to observe bats and other nocturnal wildlife close to your home.

If leaving your household to carry out the program you should only go to locations which are:

- *Close to home (short walking distance)*
- *Familiar to you and safe to walk after dusk or before dawn, with safe footpaths along the entire route*
- *Public open spaces (or if private land then you have permission to be there)*
- *Not too busy with other people so that social distancing is easy to maintain*

If conducting your observation in a public space we highly recommend using the buddy system and not doing your observation alone. Some public meet up events are planned if you want to participate and do not have access to a buddy. See our website for more information.

* Safety Checklist is adapted from the Bat Conservation Trust's Sunset Survey program resource.

Checklist for safety supplies:

- ☐ Flashlight and/or headlamp with extra batteries
- ☐ Cell phone (with full battery)
- ☐ Reflective clothing if walking near roads
- ☐ Appropriate footwear

Safety checklist:

- ☐ Do not survey alone – enlist friends/family to accompany you on the surveys
- ☐ Consider any health/mobility issues that you or your helpers have and ensure the length/nature of the route is appropriate
- ☐ Stay on designated paths and sidewalks to protect natural areas and for your own protection
- ☐ Plan route beforehand and walk in daylight in advance – stick to footpaths
- ☐ If visiting private land, contact landowners before carrying out your survey
- ☐ Identify hazards to be avoided on your survey, such as trip hazards, sudden drops, trouble spots (danger from other people), presence of animals, etc.

Will watching bats put me or my family in any danger?

No, watching bats in the sky will not endanger you or your family. Bats pose no threat to humans if they are left alone. Never handle a bat without proper training and protective gear. If you find a bat, please leave it alone. If the bat looks like it needs help or to be relocated, please reach out to the Washington Department of Fish and Wildlife or a local wildlife rehabilitation center.

Thank you for participating in the Bat Activity Tracking program. Visit zoo.org/batactivity or wdfw.wa.gov/bats for more bat information.



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DATA COLLECTION SHEET

This program will help scientists with future studies and contribute to the conservation of bats in our area! Starting at sunset, spend 30 minutes observing the sky and watching for bats!

1. Use our guide to pick a good night and place for bat watching.
2. Look up what time sunset is on the night you plan to watch for bats.
3. Pick a good spot near your home to watch the sky for bats.
4. Review our Safety Checklist so you are prepared to have a good night of bat watching!
5. Watch for 30 minutes starting 5-10 minutes after sunset. Count all the bats you see!

Further instructions can be found on the back of this form.
Please email monitoring@zoo.org with questions.

Please use the QR code or go to **bat.fieldscope.org** to create a login, then submit your data. May we contact you about your experience? If so, please enter a phone number or email address so we can follow up with you.



bat.fieldscope.org

Neighborhood/Station Name (see back of page)	
Address of Observation City, State, ZIP	
Date of Observation	
Official Sunset	
Start of Observation	
Time of First Bat Seen	
Size of Observer Group	
Type of Location (circle)	<i>Stationary</i> <i>Walking Route</i>
Distance of Walking Route and Description	
Type of Observation (circle)	<i>Overhead</i> <i>Over water</i> <i>Emergence from roost</i>

Did you see bats? (Be sure to watch the full 30 minutes, sometimes they come out early, sometimes later!) YES NO

Activity level based on number of bat passes:
(0 = no bats, Low = 1-5, Medium = 6-20, High = 20-50, Very High = 50+)

Did you see any other types of wildlife during your count?
If yes, what species?

Any notes about the night? Did you learn something new about bats?
Did your perceptions of bats change in any way?

Are you more likely now to take action to help conserve bats?

What is my station name?

Please follow this naming format: Neighborhood/Station Name. Example: Columbia City/Genesee Park. (For private residences use a street name for the Station Name. For parks and other sites use the park name, community center name, church name, etc. as the Station Name.) If you are doing a walking survey, your site name will be your start and end point (please start and end in the same spot by making a loop or doubling back).

What is my group size?

This is the number of participants that contributed to this observation. If more than one person is helping with the same observation, please conduct your survey together as a group. To avoid duplicated results, only one person from each group should submit the data.

I don't understand the types of observations?

If you are looking up and seeing bats flying around in the sky this is an **overhead observation**; these are most common and can be done almost anywhere.

An **over-the-water observation** is if you are on or next to a lake, river, pond, or stream and are watching bats over the water catching bugs or drinking.

An **emergence observation** is if you are watching bats fly out of a roost, like a house, bat box, barn, opening in a tree or cave.

How do I count bat passes?

Since we are collecting data on bat activity and not bat populations our observations **count bat passes** instead of individual bats (which are hard to distinguish). Once your 30 minutes start, please count **each time a bat passes** through your visible area. If you think a bat might have passed more than once, that's okay. Count each time it comes into your line of sight. **Count all bat passes for the full 30 minutes.** When you submit your data, your total number of passes will be categorized into low, medium or high activity. If you are observing in a group, to avoid duplicated results, only one person should enter the data and report on the activity level the group observed.

What if I don't see any bats?

Be sure to watch for the full 30 minutes, some species emerge early in the night, some emerge later. Depending on the species near you they will appear at different times. If you do not see any bats, please still submit your data! Low or no bat activity is a very important part of building our bat activity map. If we know where bats are not active, we could study those areas further to find out why. Our final map will show the range across King County of areas of no or low bat activity to places with high bat activity. Reporting your observations of "no bats" is essential data for this program!

How do I submit my data?

Our preferred method to submit the data from your BAT observation is to use our online portal at **www.bat.fieldscope.org**. **You will first have to create a login.** This is quick and easy, just click "Log in" at the **top right corner**. This just requires an email address. Once you are logged in, click on the +data green button at the top right of the home page. Please submit just one observation per survey. The fields in the portal match the fields on your data sheet exactly and will be in the same order. Click on the circled question mark next to each question for more detailed descriptions. If you have an acoustic detector please fill in those extra fields and upload three audio files.

Please complete our **reflection section** if you are submitting your first observation of the year. Feel free to do as many observations this summer as you like, from as many locations as you want to! Contact monitoring@zoo.org with any questions about our program.

This is cool! Where can I learn more about bats?

For more information about bats, and more resources to help you participate in this community science program at home please visit our program page on Woodland Park Zoo's website. Use our QR code or visit **www.zoo.org/batactivity**.



zoo.org/batactivity

*Thank you for participating in the Bat Activity Tracking program. Please use the QR code or go to **bat.fieldscope.org** to submit your data.*