



Cascadia Wild

Wolverine Tracking Project
Wildlife Camera Surveys

The Wolverine Tracking Project is a volunteer-based wildlife survey project on the Mt Hood National Forest. The information gathered is being used by the US Forest Service, Oregon Dept of Fish and Wildlife, and the Cascades Carnivore Project, to document and study many different species. We are especially interested in finding evidence of wolverine returning to our forest, learning which areas wolves are inhabiting, and in collecting information on the rare Sierra Nevada red fox, but we are also gathering information on all carnivores to add to long term records.

We are looking for 3 different types of evidence: pictures, genetic samples, and tracks. Your primary responsibility is to check the cameras and associated hair snaggers, but also look for scat and tracks while you are out, if you have time.

Cameras need to be checked approximately every 3-4 weeks. It is the responsibility of your group to divide up the checks between yourselves, however works best for you. It will be helpful for each group to select a point person who will make sure the group is keeping on schedule.

Checking a camera is usually a full day trip. Before you head out to the field, you will need to pick up gear from the Cascadia Wild office. After you return, any samples collected will need to be properly stored and the gear will need to be returned.

Questions? Contact - Teri Lysak, Project Coordinator, Cascadia Wild: 503-235-9533

Safety first!

- Safety first! Remember that the most important thing is that you get back safely.
- Do not go out alone. There must be at least two people on every visit, for safety reasons.
- Have a safety person who knows where you are going and when you are expected to return and who will call emergency services if you do not return on time.
- Visiting a camera will be a full day trip. Start early enough that you will have plenty of daylight to finish, especially in winter when the days are short.
- Be prepared for contingencies. A tree may block the road, deep snow may make snowshoeing difficult, the GPSs may get bad reception making the camera difficult to find – make sure you leave time for unexpected things and plan ahead.
- Remember to bring the gear, clothing, supplies, and common sense you need to remain safe while in the field. Bring emergency safety gear: headlamp, matches, fire starter, emergency rain gear, extra food and water.

Before you head out

- **Pick up gear.** Before you head to the forest, someone from the group will need to go to the Cascadia Wild office to pick up gear. We are located at 5431 NE 20th Ave, inside the Leaven Community Center. You can pick up and return gear any time from the Wednesday before you head out until the Wednesday after.
 - A list of what you need for the camera is located in your Camera Field Book – there is a separate field book for each camera site. Gather all the gear you need and double check the kit is stocked. Much of the equipment is for contingencies – so please carry it in case you need it!
 - There are snowshoes for you to use during the winter if you need them.
 - Bring appropriate safety gear – first aid kit, headlamp, warm clothes, etc. Personal safety kits with an emergency blanket, matches, fire starter, headlamp, etc are on the shelf next to the camera equipment. Warm clothing is in the drawers below. Car kits with jumper cables, fix-a-flat, etc are on the white bookshelf.
 - Sign out any gear you take (camera kit, snowshoes, safety gear) on the sign out sheet on the wall.
- **Clean and sterilize the hair snagging brushes.** To clean a brush, remove all the hair and debris you can see, then run a lighter up and down it to burn off anything you can't see, and scrape it with your fingernail to remove any residue. Stand bristles upright again if they need it. After cleaning, sterilize it by running it under a flame for 3-5 seconds.

Navigating to the camera

- Turn the GPS on when you get out of the car, wait for it to get satellites. Take a waypoint at the parking lot for safety.
- Use roads and trails to get as close as possible. When you have to go off-trail, use the GPS to get a bearing and distance to the camera, set the compass to that bearing, then use a compass to navigate. Periodically check with the GPS to make sure you are still headed in the right direction.
- The GPS is usually accurate to within 20-50 feet. You may have to search around for the camera when the GPS tells you that you are close.
- Read the GPS instructions if you are not familiar with them.

Controlling your scent

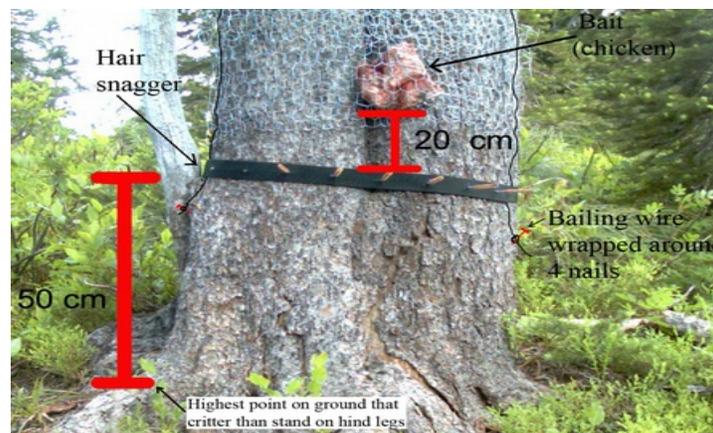
- Keep your scent to a minimum around the camera area. Don't put your pack right next to the bait tree, place small items on top of your pack rather than on the ground, and don't touch things unnecessarily.
- Wear disposable gloves when working on the hair snagger, meat bait, or anything around the bait tree and try to keep as much of your scent as possible off the bait.
- If you are traveling dogs, keep them 200 feet from the camera site.

When you get to the camera

- Trigger camera with yourself in view (if you have managed to not do so already).
- Note whether camera is still operating, and check the battery level and whether the date and time are correct. For Reconyx cameras, press OK and see if the menu appears. For Bushnell cameras, push switch to the bottom, then push it half way up, and see if the menu appears. Further instructions are given in your Camera Field Book.
- Turn camera off.
- Look around for tracks, scat, hair, and if there is snow, for urine in the snow. Check the bait tree thoroughly for hair snagged on the bark chicken wire, or hair snaggers. Collect samples according to protocol given in the Collecting Genetic Samples booklet in the camera kit. It is very important it be collected properly!

Checking the hair snaggers

- If there is hair on the hair snaggers, treat it as if it were from a target species unless you can tell otherwise. **Without touching the hair**, remove each brush with hair on it and place it in an envelope. Occasionally, the brushes will be stuck and you will need pliers to twist them off. Wear disposable gloves if you think you may have to touch the brushes to get them off.
- Label the envelope with the date, camera name, and your initials. Keep it as dry as possible.
- The web belt should be at about knee level above the ground. Re-adjust if necessary.
- After the meat bait is replaced (see below), replace any brushes you removed with clean, sterilized ones. If you touch the bristles while you are putting them up, re-sterilize by holding a flame under them for a few seconds.



Bait tree set up, picture courtesy of Cascades Carnivore Project

Replenishing the bait and scent

Meat bait

- Unwind the bailing wire from the nails, and work the bailing wire out from where it is threaded through the chicken wire. Unwrap old meat bait and discard at the base of the tree.
- If the chicken wire does not have any holes, it can be re-used. Otherwise, use a new piece. Fold the chicken wire long-wise around the meat bait, and re-thread the bailing wire through the cut ends. Make it as secure as possible so that an animal will have to work hard to get it out.
- Re-wrap the bailing wire around all 4 nails, repositioning them if necessary so that the bait is a hammer-length above the web belt

Fox urine

- Add a small squirt (about ½ teaspoon) of fox urine to the tree right below the hair snaggers.

Gusto scent lure

- Add about ½ teaspoon Gusto to the canister. You don't need to remove what is already there, just add more to the top. There should be some lichen, moss, or old rag in the bottom to hold the liquid.
- Hang it in a place where it will get good air circulation, within 15 feet of bait tree.

Checking the camera

- **Keep the inside of the camera as dry as possible.** If it is raining or snowing, hold an umbrella or something else handy over the camera while the cover is open to keep the rain out.
- **Replace memory card and batteries:**
 - ---**Never remove batteries or cards when camera is ON!!!!!!!!!!!!!!!!!!!!**-----
 - Replace the memory card. If the camera takes a small SD card, push the card in a bit and it will pop out. If the camera takes a large CF card, just pull the card out.
 - **Reformat** the card
 - If the battery level is less than 35%, replace the batteries. To check the battery level for you model camera, see instructions in your Field Book.
- **Check that the camera is aimed properly:**
 - We want to be able to get a picture of the entire animal when it goes after the bait. In the camera field of view, the bottom of the bait tree should be about a third of the way up from the bottom, and the bait itself should be close to the top.



- In the winter, the camera will have to be repositioned every visit as the snow level changes. In the summer, it will only have to be repositioned if it is bumped.
- The camera should be at least at chest high, to reduce the chance that it is disturbed and so it is not snowed under during the winter. Ideally the camera should be slightly higher than the bait so that it is aimed at a slight downward angle. Angle it down by placing a stick behind the top of it.

- To see if it is positioned correctly, first go the bait tree and face the camera with you head the level of the bait. Check that the camera is level and centered on your head. Re-position if necessary. Next, turn the camera on and take a picture (see instructions below for turning camera on). Trigger the camera by waiving your arm or walking in front of it for about 5 seconds. Turn the camera off (don't remove card with camera on!), remove card, and use the card viewer to see what it took a picture of. Re-position as necessary, and repeat as many times as needed.
- **Camera settings:** If the date and time are incorrect, re-set all the camera settings. Settings for your model camera are in your Field Book.
- **Turn camera on and lock it to tree:**
 - Check that the lens and flash windows are clean.
 - When everything is ready, turn the camera on. For Bushnell cameras, push the switch all the way up. For Reconyx cameras, push the “on” switch up, wait for the screen that says “Arm Camera”, and press the ok button. For other cameras, refer to your Field Book. With all cameras, you have 10 seconds until the camera starts taking pictures.
 - Make sure the cover and inside of the camera are dry. Close the latch cover.
 - Lock camera around the tree. On the python locks (the ones with the attached cable), make sure the key insert is on the lower surface where it will not fill with rain.
 - Trigger the camera with yourself in view for scale.
- **Fill out the field log sheet** recording what you did – there will be a paper copy with your Field Book, or fill the Field Log out online at: cascadiawild.org/camera-info.

Troubleshooting the camera

To check if the camera is taking pictures: On Bushnell cameras, push the switch half way up, and the number of pictures that have been taken will show on the bottom left. On the Reconyx cameras, turn the camera on and wait until “Arm Camera” appears on the screen. Press the right arrow button until “Check Status” shows, then press the ok button. The number of pictures taken will show on the top of the screen.

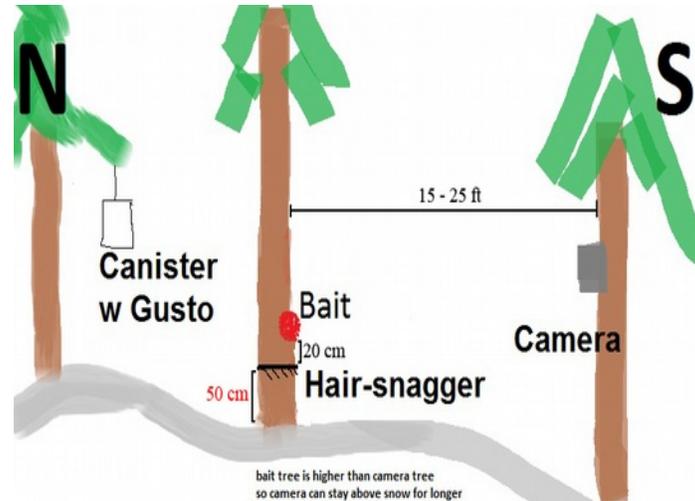
If the card viewer is not working, you can still check that the camera is positioned reasonably accurately by checking the field in which the camera will detect your movement. On Bushnell cameras, push the switch half way up. If the camera detects movement, a red light on the outside will blink. On Reconyx cameras, use the right arrow button to scroll until “Walk Test” appears. In this mode, a red light will flash on the outside of the camera when it detects motion.

If the memory card does not work, you can reformat it. In the menu, scroll to “Erase Card”.

Choosing the camera site (in case you need to move it)

- You will need two trees 15-20 feet apart to set the camera and the bait in.
- There should be no brush between the two trees that would obscure the view. Small limbs or brush can be cut out away with a saw.
- Trees should preferably be in a roughly north-south orientation, with the camera facing north to reduce sun glare.

- The location should be as consistently shady as possible, since contrasting heavy light and shadow makes it difficult to get good pictures.
- The camera tree should preferably be slightly downhill of the bait tree. That way less sticks have to be placed behind the camera to angle it down in order to get the proper view of the bait.
- The camera tree should be sturdy enough that it won't sway too much in a storm, but not too large that the cable lock won't fit around it. The bait tree can be any size.



Camera setup, picture courtesy of Cascades Carnivore Project

Keep an eye out for scat and tracks

Scat and other genetic samples

- As you hike to the camera, look for scat, tracks, hair, and if there is snow, urine and blood. If it is outside the field of view of the camera, only collect samples you think might potentially be from a target species.
- Scat can often be identified by visual characteristics, and guidelines are given in the instructions on Collecting Genetic Samples. If the scat looks like it might be from a target species, collect it. Hair, urine, and blood should only be collected when they are associated with tracks or other evidence of a target species, or found in the vicinity of a camera.
- Follow the instructions in the Collecting Genetic Samples booklet (found in the camera kit) when collecting samples.
- Be sure to take a picture with a scale reference!!!
- If in doubt, collect it!

Tracks:

- If you find tracks that you think are of target species, document them with pictures (with a scale measurement), and by taking a GPS waypoint. If you have time, follow the trail and look for genetic samples. (If you are a tracker with Cascadia Wild, please also fill out a track log sheet.)
- If you wish to do a more complete tracking survey on your way to the camera, please do so. Instructions for carrying out Cascadia Wild's tracking surveys are in the box labeled Extra Parts for Tracking Kits, and data sheets are in the folders next to the box.

Back in the office: Return equipment, memory card, genetic samples

- **Return equipment:** It is very important everything is returned and the kit is re-stocked for the next group!!
- **Wildlife camera pictures and field log sheet:** Return the memory card(s) to the desk. If you are filling out a paper copy Field Log, please leave that with the memory card(s). Otherwise, please fill out an electronic field log as soon as possible at: cascadiawild.org/camera-info.
- **Genetic samples:** It is very important that the genetic samples get stored properly the same day you collect them. Instructions are on the wall in the office, and in the Collecting Genetic Samples booklet.
- **Other pictures:** If you have any pictures of scat, tracks, camera set up, or anything else, email them to me in a timely manner.

That's all! Hope you had a great trip!

Checklist for visiting a camera station

*Keep your scent to a minimum around the camera area.

1. Note whether camera is still operating, check the battery level, and check whether the date is correct (press enter key or move switch depending on your camera model, see Field Book).
2. Turn camera off.
3. Check the bait tree area thoroughly for tracks, scat, hair, and, if there is snow, urine or blood. Collect samples according to protocol (see "Genetic Samples").
4. Reposition web belt if needed, belt should be knee-high.
5. Put fresh meat bait inside the chicken wire. If chicken wire has holes, it should be replaced, if not it can be reused. If there is still meat inside, place it in front of the tree.
6. Replace hair snagger brushes if you removed any, make sure they are sterilized.
7. Squirt ~½ tsp of fox urine on tree directly below hair snagger belt. Make sure bottle closes and does not leak.
8. Add ~½ teaspoon Gusto to the canister.
9. Replace the memory card in the camera, and batteries if they are below 35%:
10. Format the card according to camera settings. If the date is incorrect, re-set all the settings.
Never remove batteries or cards when camera is ON!
Keep the inside of the camera as dry as possible
11. Reposition the camera if needed so that it is aimed properly.
12. Check: lens and flash windows clean, cover and inside of the camera dry, camera locked securely.
13. Turn the camera on, "arm" if needed for your camera model.
14. Trigger the camera with yourself in view for scale.
15. Wish the animals a happy visit!