Remote Camera Trap
Installation and Servicing Protocol

Citizen Wildlife Monitoring Project
2017 Field Season

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This document available online at: https://www.conservationnw.org/wildlife-monitoring/

Citizen Wildlife Monitoring Project partner organizations: Conservation Northwest and Wilderness Awareness School

Contents

Field Preparation

1. Research the target species for your camera, including its habitat preferences, tracks and signs, and previous sightings in the area you are going.

2. Research your site, consider your access and field conditions. *Where will you park? Do you need a permit to park in this location? What is your hiking route?* Call the local ranger district office closest to your site for information on current field conditions, especially when snow is possible to still be present.

3. Know your site: familiarize yourself with your location, the purpose of your monitoring, target species, and site-specific instructions (i.e. scent application, additional protocols).

4. Review this protocol and the species-specific protocol for your camera trap installation, to understand processes and priorities for the overall program this year.

5. Coordinate with your team leader before conducting your camera check to make sure you receive any important updates.

6. Gather the supplies needed for your check and schedule the pick-up either from the nearest Conservation Northwest office or your team leader/members. Conservation Northwest contact at Seattle Office: Laurel Baum (Monitoring Project Coordinator) 206.675.9747 ext. 201

7. Resources such as data sheets and protocols are available for download from our website at: www.conservationnw.org/what-we-do/northcascades/resources-page-for-wildlife-monitoring-volunteers/ or from the CWMP Google Drive folder: https://drive.google.com/drive/folders/0B1ppDLoUmp4nczI2ZzExSVAxS1E

8. Before going into the field, make sure you/your team members have a copy of this document as well as everything else needed on the equipment checklist. **Most**

important: keys for cable locks on cameras, fresh camera batteries and memory cards, lure, blank data sheet, pencil, maps, a GPS to find your camera/document wildlife sign, and a digital camera to document wildlife sign.

9. Ensure you review the camera technical tips and field manual for your camera, and if you have access to the camera, conduct a mock set up.

Installing a Remote Camera Trap
(For the first time the camera is placed in the field for the season, or in case you move a camera trap)

Target Species Guidelines
Creating a remote camera trap involves more than simply attaching a remote camera to a tree with the appropriate settings. The components of a remote camera trap include: specific location of the camera based on knowledge and prediction of target species behavior and activity, camera settings, and found or imported attractants.

All remote camera traps set up for CWMP are designed to target a specific species and with specific research questions in mind. In some instances, such as along Interstate 90, camera traps are installed to monitor general wildlife activity in an area. See the relevant species-specific camera trap installation guidelines for details for your specific location (links below for online access to these documents).

Wolves: http://www.conservationnw.org/files/wolf-remote-camera-trap-guidelines.pdf
Grizzly bear: http://www.conservationnw.org/files/grizzly-bear-remote-camera-trap-field-methods.pdf
Wolverine: http://www.conservationnw.org/files/run.pdf/at_download/file
Canada lynx: http://www.conservationnw.org/files/lynx_detection_protocol.pdf

General consideration
These are some general considerations for installing a remote camera trap, which apply to general wildlife monitoring sets and for most applications for species-specific traps.

Location: Find a location where wildlife will most likely pass by – a game trail, a location with tracks or sign, travel corridors (valleys, river corridors), and/or excellent habitat for your target species (i.e. dense forested cover for martens). Landscape features that tend to funnel wildlife movement and areas close to water may be good sites. Place the camera so that it is pointed toward this area. Avoid sites within 500 m of campsites or human sign, or 250 m of human trails if possible (*this may be difficult for some of the I-90 locations*). At a minimum, select a location out of the line of sight from major trails and/or roads.

Trail Sets: If you are setting up a camera to target a trail, try to aim it at a 45-degree angle to the trail (instead of shooting up or down the trail, or directly perpendicular to it). A 45-degree angle generally captures the best images. When setting a trail camera on a road or trail used by humans, in addition to using a lock box and python lock, consider trying to set the camera below or above head height so it is less visible. Setting it in a location that doesn't draw attention to it can also help with keeping it concealed from people.

Lighting: For best results, consider how the light may affect the photos. Shadows and changes in lighting can trigger the camera. Note that pointing the camera in a north-south direction often offers the best results.

Visual Obstructions and False Triggers: Look for a clear site or one that you can easily clear so that the camera's view is not obstructed by branches, leaves, or brush. Plan to use a knife or saw if needed in forested areas to clear the screen. Be diligent about removing vegetation in the camera's view, especially from the foreground. This can otherwise produce false triggers resulting from wind or shadows.

Mounting Instructions: Attach the camera to the mounting tree, above eye level (or at chest level) and pointed downward toward the trunk of the other tree/feature that you are spreading lure on. Depending upon the camera model you have, use the laser or test feature (see details below) and other team members to help aim it at the right location. Consider the size of the animal species that you are targeting while aiming the camera. Point it low enough to capture smaller animals like wolverine and pine marten, while the placement of the actual camera on the tree is high enough to get a view of larger animals, like deer or bear, walking in front of it. Cameras are often mounted pointing too high, so aim on the low side.

Once you have the camera in position, use bungee cords or camera straps and your python lock to secure the camera to the tree. Branches or nearby wood may be helpful to help tilt the camera downward to ensure the aim is correct. Try to anticipate spring snowmelt and changing conditions in many locations (this step may need to be repeated during future camera checks).

Test Your Set: Some of our cameras have a test function in setup mode. Following your camera model instructions, place your camera in test mode. Have one person walk in front of the camera and look for the red flashing light. Test the range of your camera by walking back and forth. The red flashing light indicates where the camera catches an image. Some cameras have a viewer feature that will allow you to actually view the test images recorded. Use this feature if you have it, or you can use a standard digital camera to view test images. Set up your camera and walk in front of it in the location you anticipate wildlife to travel. Then turn off the camera, remove the memory card and view the photos on your viewer or camera. Reposition as needed.

For cameras without a test function, turn on the camera and walk in front of it, making sure to cover as much ground as possible. Then open the camera and see what is captured in the photo frame. **Be sure to replace the memory card back in the camera and turn it back on, and place a lock around the camera or through the lockbox containing the camera.**

Index Photos: Whenever you set up or visit a camera trap **be sure to capture an index photo**. When approaching an existing site, walk in front of the camera in order to get a photo of the camera team visiting the camera. Before leaving a newly set up or serviced camera trap, once again step in front of the camera in order to capture a photo of the team.

For new installations: hold up a sheet of paper with the following information written in

large clear letters on it: Camera installation name, date and time, team leader name, latitude, longitude, altitude, and attractant used. Stand in front of the camera for 10 seconds to make sure a clear photo is captured. All of this information will help us ensure that we are able to keep track of where images have come from. To avoid glare and to ensure that what you have written is clear, please stand approximately <u>five feet in front of the camera</u> and use gray paper and a thick, black marker to fill in the information.

Data Sheet: Make sure your GPS unit is set to report coordinates in **<u>decimal degrees</u>** and record the GPS coordinates (use Datum WGS 84, lat/long coordinates in **<u>decimal degrees</u>**) on your data sheet if this is a camera installation/move or if they were not recorded previously. Carefully fill out all of the other information requested on the data sheet. Include relevant notes about the location and details about access for people who will be servicing the camera trap. A few photographs of the area and the approach might be useful for this as well.

Defining and labeling discreet camera trap installations: Each time a camera is moved to a new location (more than 100m away from original location) this is considered a new installation. A slight adjustment to a camera, where the camera is still monitoring the exact same immediate location, just from a slightly different angle (which might be done in an attempt to reduce false triggers due to lighting or waiving branches) counts as the same installation. Carefully record the specific name of each individual installation on the data sheet. Use the labeling convention outlined below for creating a discreet label for each new location you set up a camera trap.

This name needs to be the same for **every visit to the camera installation**. Use the convention outlined below for creating labels for each installation. Be sure to enter it the same on all visits to the camera installation. See the spreadsheet with previous camera visits to double check the title of the installation if you have any questions.

General location-year installed-installation number	Example: Rainier-2016-1
General location	This title is provided to you by Conservation Northwest when you are issued your camera trap equipment. Use this title for all of the installations you create in that area.
Year	Record the year you INSTALL the camera (in the case of cameras that are out over the transition from one year to the next, the title comes from the **year when the installation was created**).
Installation Number	Label each installation chronologically starting with 1. If you have two cameras, the first trap you install will be 1, the second 2. If you move camera 1 to a new location after a month, this will become camera 3 and if you move the other camera it would

	become 4 and so on.

Flagging: If needed to find a location, surveyor flagging tape can be used to guide you. Do not rely on this as your only means of finding your camera again because it can disappear and there may be flagging out there unrelated to our project. **Be careful about placing flagging that could give away our camera locations for security reasons. Use your judgment as to whether flagging is necessary, and where and how much to use.**

Scent Lures and Imported Attractants

Some CWMP remote camera traps utilize imported attractants including bait, scent lures, visual attractants, and auditory attractants. Guidelines for the specific types of attractants are outlined in the species-specific protocol documents. Below are some general considerations relevant for all uses of scent lures and other imported attractants on CWMP remote camera traps.

General application of scent lures: Find two trees (or one tree and a rock, log or other feature that the camera can be aimed downward at), about 10 feet apart; one tree that is both large enough to mount the camera on and sturdy enough that it won't sway too much in the breeze. The other tree or landscape feature is for spreading the lure on and can be any size. However, make sure it is large/sturdy enough to withstand animals rubbing and leaning against it and that the camera is angled properly to aim toward that area. Apply the attractant at a height where the target species can inspect it.

Scent lure can also be attached higher on a tree trunk or overhanging branch where it will catch the wind and travel further, attracting animals from a longer distance.

Trapper's lures: When applying the highly concentrated trapper's scent lures (those in small bottles) remember that a little goes a long way. Simply use a branch dipped into the bottle for application, and put a few drops at the base of the tree. You can apply some to the bark of the tree as well and hang the "lure twig" there or insert it into the bark, but do remember moderation.

With fish oil, fish fertilizer, or oil from a sardine can, you can apply the scent more liberally. Try pouring some at varying heights on the tree trunk, creating an oil slick that will remain on the tree through rain events.

Aiming the remote camera: Placing the camera about 10 feet from the lure tree/feature (or even a little farther out depending on the angle of the camera) is best for most camera models to avoid cropping or only capturing portions of animals. Full view of an animal's features is often needed to ensure species identification. Make sure that the attractant is only applied on surfaces within the camera's view so that wildlife spending time sniffing are captured on the camera. Set the camera, and then trigger it and review the images in order to be sure that the area within the photo frame is appropriate.

Handling scent lures: Because the scent lures are so powerful **it is vital to keep them separate from the remote camera** to avoid drawing attention to the camera itself. Bears in particular can destroy remote cameras. Have one person on a team carry and handle the lures and a separate person handle the camera. When traveling in bear country with carnivore scent lures, **always carry bear spray**. When camping with lure, treat it as you would treat food. Store it away from your camp, ideally hung from a tree just like you would hang food in bear country.

Make sure to record the exact name(s) of the lure(s) applied by your team on your data sheet. This information will be entered into our database to track the wildlife response to different lures.

Setting Two Remote Camera Traps in the Same Area

Most teams will have two remote cameras to deploy in their assigned area. Refer to the specific guidelines for spacing these camera traps and considerations for variations between the two in the species-specific protocols for wolves, bears, and lynx. For wolverines, these two cameras are used in conjunction with each other at the same trap site (see wolverine-specific protocol).

For general wildlife survey camera traps along Interstate 90, space your camera traps at least 1 kilometer apart and attempt to set up the two cameras in distinctive habitats. This will help increase the diversity of the wildlife captured on camera. Other considerations might include setting cameras on opposite sides of the interstate, setting one on a trail that clearly leads to the road or a culvert under the road, and a second in habitat a bit more distant from the road.

Servicing a Remote Camera Trap
Instructions for servicing a previously-installed camera trap

Getting to Camera Site

1. Use the site write-up, maps, written directions, GPS coordinates and photographs of the area taken by the installation crew to locate your cameras. It might be helpful to take a copy of the data sheet from the installation and/or previous visit, which may have useful notes on it.

2. Be on the lookout for tracks, scat, or other wildlife sign on the way to the camera and if encountered, document it according to the **Wildlife Sign Documentation Protocol** section (below).

3. Look for flagging along the route and near the actual camera location if your team has elected to place it.

4. If you move camera location for any reason, be sure to follow all the relevant instructions for creating a new camera trap installation, including recording the location on the datasheet you fill out.

Basic Overview of Camera Trap Check

1. Upon arriving, walk in front of the camera and trigger the motion sensor. This picture will verify that the camera is working and also serve as a reference if the date/time is incorrect (*make sure to record the actual date and time of the check on your data sheet so that we can crosscheck with the date/time on the photos when we download them in the office*). If the camera does not trigger, your batteries may already have died or your memory card is full.

2. Unlock the cable lock to access the camera.

3. Use the technical instructions for the appropriate camera model to replace the batteries and memory card, check/set up all of the camera settings (*Links to all model user guides are below and on our website. Hard copies of user manuals are made available to team leaders and stored in the office*).

4. If appropriate for your camera trap, apply lure and install bait according to your specific site instructions. *Every site has unique directions, so be sure to understand and follow yours.* Please remember that a very little amount of lure goes a long way, and that too much can deter animals. Their noses are much more powerful than ours. If you are applying bait you will receive specific instructions from our staff and/or advisory council on this. Do not apply bait at your site unless instructed.

5. **Carefully fill out the data sheet with all requested information.**

6. Arm the camera to take pictures before leaving the site. Be sure to step in front of the camera to capture a "camera check" image, which will act as a reference for the survey period between camera checks. Hold a sheet of paper up with all the information mentioned above for index photos.

After your Camera Trap Check

Email a brief report of your visit to your team and cc Laurel Baum (lbaum@conservationnw.org). If there are any important news/findings, such as signs of a Level 1 species, problems with the camera or location, etc. contact your team immediately upon return and cc: lbaum@conservationnw.org. Please pass on any information about the site to your team members, even if it is not as critical as the examples listed above. The next team will greatly benefit from a brief report, including site conditions, what you learned about animals in the area, topography, hazards, and any outstanding questions. Team leaders will be the communication point between your team and Conservation Northwest.

Review, tag, and upload the photos from retrieved memory cards to Google Drive (online photo sharing service) and fill out an online data form (see instructions for both below). You also have the option of returning the memory card(s) and data sheet(s) to your team leader or the nearest Conservation Northwest office ASAP. That way we can get the photos from your camera downloaded, reviewed, and stored in our database. Indicate how data is being returned to Conservation Northwest on your data sheet in case the images and the data sheet are separated.

Cameras should be checked roughly once each month throughout the season, depending on the camera location and accessibility. Your team leader will schedule camera checks to ensure that sites are being maintained regularly.

Considerations for relocating a camera trap

Selecting a camera trap location, preparing the site and setting the trap can be labor-intensive. Most of our target species have very large home ranges and even if they occupy the habitat where the camera trap is set, they may not return to it for weeks or even months. For both of these reasons, once set (barring extraordinary circumstances), camera traps should be left in place for at least one month. Extraordinary events might include: large changes to the landscape where the camera has been set such as logging, fire, snowpack changes, increase in human activity in the vicinity, or compelling and time-sensitive evidence of a much more promising location in the area being surveyed.

After one month, it is reasonable to assess whether or not to continue to monitor the specific area where you have set your camera trap. Sites that have been very active with a variety of other carnivore species might encourage you to leave the camera trap where it is currently located. Sites that have had very low activity might be worth relocating. Other factors to take into consideration may include an abundance of other promising locations to monitor, or conversely, the current location appearing to be the best option.

Remember that when a camera trap is moved it becomes an entirely new camera installation and needs to be labeled as such in all the data sheets and photo folders you submit. See above for guidelines about labeling discreet installations. If you are using the coordinate-recording feature on a remote camera, be sure to reset the coordinates to the location of your new installation.

Remote Camera Data Sheet and Online Photo Submission

Photos should be processed following the guidelines in the Remote Camera Photo and Data Management Guidelines (available online at http://www.conservationnw.org/files/2017fieldteamphotomanagementguidelines). Below is a synopsis of this process. Refer to full document for details.

Process Remote Camera photos: Review and tag photos in Windows Photo Gallery, Picasa, or Iphoto

Windows Photo Gallery
Use Windows Photo Gallery if you use a Windows PC computer and have not previously downloaded Picasa
1. Download photos to your computer.
2. Open Windows Photo Gallery. Navigate to the folder containing recently imported photos by using the pane on the left side of the program.

3. Determine if you have any series of photos taken by false triggers such as light changes, temperature changes, waving branches, etc. Delete all false triggers (carefully inspect images before deleting to ensure you are not missing something subtle). Sometimes these can number in the hundreds or thousands and we do not need to catalogue or store them. Note that you can select multiple photos to delete at once when in the screen with rows of thumbnails.

4. Update the "Descriptive tags" feature to tag all photos with species ID using the labeling conventions guidelines. This feature can be found in the pane on the right side of the program. You can tag multiple photos at once by selecting as many as you want to tag, and then updating the "Descriptive tags." The program automatically updates and saves photos with new tags.

Picasa
1. Download photos to your computer.
2. Open photo folder in Picasa (under the "File" menu select "Add Folder to Picasa" and navigate to the folder on your computer with remote camera photos).
3. Follow step three above.

4. Use the "tags" feature (found in the lower right corner of the screen) to tag all photos with species ID using the labeling conventions guidelines listed at the bottom of this document. You can tag multiple photos at once by selecting as many as you want to tag in the screen with rows of thumbnails and then adding a tag.

Iphoto
1. Import photos into Iphoto.
2. Follow step three above.
3. Use the "Keyword" feature to label the species in all the photographs. You can batch-enter keywords to save time, by selecting multiple images at once in the gridview.
4. Once all photos are labeled, export them into a folder on your desktop or directly onto Google Drive. When exporting images from Iphoto to send to Conservation Northwest, be sure to select the following settings (see image below of export dialogue box).
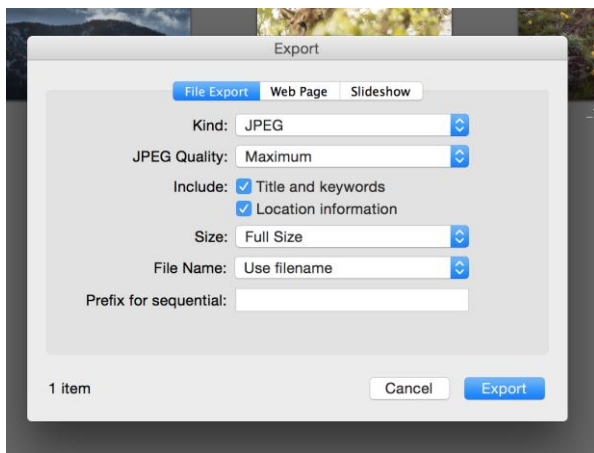
Upload Remote Camera Photos to Google Drive

1. Each time you upload new photos from a camera check you will need to create a folder in Google Drive for each camera you check (most teams will have two camera sites).
2. Navigate to Google Drive either through an internet browser or through the app on your desktop.
3. Create a folder within your Google Drive account. The folder will need to be labeled as such:

   Site-Year-Installation #_XXX (previous visit date)-XXX (current visit date)
   Example: Mt. Rainier-2015-1_12AUG2016-30AUG2016
         And for second installation in that area:
         Mt. Rainier-2015-2_12AUG2016-30AUG2016

4. For *wolverine run pole camera sets* where two cameras are set for the same installation: within the folder you create for each site visit, place the photos from each camera into a separate folder labeled: "runpole" and "vicinity".
   a. Create a "site location" folder.
   b. Since there are two cameras installed at the same site, create two folders within the "site location" folder.
      ▪ Example of "site location" folder:
        Mount Baker-2015-1_12April2016-5May2016.
   c. The first folder within the "site location" folder should be labeled "runpole" and should contain the photos from the camera that is set facing the runpole.
   d. The second folder within the "site location" folder should be labeled "vicinity" and should contain the photos from the camera that is set up to record the entire site scene.
5. Add all of the photos from your camera check into the appropriate folder.
6. Once all of the photos have been added to the folder, "share" the folder with wildlifemonitoringproject@gmail.com. To do this you can "right click" on the folder name and select "Share" in the popup menu. Then add the email address there. Hit save.
7. If applicable, you can include a note in each camera folder (via Word document or Google text document) for any instances of runaway photo-taking from false triggers, or other relevant issues. Place this document in the folder with the applicable photos.
8. Once photos are completely uploaded to shared folder, email wildlifemonitoringproject@gmail.com informing us that the photos have been uploaded.
9. If you are having trouble uploading photos or have any questions contact Laurel Baum (lbaum@conservationnw.org).

Other general field photos

If you have relevant general field photos from your camera outing you can share them with the project in the same way as above. Upload any relevant photos you take with your own digital camera of the site/route to site/wildlife tracks and sign, etc. into a folder and share it

with wildlifemonitoringproject@gmail.com. Label it with the site name, date of visit, and the title, "General Field Photos". (***Example "Mt. Rainier-General Field Photos- 8_30_2016"***)

Label photos as best you can prior to uploading them into the folder and include a Word document with additional details such as GPS coordinates of specific photos and route descriptions, etc as needed. Note that if you have the ability to add GPS coordinates and captions to the metadata of individual photos, CNW will be able to access this information.

Enter data into online Remote Camera Check Data Form
All data from each camera installation, check, location change, and removal needs to be filled out on your CWMP Field Data Form while in the field. Once you get home, enter all data from field data forms into the online form: https://docs.google.com/forms/d/1-9WnxfwVna6VBoEeI6UjTXwHT35fJ62dgI1NCKAmNxQ/viewform. This data form needs to be filled out for each camera every time you visit it!

Notify Conservation Northwest once you have uploaded your photos
Once photos are completely uploaded to the shared folder, email wildlifemonitoringproject@gmail.com to let us know.

CWMP Communications Protocol
Due to the potential social and political sensitivity of some species and the importance of this work being shared in a scientific and thoughtful manner, the Citizen Wildlife Monitoring Project has a Communications Protocol for all volunteers and staff.

All photos taken by cameras owned by the CWMP are owned by the non-profit organizations sponsoring this effort. We strongly recommend that any cameras not owned by CWMP but contributing to our effort follow this protocol as well.

- All photos taken by cameras and retrieved by teams are only released to people outside the program by one of the three program sponsor organizations or by an agency affiliated with our Advisory Council. *Volunteers are not to share their results with anyone outside the program directly*.
- Photos gathered off of a camera are sent in per the protocol above for review and decisions about communicating findings.
- If you feel you have captured a photo of your target species, you can upload it to Google Drive and alert our staff OR email it directly to our staff. Photos can be emailed simultaneously to lbaum@conservationnw.org and jwatkins@conservationnw.org (to ensure that even if one of us is on vacation they are viewed).
- Selected photos are shared on our website and results are reported in our volunteer e-newsletter. Requests for any photographs can be made through our program to lbaum@conservationnw.org.
- Photos that need further identification or discussion are taken to our Advisory Council prior to any wider release, and we will notify you of the discussion and outcome.
- Any interaction with the media based on the results of a camera is decided upon by the host non-profit organizations, and shared with the Advisory Council.

- An annual report is prepared at the close of each season that will share and discuss all results. At that time, all results, with the exception of details of camera locations, are public information.

If any member of the press approaches you about the program, please re-direct them to our offices and staff.

Contacts for Remote Camera Work for 2017:
Project Coordinator: Laurel Baum, lbaum@conservationnw.org or 206-637-9747 ext 201;
Project Director: Jen Watkins, jwatkins@conservationnw.org or 206.940.7914

Wildlife Track and Sign Documentation

It is not uncommon for the animals we monitor to leave tracks or signs of their presence even if they do not trigger our remote camera trap. If you observe tracks, scat or other signs that may be from one of our target species (on your way to the camera or at the camera site) use these procedures for documenting the sign. This information may be useful for refining our camera trapping effort or as evidence of the presence of our target species.

Documenting Tracks and Signs
See appendix for diagrams and further instructions.

Stop your companion(s) and bring tracks to their attention. Stop walking to prevent destroying tracks. Determine if you believe the tracks or sign in question could possibly be one of our target species. If so, proceed to document them. If not, carry on with your other activities.

Select the clearest tracks for photographs (and measurements). Consider photographing tracks in a variety of locations if possible. When ambiguous or unidentifiable tracks are found, the first step is to search the area for better tracks of the same animal. If there is a trail you can follow, this is one way you may discover clearer tracks for that individual. In general, look for where the creature has entered more sheltered areas away from direct sunlight, wind, further snowfall, or whatever has likely obscured the tracks.

If clearer identifiable tracks cannot be found, then ambiguous tracks, which could be one of our target species, should be documented with care. Unclear tracks that are clearly NOT the target species do not need to be documented. Photograph tracks, trail patterns, and other signs as per photo-documentation procedures below.

General consideration
Take multiple photographs to ensure you get a quality shot. Take at least one picture of the track that includes a card in the picture with:
- o Date
- o Location name
- o Observer name
- o GPS coordinates and map datum

Individual tracks

Take a photo looking directly down at track to reduce distortion. Include two scales, preferably rulers, one running lengthwise and the second running widthwise. Collapsible ski poles with visible cm calibrations also work.

Track patterns, trails, and other signs

Include a scale of some sort. This may mean you leave the scale you used for an individual track on the ground by that track (thus also giving a reference for where the individual track sits in the pattern). Try to take a picture looking directly down at the trail to reduce distortion. If this is impossible due to the size of the trail, include scales both near and far to account for distortion. Including a person in a photo can help with scale for larger frames. Also consider taking pictures of people looking at the tracks or sign, or pictures that show the tracks in the context of the location they are found to accompany the detail pictures.

Trailing and Specimen Collection (Optional/Recommended)

Assuming time and safety permit, attempt to follow the animal's trail in both directions for as long as possible. Trailing is carried out for two reasons:
- To collect more geographic information on the potential target species' trail.
- To search for and collect specimens that can be used for DNA analysis (e.g. hairs or scats).

If you are able to locate and collect a genetic specimen related to tracks that you have photo-documented, carefully collect the specimen following the same guidelines laid out for our camera traps (http://www.conservationnw.org/what-we-do/northcascades/pdf-reports-and-forms/2010_wolverine-protocol-1).

Out of the Field

Once you come out of the field, contact Conservation Northwest for specific instructions on how to handle delivery of materials (photographs, specimens). Immediate communication is highly valued. Strong evidence may solicit a hasty follow-up response in the area of discovery which might include setting up/resituating remote cameras and hair snags, or follow-up tracking surveys.

Acknowledgements

The field methods documented here represent the work of many individuals over the course of the years this project has been underway. Many thanks to all of the past CNW staff and project volunteers who have written, revised, or offered feedback on this and past versions of this document. A special thank-you to members of the project's Advisory Council for lending their time to the continued development of our field methods.

Appendix: Track Photo Documentation Guidelines

PHOTOGRAPHS OF INDIVIDUAL TRACKS:
1. Take photo looking directly down on track to reduce distortion.
2. For close up photographs, fill the entire frame with the track and measuring devises
3. Include two scales, preferably rulers, one running lengthwise, the second widthwise.
4. Take at least one picture of the track that includes a card in the picture with:
   - Site Name
   - Date
   - Observation Number
   - Team leader's name.
5. Take multiple photographs to ensure you get a quality shot.
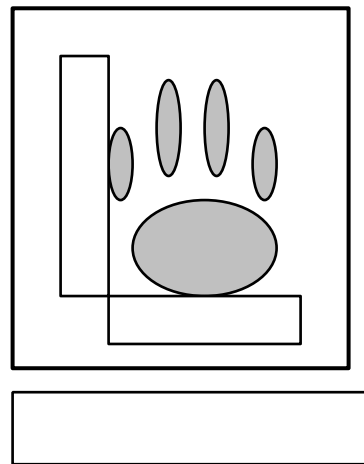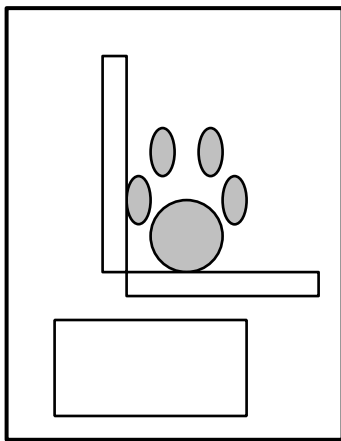
PHOTOGRAPHS OF GAITS/TRAIL PATTERNS
1. Include a scale of some sort. Often this may be leaving the scale you used for an individual track on the ground by that track (thus also giving a reference for where the individual track sits in the pattern).
2. Try to take picture looking straight down on trail to reduce distortion. If this is impossible due to size of trail, include scales both near and far to account for distortion.
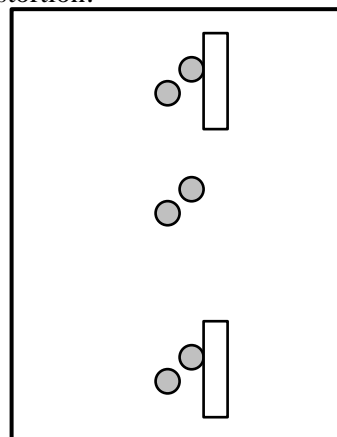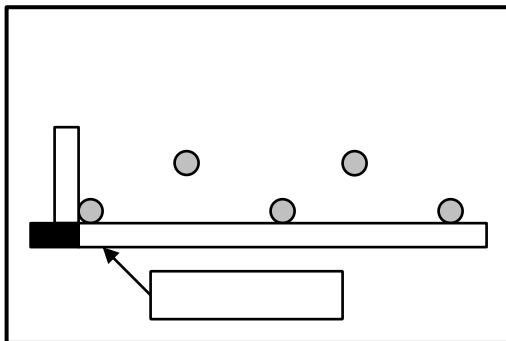
PHOTOGRAPHING THE SETTING

Also consider taking photographs of people looking at the tracks or sign, or pictures which show the tracks in the context of the location they are found to accompany the detail photographs.