SnapshotSafari Camera Trap Deployment Guidelines

A guide to setting and maintaining camera traps to obtain systematic coverage of the entire study area and allow simultaneous monitoring of multiple species.

CAMERA PLACEMENT

Location. Camera traps should be positioned on suitable trees within a 250 m radius of a predetermined GPS point at the center of each 5 km^2 grid cell. When no trees are available, cameras can be placed on metal poles (Figure 1). Reserves with GIS layers can contact Sarah Huebner (huebn090@umn.edu) for a grid layout of camera coordinates.

Figure 1. Camera traps positioned on trees and poles

Naming. Camera locations should be given unique letter-number identifiers based on rows (letters) and columns (numbers): i.e., A01, A02, B01, B02.

Placement. Cameras can be positioned so as to view animals walking on a nearby game trail, but should not be placed deliberately at den sites or water holes, nor should the cameras be baited to attract carnivores or other rare species. Set cameras ~ 75-100 cm above ground level to prioritize capture of medium to large vertebrates. Point camera in a direction that minimizes obstructions rather than with respect to compass direction.

Housing. We recommend housing cameras in steel cases to protect them from animals and from the elements. Furthermore, we suggest inserting small silica gel packets inside the cameras themselves to absorb moisture from dew or rain.

CAMERA SPECS & SETTINGS

Brand. The University of Minnesota Lion Center (UMNLC) uses Cuddeback cameras (with either white or black flash), although other camera types are acceptable as well. Contact Sarah Huebner if you would to purchase cameras or equipment through UMNLC vendors.

Settings. Set the cameras to take a sequence of three photographs every half second when triggered during the daytime, with one-minute delays between each triggering event. At night, set the camera to take a single photograph when triggered. We recommend changing camera sensitivity to "low", particularly if the camera is surrounded by grass or vegetation that may trigger misfires.

SD Cards. SD card size depends on site traffic and how often the cards are changed. We recommend using 8GB or 16 GB SD cards.

Batteries. Cuddeback cameras require 8 AA batteries. Rechargeable batteries are preferable, and we suggest obtaining additional batteries that can be pre-charged to replace depleted batteries in the field. We have found Uniross rechargeable batteries to work well, with the added bonus that purchase of these batteries provides a donation to the World Wildlife Fund.

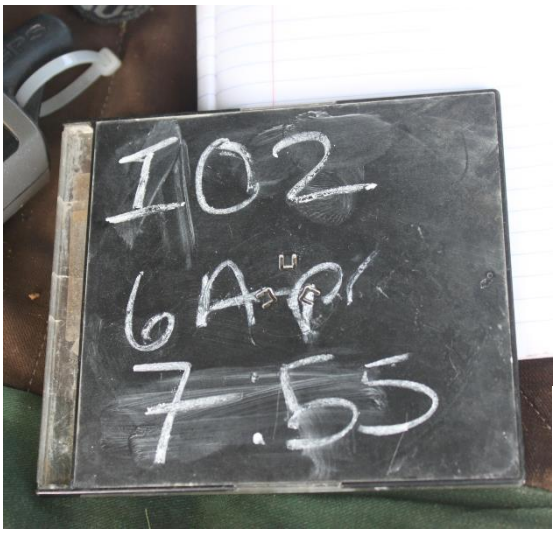
CHECKING CAMERAS

Initial Deployment. When cameras are deployed and at each camera trap check, data should be collected on habitat, camera status, and image quality (see Protocol I – Data Collection).

SD Cards & Batteries. SD cards and batteries should be changed every 6-8 weeks, although this may depend on number of images and battery quality. Bring additional formatted (empty) SD cards and charged batteries to the field when performing maintenance so that cameras do not have to be removed. Be sure to reset the date and time when the batteries are changed. Use permanent pen to write the site ID and date on the SD card itself before inserting it into the camera trap to reduce possibility of confusing data cards (see Figure 2). These marks can be removed from the SD card by wiping with rubbing alcohol.

Figure 2. Label SD cards before deployment with site and date.

Field Data. Please record the date and time the camera was changed, the timestamp reading on the camera, any sign of camera damage, and whether the SD card uploaded successfully (see Protocol I – Data Collection).



Roll Identifier. After installing the new SD card, trigger the camera to photograph a sign that lists a unique identifier, date, and time for data management purposes (Figure 3).

Maintenance. Trim tall grass to ~30 cm and remove low-hanging branches in front of the camera trap to minimize the risk of camera misfires and improve the unobstructed view from the camera.

Figure 3. Photo of sign at beginning of roll identifying the site, start date, and time of that roll. It is important to record this information in case of misplaced SD cards or faulty time-stamps.