

North Carolina's Candid Critters Online Training

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Welcome to North Carolina's Candid Critters!

An eMammal Project



NORTH CAROLINA'S
**CANDID
CRITTERS**

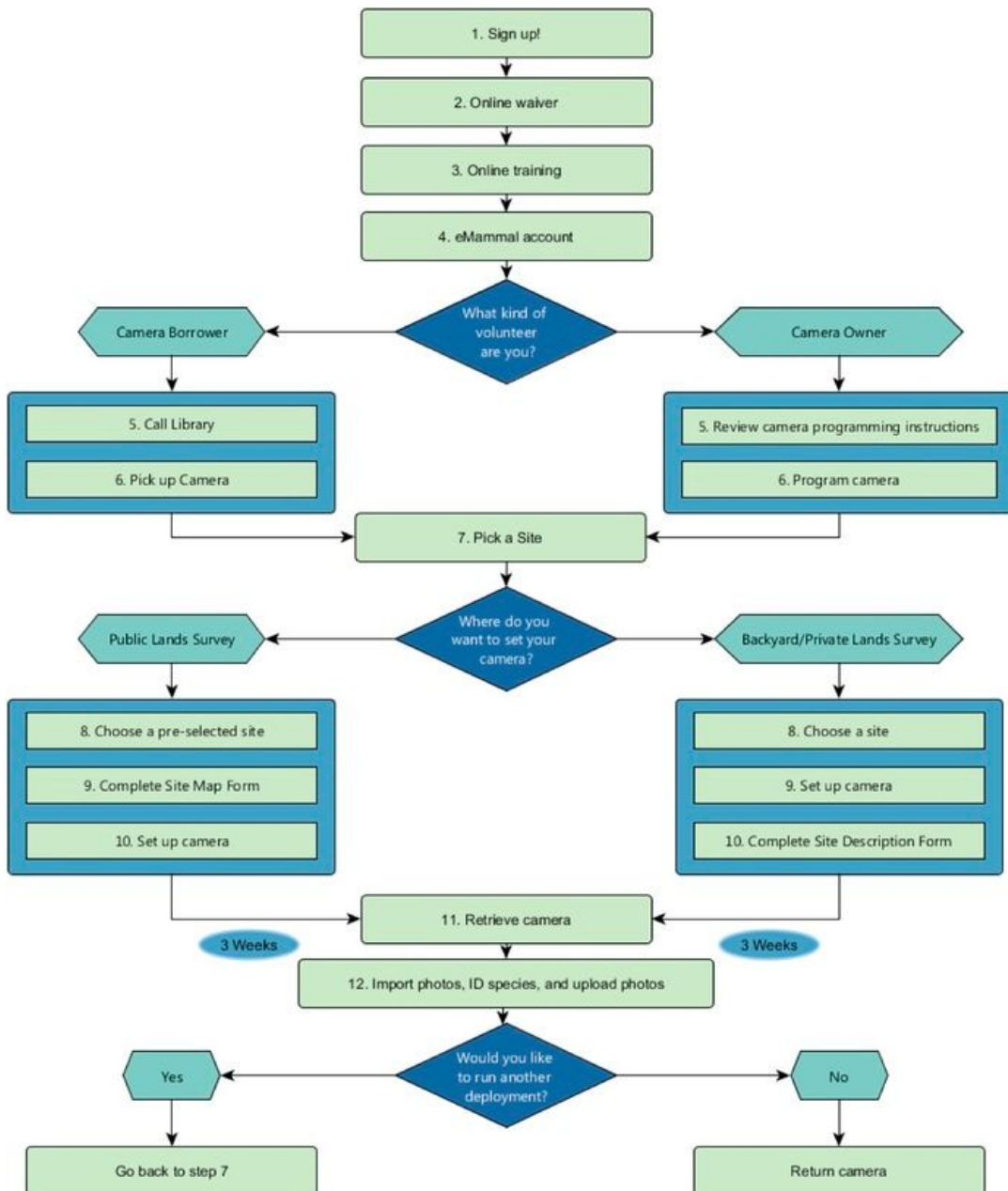


North Carolina's Candid Critters is a camera trap survey covering the entire state of North Carolina in partnership with the North Carolina Wildlife Resources Commission. eMammal is a set of tools used to conduct citizen science camera trapping projects on large scales. eMammal helps you collect camera trap pictures and share your data and results with scientists to address important scientific questions about wildlife. We want you to help us understand how mammal communities in North Carolina change over space and time. Specifically, we will be investigating doe/fawn ratios across the state to assist in white-tailed deer management and we will be quantifying the statewide distribution of coyotes and other species.

Please see our website for more details: www.NCCandidCritters.org

This project will last 3 years during which over 500 camera traps will be set at different sites on public and private lands throughout EACH of North Carolina's 100 counties. The sampling will be split into 4 seasons: Winter (Dec-Feb), Spring (Mar-May 14), Summer (May 15-July) and Fall (Aug-Nov). During Winter, Spring and Summer, cameras will be randomly scattered in different habitats throughout each county and left for 3 weeks at a time, then moved to a new location. This sampling will help us learn about the distribution of different wildlife species. During Fall, all cameras will be moved from 100 counties to just 10 counties. They will be set in tight grid formations and left for 2 weeks at a time, then moved to new locations. This will allow us to estimate doe/fawn ratios and male density for white-tailed deer.

Here's how the project works, we will be going through everything step-by-step during this training:



How to Borrow a Camera



There are two ways to participate in North Carolina's Candid Critters: 1. Use your own camera, or 2. Borrow a camera.

If you are using your own camera, it MUST be one of the brands and models listed below. Camera restrictions are necessary to prevent use of cameras with slow trigger speeds that will miss too many animals.

Approved cameras:

Browning: Strike Force Elite HD, 2017 Strike Force HD Pro

Bushnell: Trophy Cam HD, Essential, Aggressor

Cuddeback: Black Flash e3

Moultrie: M999I, M-1100i

Primos: Proof Cam 02, Proof Cam 03

Reconyx: HC 500, HC 550, HC 600

SpyPoint: Solar, Force 10, Force 11D, Force GM

Stealth Cam: G30, G42NG, G45NG Pro

If you are borrowing a camera, there are over 40 public libraries around the state where cameras can be borrowed from. A list of those libraries and their addresses can be found on our website, [here](#).

Before you can borrow from a library, you may be required to obtain a free library card - you do not need to be a resident of the library county to obtain one. Some libraries will not require this, and you will be notified by the library if that is the case. We suggest calling ahead to see what will be required to obtain your library card, please identify yourself as a North Carolina

Candid Critters volunteer.

Before you can pick up a camera, you will need to call the library to place a hold on a camera. If a camera is not available, you will be placed on the waiting list and the library will call you once a camera is available. Please be sure to pick it up within **48 hours** of it becoming available, otherwise your hold will expire.

How to set up your camera trap



While participating in the NCCC project, you will be setting your wildlife camera up outside using a standard protocol. It is critical that all of our volunteers set their cameras up in the same way so that we can compare data across our project and learn about wildlife across large areas. Below are some guidelines for **How Long**, **Where** and **How** to set up your camera.

How Long?

This will depend on the season. For those borrowing cameras, it is CRITICAL to stick tightly to the [camera deployment schedule](#) and return the loaned cameras to lending libraries when noted. If this schedule is not tightly adhered to, the project will not be successful. Please pay attention to the guidelines below:

Winter (Dec-Feb), Spring (Mar-May 14), Summer (May 15-July): Leave your camera out for a **3 weeks** each time you set it up at a new location

Fall (Aug 18-Nov 19): Leave your camera out for **2 weeks** each time you set it up at a new location

Where?

If you borrow a camera, you can choose where you want to run it from a map with approved sites on public lands. These places are called "Deployments" and will come with a unique Deployment ID. You will receive a link to this map after your training is complete. Please pay special attention to the ease of access of a chosen site from the map, and be sure you are capable of the necessary hike. Also, write down any special notes attached to your chosen location, such as whether the camera should be pointing towards the forest or towards an open area, or whether the location should be on a trail. These notes will appear on the map when you click on a site location.

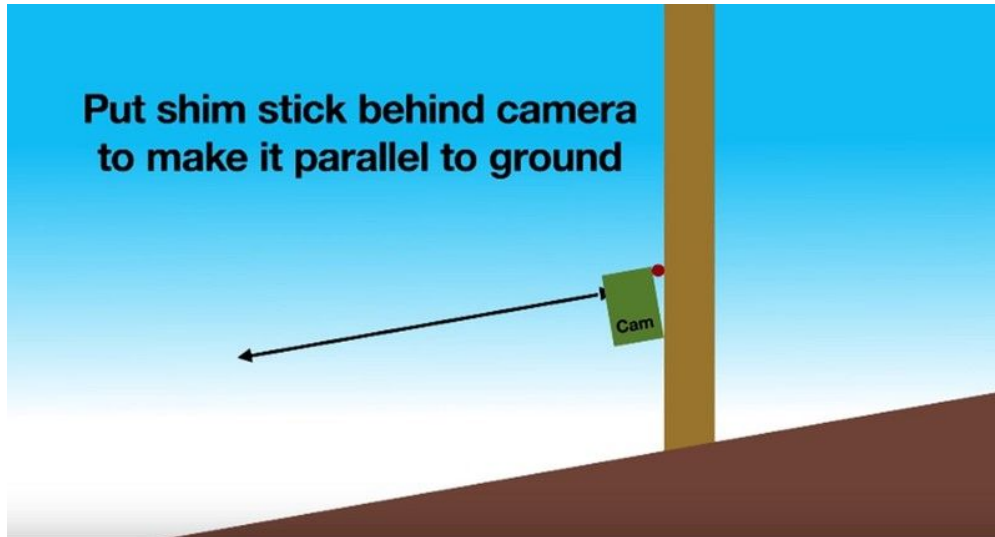
You can also choose your own site to run the camera, whether you are borrowing a camera or using your own. However, each volunteer is limited to setting only ONE 3-week deployment in a suburban area like their yard. We need all other deployments to be set outside of the more developed areas of each county to get a representative picture of mammal activity. You will be asked to fill out an Site Description Form with the specific latitude/longitude locations of each place you set your camera (each "deployment") if you do NOT choose pre-selected sites from the online site map. Each of your Deployments will be assigned a unique Deployment ID by the Candid Critters team.

Deployments are very important because they connect all of the species information and photos with the correct place and time, and you will be using them later in the eMammal software.

How?

Here are some basic setup details:

1. Cameras should be set at KNEE HEIGHT (about 2 feet from the ground)
2. Avoid high traffic areas like roads or other high human/vehicle use areas, including the
3. high traffic areas of your yard
4. Avoid steep slopes and extremely thick vegetation. Machetes are useful for clearing vegetation if setting on the Coastal Plain
5. Make sure you are securing the camera to a sturdy tree so it is difficult to steal
6. Cameras should be pointing parallel with the ground, use sticks to "shim" behind the
7. camera to either point it up or down with the slope



*Clean your hands well of any food debris before setting your camera. Bears can be attracted to food smells on the cameras and may cause damage to the device.

After setting your camera, remember to do the following:

1. Verify the date/time on the camera are correct
2. Record the Detection Distance (you will get this from the Walk Test)
3. Arm your camera
4. Record the GPS coordinates
5. Fill out the rest of your [datasheet](#)

How to get GPS Coordinates

If you have been assigned GPS coordinates to place your camera on public lands, you can learn how to use your Smartphone as a handheld GPS to navigate to your points and record the coordinates at which your camera was placed by reading through this short [Powerpoint](#).

If you are choosing your own camera location on private land, you will still need to record the latitude and longitude location of each deployment. You can use an online mapping service to get this, such as [itouchmap.com](#). Zoom in as far as possible. The format MUST be in decimal degrees:

Decimal Degrees: 35.8907990, -78.876876



Degrees Minutes Seconds: 35 32.46, -78 00.21



Note the NEGATIVE on the longitude. This is very important for points in the Western Hemisphere. If you don't add the negative, then your deployment will appear to be located in Asia.

Please carefully watch [this video](#) to learn how to set your cameras properly for this project.

*Once the video is finished, return to this course by clicking the BACK button in your browser.
DO NOT continue to watch videos on YouTube.

How to use the camera



You will be using only digital camera traps for the Candid Critters Project. Once you get camera trap pictures, you will use custom software (eMammal Desktop Application) to tag the photos with species identifications and upload the photos and data.

No matter what brand of camera you will be using, we would like them programmed in the following way:

1. Still picture mode NOT video mode
2. Set to take as many pictures as possible each trigger (5 for Reconyx, 3 for Bushnell)
3. Trigger sensitivity set to HIGH
4. Infrared flash power set to LOW
5. Date/Time Stamp ON (will appear on the photo)

6. Make sure the time is set in military time and the date/time are accurate (be aware of daylight savings time)

***Never mix alkaline and rechargeable batteries! This can damage the camera.**

If you are using a Bushnell camera, be aware that the date and time reset easily, so be sure to check it each time you set up your camera.

Camera Setting and Return Schedule:

Borrowed Cameras:

It is CRITICAL that cameras are set out promptly (within one week) of borrowing and that successive deployments are happening regularly and promptly after 3 weeks (2 weeks during Fall). ALL cameras must be returned to the lending libraries by August 1st so they can be consolidated into 10 counties that will run the cameras during the Fall. At the end of Fall, ALL cameras must again be returned to the lending libraries by November 25th so they can be returned to their originating libraries around the state and borrowed again for the Winter season. A detailed schedule can be found on the [NCCandidCritters.org website](http://NCCandidCritters.org).


We encourage volunteers to commit to at least one season (3 deployment, 2 deployments in Fall) when they borrow a camera. During the Fall season, we require that volunteers commit to the entire season (2 deployments) because there is not time to return the cameras in between deployments during this season.

***All uploads MUST be completed prior to returning your camera. If you will be unable to do this, please alert your volunteer coordinator as soon as possible prior to returning your camera**

***If you fail to keep up with the schedule or if you fail to upload your photos in a timely manner, you will not be asked to participate further with the project**

***All volunteers will be subject to a 1 deployment trial period to verify they can stick to the schedule and upload photos**



 = locations that will run cameras in the Fall season

All counties will run cameras for the Winter, Spring, and Summer seasons

These return dates are critical for the success of this project! Be sure you return your cameras to lending libraries at these times!



Camera Deployment Schedule:	
Winter (Dec 1 - Feb 21) – 3 week deployments	
• First deployment Dec 1 st	
• Final pickup by Feb 21 st	
• Uploads complete and camera returned by Feb 28 th	
Spring (Mar 1 - May 7) – 3 week deployments	
• First deployment Mar 1 st	
• Final pickup by May 7 th	
• Uploads complete and camera returned by May 14 th	
Summer (May 15 – July 24) – 3 week deployments	
• First deployment May 15 th	
• Final pickup by July 24 th	
• Uploads complete and camera returned by August 1 st	
Fall (Aug 18 - Nov 19) – 2 week deployments	
• First deployment Aug 18 th	
• Final pickup by Nov 19 th	
• Uploads complete and camera returned by Nov 25 th	

Volunteers Who Own Cameras:

We ask that volunteers who own their own cameras follow the deployment schedule above as closely as possible. However, volunteers that own their own cameras can set them for 3-week deployments during ALL SEASONS and do not have to do the 2-week Fall deployments. Owned cameras do not need to be moved to the 10 counties in the Fall and can continue running wherever the owner would like. However, we would like to encourage camera owners not just to run cameras in their yards but also in forested and open areas around their counties to help us reach our sampling goals.

***Just like those borrowing cameras, please upload your photos promptly at the conclusion of each 3-week deployment**

Please watch [this video](#) to learn how to use your camera.

***Once the video is finished, return to this course by clicking the back button in your browser. Do not continue to watch videos on YouTube**

How to use the eMammal Website



Once you have received your official invitation to participate in the project (contingent upon a passing test score at the end of this training), you will be invited to sign up for an account on the eMammal Website. This website has a number of resources that will be helpful for you over the course of the project including:

1. Software (eMammal Desktop Application)
2. Deployment information
3. More instructional resources
4. Datasheets
5. Data download
6. Basic data analysis

Please watch [this video](#) to learn how to use the eMammal Website.

*Once the video is finished, return to this course by selecting the BACK button in your browser. Do not continue to watch videos on YouTube

How to Import Photos into the eMammal Desktop Application for Tagging and Uploading



The software you will use to tag and upload your photos is called the eMammal Desktop Application or “Leopold”. You can download this tool from the eMammal Website once you have created an eMammal account and it has been approved. After you download the Desktop Application, you must then install the program on your computer.

*Mac users have one extra installation step and will need to watch an [additional video](#) to install the Desktop Application

*If your username or password has any special characters in it, you will receive an Authentication Error. To fix this error, change your username and password in the eMammal Website to remove special characters

You will use the software in 3 steps, we will go over step 1 here and steps 2 and 3 in the next section:

1. Load pictures from camera into the software
2. Identify animals in photo sequences
3. Upload photos to eMammal database

Loading Pictures

To load your photos into the Desktop Application, you will need an SD or CompactFlash memory card reader, depending on the camera model you are using, that can plug into the USB on your computer. These can be purchased for a small cost from Amazon or similar retailers.

Please watch [this video](#) to learn how to import your pictures into the eMammal Desktop Application.

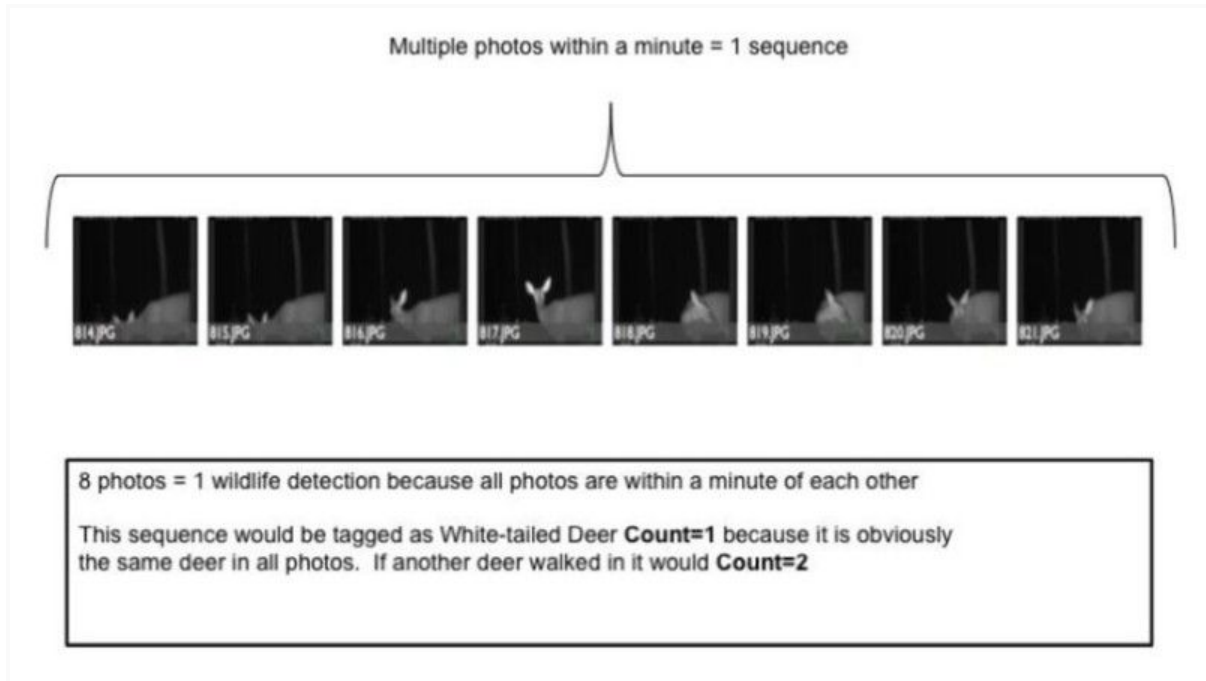
***Once the video is finished, return to this course by clicking the back button on your browser. Do not continue to watch videos on YouTube**

How to tag and upload your photos using the eMammal Desktop Application



Once you have your photos loaded into the Desktop Application, you will need to tag them with the correct species and quantity for each photo SEQUENCE.

A photo sequence is a group of photos that are taken within a minute of each other and ALL the photos in that sequence are counted as ONE wildlife detection because they are the same individual animal. There could be 3 photos in a sequence or many more if an animal stands in front of the camera for a long period of time (see the picture below).



Upload Photos and Data

After you have tagged all sequences in a deployment, you can use the Desktop Application to upload the photos and identification data (see video below).

Before uploading, double check that the Deployment listed in the upper lefthand corner is the CORRECT deployment. If it is not, close the Application without uploading and contact your volunteer coordinator.

Please watch [this video](#) to learn how to use the Desktop Application.

*Once the video is finished, return to this course by clicking the back button on your browser. Do not continue to watch videos on YouTube.

Application Troubleshooting:

Contact your volunteer coordinator if you have problems using the Desktop Application.

***Please always save a copy of your pictures on your computer just in case you run into problems uploading and need to start over.**

***If your camera was moved partway through the deployment, please let your volunteer coordinator know.**

Common Problem	Solution
The upload is proceeding slowly or not at all	Your internet speed is not sufficient. If using WIFI, try plugging directly into your router. If that doesn't work, contact your volunteer coordinator.
You have multiple folders of pictures for one deployment	Choose the parent folder containing all subfolders when importing. NEVER combine folders together by cutting and pasting.
The wrong photos were accidentally uploaded to the wrong deployment	Contact your volunteer coordinator to get a new deployment

Safety in the Field



Your safety is more important than data collection! Please keep the following safety concerns in mind when out in the field:

1. Wear blaze orange clothing in hunted areas from September through January
2. Seek shelter during inclement weather, especially if lightning is present
3. Wear sturdy footwear and avoid slippery rocks, logs or slopes
4. Make sure someone knows where you will be going, bring your phone in case of emergencies
5. Black bears are very common in Eastern NC and the mountains. Exercise appropriate caution in those regions, make noise so bears know you are coming.

Other Points to Keep in Mind

- Make note of any special instructions given on the site map for your site when you choose it
- For all State Parks, email superintendents at least 3 days before your first visit and check in at Park Headquarters on your first visit so they know who you are*
- Call or check in at all National Wildlife Refuge headquarters on your first visit so they know who you are*
- Carry the appropriate permit on public lands, you will receive one from your volunteer coordinator
- Follow any specific rules in public lands

*If you have questions regarding the project, please contact your volunteer coordinator at info@nccandidcritters.org. The park superintendents and land managers should only be contacted about setting your camera.