

# Welcome to eMammal!



eMammal is a citizen science camera trapping project that 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 animal communities change along a gradient from urban to wild areas and how different human activities affect wildlife in these areas. Our early research revealed some interesting results about the effect of chicken coops, dogs, and fences in urban areas, and we are expanding this research to examine the effect of different habitat types, habitat size, and other factors.

Please see our blog for more details: <http://emammal.wordpress.com/2014/02/07/new-emammalopportunity-in-raleigh-area/>

Also check out our Facebook page too see more cool pictures:  
<http://www.facebook.com/emammal>

# How to use the camera



You will be using only digital camera traps for the eMammal Project. Once you get camera trap pictures you will use custom software (eMammal Desktop Application) to tag the photos with species names and upload the photos and data. This software works with both Reconyx and Bushnell cameras but has not been tested with other camera brands. If you are using a brand other than Bushnell or Reconyx you may have problems using the eMammal Desktop Application and we will do our best to help you troubleshoot.

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 (10 for Reconyx, 3 for Bushnell)
3. Trigger sensitivity set to HIGH (If using a Bushnell, please set to LOW)
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

If you will be borrowing a camera from eMammal, these settings will already be done for you but the Bushnell date and time reset easily so be sure to check it each time you set up your camera.

**\*Never mix alkaline and rechargeable batteries! This can damage the camera.**  
**Please watch the following video for details about how camera traps work:**

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

**\*Additional supplementary videos on the specific Reconyx and Bushnell models:**

[Reconyx](#)

[Bushnell](#)

# How to set up your camera trap



While participating in the eMammal 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?

- Leave your camera out for a **3 week** period each time you set it up
- A little longer than 3 weeks is better than a little shorter

## Where?

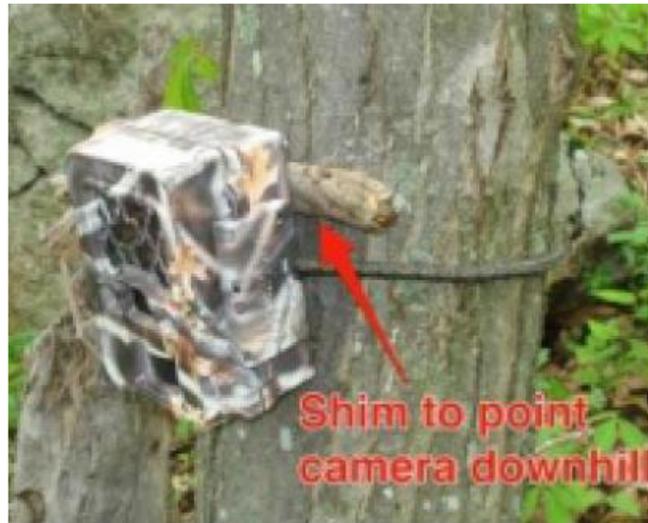
You may have several locations where you would like to set your camera trap. After being officially invited to the eMammal Project, you will be asked to fill out a form with the specific latitude/longitude locations of each place you plan to set your camera, these places are called “Deployments” and each of your Deployments will be assigned a unique ID by the eMammal team. You will receive those unique Deployment IDs by email

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
2. Avoid high traffic areas like roads or other high human/vehicle use areas, including the high traffic areas of your yard
3. Cameras should be pointing parallel with the ground, use sticks to "shim" behind the camera to either point it up or down with the slope



After setting your camera, remember to do the following:

1. Verify the date/time on the camera are correct
2. Arm your camera
3. Record the Detection Distance
4. Fill out the rest of your datasheet (downloaded from the eMammal Website)

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

# How to use the eMammal Website



Once you have received your official invitation to participate in the project (contingent upon a passing quiz 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
2. Deployment information
3. More instructional resources
4. Datasheets

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

# How to tag and upload your photos



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 received your official invitation to participate in the project, and 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**

You will use the software in 3 steps:

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

## **Load Pictures**

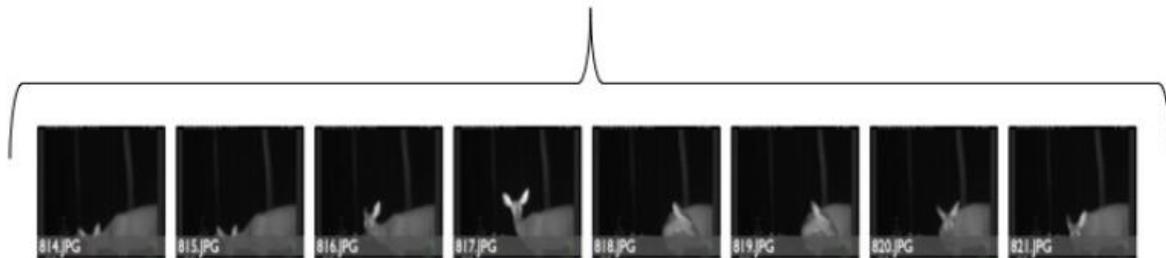
To load your photos into the Desktop Application, you will need an SD or CompactFlash memory card reader, depending on the camera model you are using, that can plug into the USB on your computer. These can be purchased for a small cost from Amazon or similar retailers.

## ID Animals in Photo Sequences

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 can be 10 photos in a sequence or there can be 50 if a deer stands in front of the camera trying to figure out what it is (see the picture below).

Multiple photos within a minute = 1 sequence



8 photos = 1 wildlife detection because all photos are within a minute of each other

This sequence would be tagged as White-tailed Deer **Count=1** because it is obviously the same deer in all photos. If another deer walked in it would **Count=2**

## 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).

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

**Application Troubleshooting:**

Contact your volunteer coordinator if you have problems using the Desktop Application. We recommend you always make a copy of your pictures on your computer just in case you run into problems uploading and need to start over.

Common Desktop Application problems are (available shortly on the eMammal Website):

<b>Common Problems Solution</b>	
The "Copying..." phase never completes	There is a corrupted file in your picture folder. To find it, look for the file of size 0KB and delete it. Reopen the Application and try loading the photos again.
The upload is proceeding too slowly or not at all	Your internet speed is not sufficient. If using WIFI, try to hard-wire into your router.
You have multiple folders of pictures for one deployment	Contact your volunteer coordinator. DO NOT try to upload multiple folders to one deployment. DO NOT try to combine multiple folders together yourself.
The pictures your were working on tagging in the Application have disappeared	Contact your volunteer coordinator for assistance
The wrong photos were accidently uploaded to the wrong deployment	Contact your volunteer coordinator for assistance