

# Game Camera Data Entry

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Mammalogy 2019

# Data Entry

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- Data will be entered in two places: eMammal and Excel
- I recommend doing this all at the same time, but you don't have to
- There is a guide on how to use eMammal on Canvas; it's called "eMammal Webinar" under the Spring Creek data folder (starts at 6:00 and goes through 23:00)

# eMammal

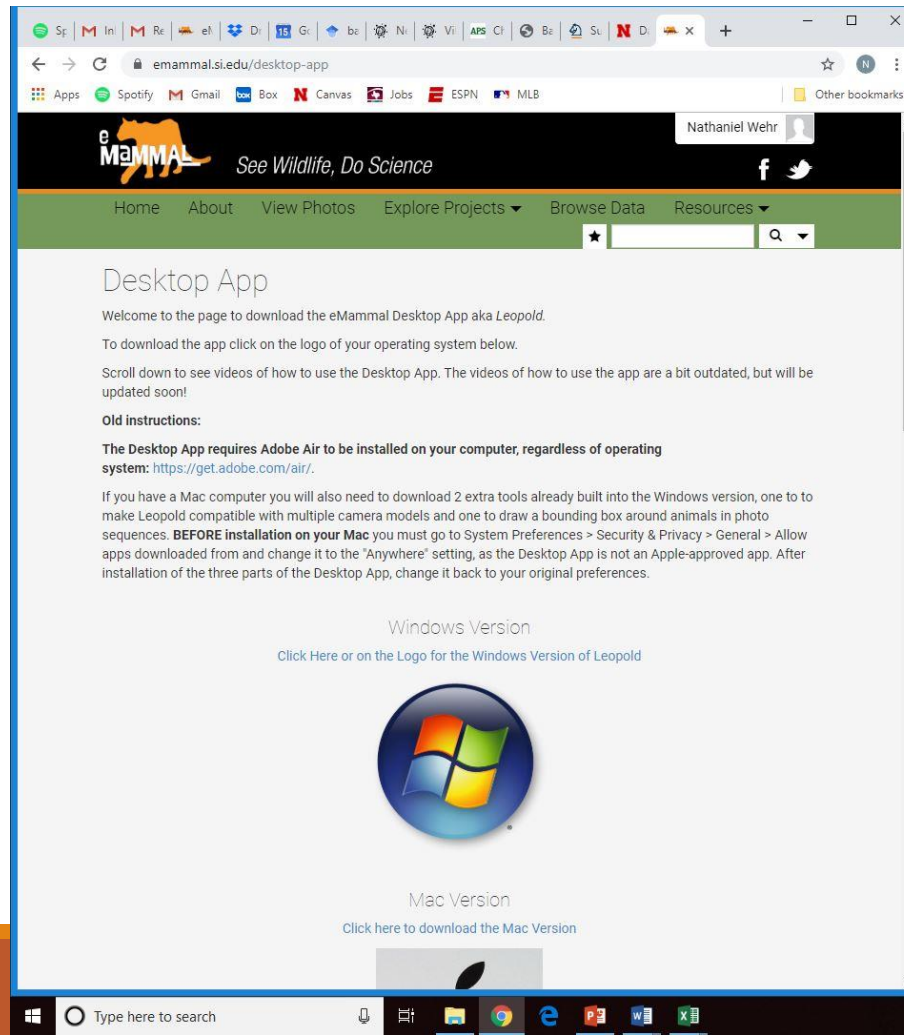
## Step 1 – Download the eMammal desktop app

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- Go to < [emammal.si.edu](http://emammal.si.edu) > and log in
- Username: nwehr
- Password: Mam476!
- Click the resources tab and then desktop app
- Click on either the Windows logo or Mac Logo to download the version for your computer

# eMammal

## Step 1 – Download the eMammal desktop app



The screenshot shows a web browser window displaying the eMammal website. The browser's address bar shows the URL `emammal.si.edu/desktop-app`. The website header features the eMammal logo (an orange silhouette of a mammal) and the tagline "See Wildlife, Do Science". The navigation menu includes "Home", "About", "View Photos", "Explore Projects", "Browse Data", and "Resources".

### Desktop App


Welcome to the page to download the eMammal Desktop App aka *Leopold*.  
To download the app click on the logo of your operating system below.  
Scroll down to see videos of how to use the Desktop App. The videos of how to use the app are a bit outdated, but will be updated soon!

**Old instructions:**

**The Desktop App requires Adobe Air to be installed on your computer, regardless of operating system:** <https://get.adobe.com/air/>.

If you have a Mac computer you will also need to download 2 extra tools already built into the Windows version, one to make Leopold compatible with multiple camera models and one to draw a bounding box around animals in photo sequences. **BEFORE installation on your Mac** you must go to System Preferences > Security & Privacy > General > Allow apps downloaded from and change it to the "Anywhere" setting, as the Desktop App is not an Apple-approved app. After installation of the three parts of the Desktop App, change it back to your original preferences.

**Windows Version**  
Click Here or on the Logo for the Windows Version of Leopold



**Mac Version**  
Click here to download the Mac Version

The screenshot also shows the Windows taskbar at the bottom with the search bar and several application icons.

# eMammal

## Step 2 – Upload photos to eMammal

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- Open the eMammal desktop app
- Sign in using the same username and password
- Press load new photos
- Project = “p270 – Snapshot USA – 2019”
- Subproject = “sp1621 – NE\_Grassland\_Lincoln”
- Deployment = “NE\_Grassland\_Lincoln\_#” (\*Your # is the number of the game camera, so SC7 = #7)
- Choose Folder: choose the folder I give you; open the folder (it should look empty), then press select folder)
- It should say Found ### images beside load photos, that means it worked

# eMammal

## Step 2 – Upload photos to eMammal

e.m Si Emammal Desktop



Load Deployment Photos

Select Project: p270 - Snapshot USA - 2019

Select Subproject: sp1621 - NE\_Grassland\_Lincoln

Select Deployment: d60549 - NE\_Grassland\_Lincoln\_I

**Browse to the SD card to load images**

Low Resource Mode (Check this if you have a slow performing computer and want to limit resources used by the application.)

Choose Folder: j:\sinatew\Desktop\Spring\_Creek\_Photos\SC1

Load Photos Found 279 Images

**eMammal**

Username **ONLINE MODE**

rwelvr

Password

\*\*\*\*\*

[forget your password?](#)  stay signed in\*

Authentication Successful Sign In

\* Stay signed in MUST be checked to use offline mode

Load New Photos Continue Previous Session

Load All Metadata For Offline Mode (last run: Thu Sep 26 2019)

# eMammal

## Step 3 – Enter metadata

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- The metadata can be found under the data analysis folder on Canvas
- All the info is in the first 5 columns of the excel file

# eMammal

## Step 4 – Identify Species in Images

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- Pictures within 1 minute of each other are considered a single sequence
- Look for movement within a sequence to identify species
- Record all species (including birds, reptiles, etc.) in a picture and how many of each species
- If you can tell the sex (like a buck with antlers) you can specify sex
- On the right side of the desktop app, there is an Add Species tab
  - The codes for most species are just their common names
  - “human non staff” is the code for humans besides us
  - “camera trapper” is one of us (mostly me)
  - “unknown animal” is if you can’t identify the species
  - “vehicle” if you get a tractor/car/bicycle/etc.
  - “misfire” if a sequence has no animals in it



# eMammal

## Step 4 – Identify Species in Images

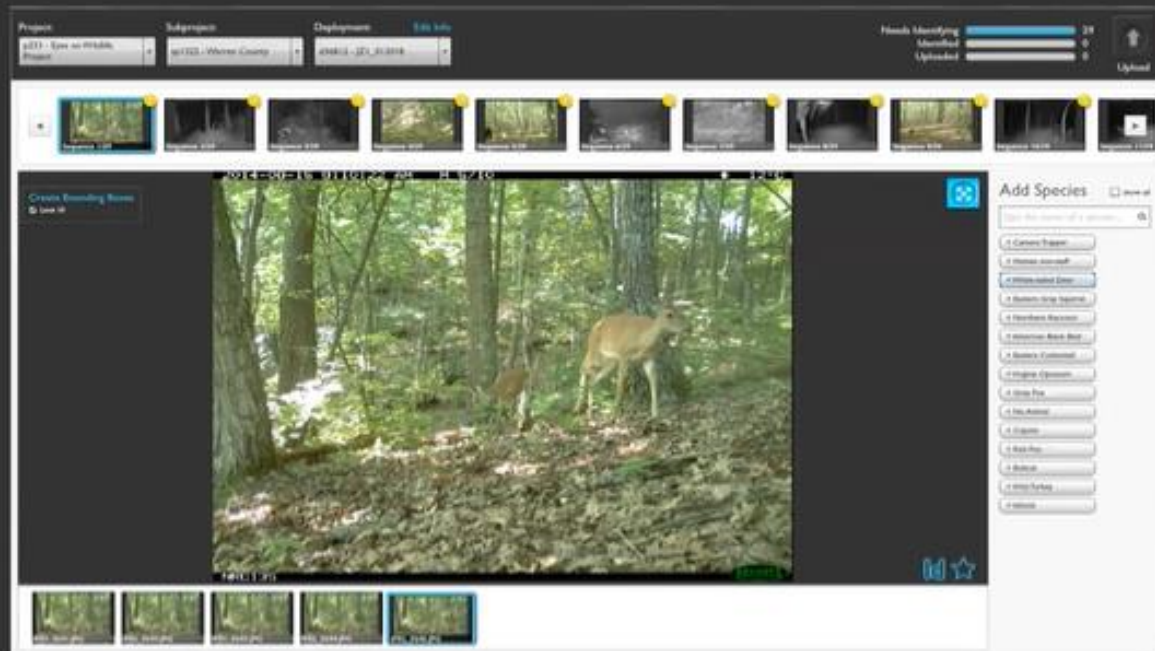
The screenshot displays the eMammal Desktop application interface. At the top, there are dropdown menus for Project (p270 - Snapshot USA - 2019), Subproject (sp1431 - VA\_Forest\_SCBI), and Deployment (d5948 - SnapshotUSA\_Test\_Deplo...). On the right, there are progress bars for Needs Identifying (35), Identified (20), and Uploaded (0), along with an Upload button. Below the menu bar is a sequence of 20 image thumbnails labeled Sequence 8/15 through Sequence 20/15. The main window shows a video player with a forest scene. The video title is "2018-09-06 5:13:15 PM H 8/10". The video player has a "Create Bounding Boxes" button and a "Less 10" link. The video content shows a forest scene with a deer in the foreground. The video player has a "PC800 PROFESSIONAL" watermark and a "HD" icon. On the right side, there is a "Selected Species" panel with a search bar and a list of species: White-tailed Deer, Adult Male, Adult Female, Juvenile, and Unknown. Below this is an "Add Species" panel with a search bar and a list of species: White-tailed Prairie, White-tailed Ptarmigan, White-tailed Jackrabbit, and White-tailed Deer. The bottom of the screen shows a video player control bar with a play button, a progress bar (30:27 / 54:59), a volume icon, and a settings icon.

# eMammal

## Step 4 – Identify Species in Images

### SOME KEYBOARD SHORTCUTS TO REMEMBER

- LEFT or RIGHT ARROWS: moves between images within your currently selected sequence
- SHIFT + LEFT/RIGHT ARROWS: moves between sequences
- UP or DOWN ARROWS: select species from list
- ENTER: identify sequence with selected species
- A-Z: edit species filter text
- CONTROL (COMMAND) + SPACE: clears the filter text



# eMammal

## Step 5 – Upload

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- Once all your sequences are done and you've identified the species, you are done. You just click upload
- If you only get through half of your sequences and you need a break, you can click upload and come back later
- It won't upload the same sequence twice
- I'll be able to log on after you're done and see if you've done all your sequences or not

# Excel

## Step 1 – Fill out on Excel

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- You need to add the data to an Excel file for our class to use
- The excel file is in the Spring Creek Data folder and is titled “Spring Creek Data”
- When you open it, you need to enter the data for each sequence into the excel sheet

# Excel

## Step 1 – Fill out on Excel

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- **IMPORTANT:**
  - Delete the sample info that I put in the excel sheet before you enter yours
  - If there's more than one individual of the same species you have to enter that data into excel twice (or you can just copy the row and paste it below the first row)
  - You don't count it as a new appearance of the species unless it occurs at least 30 mins after the first appearance
  - You have to use military time for the data to work in R
  - The date, time, and temperature are in the bar across the bottom of the picture

# Excel

## Step 1 – Fill out on Excel

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- Species
  - You have to type the species name in on Excel exactly as it is spelled on the list of species at Spring Creek Prairie (otherwise, R, will reject it)

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW Nate Wehr

Clipboard Paste Font Alignment Number Styles Cells Editing

Arial 10 General Conditional Formatting Insert Delete Format

Format as Table Cell Styles

F6

	A	B	C	D	E	F	G	H	I	J	K
1	Camera	Date	Time	Temp	Species						
2	SC1	9-25	2:50:00	78	Human						
3	SC1	9-26	6:43:00	48	Raccoon						
4	SC1	9-27	9:56:00	69	Human						
5	SC1	9-27	11:29:00	69	Human						
6	SC1	9-27	13:41:00	73	Human						
7	SC1	9-27	13:41:00	73	Human						
8	SC1	9-27	15:08:00	77	Fox Squirrel						
9	SC1	9-27	16:16:00	75	Human						
10	SC1	9-27	19:36:00	68	Human						
11	SC1	9-27	19:54:00	68	Human						
12	SC1	9-28	4:23:00	55	Raccoon						
13	SC1	9-28	7:35:00	51	Fox Squirrel						
14	SC1	9-28	11:18:00	57	Human						
15	SC1	9-28	13:33:00	66	Human						
16	SC1	9-28	13:37:00	66	Human						
17	SC1	9-28	13:37:00	66	Human						
18	SC1	9-29	12:00:00	71	Human						
19	SC1	9-29	14:11:00	71	Human						
20	SC1	9-29	14:19:00	71	Human						
21	SC1	9-29	14:19:00	71	Human						
22	SC1	9-29	16:05:00	73	Human						
23	SC1	9-30	5:43:00	77	Raccoon						
24	SC1	9-30	11:57:00	82	Human						
25	SC1	10-2	9:09:00	51	Fox Squirrel						
26	SC1	10-2	11:00:00	51	Fox Squirrel						
27	SC1	10-2	17:51:00	53	Human						
28	SC1	10-2	17:51:00	53	Human						
29	SC1	10-3	14:25:00	57	Fox Squirrel						
30	SC1	10-4	7:03:00	44	Eastern Cottontail Rabbit						
31	SC1	10-4	14:58:00	55	Human						
32	SC1	10-4	15:36:00	53	Human						
33	SC1	10-4	15:36:00	53	Human						
34	SC1	10-5	12:01:00	62	Whitetail Deer						
35	SC1	10-5	15:13:00	77	Human						
36	SC1	10-5	15:14:00	77	Human						
37	SC1	10-5	15:37:00	75	Human						
38	SC1	10-5	16:48:00	69	Human						
39	SC1	10-5	16:48:00	69	Human						
40	SC1	10-6	2:26:00	42	Raccoon						
41	SC1	10-6	3:39:00	42	Raccoon						
42	SC1	10-6	8:58:00	46	Human						

# Excel

## Step 2 – Upload to Canvas

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- To submit your Excel file for your homework, you can do so on Canvas; I created an assignment called data entry where you can upload your file



# Everyone

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- Both Ed Hubbs (director of Spring Creek Prairie) and Roland Kays (in charge of eMammal) have asked us to set aside some cool pictures so they can show people
- So, I want everyone to pick their favorite picture from their set of pictures
- You can then upload it to the discussion I created on Canvas so that you can all see the best photos
  - Click “Reply” under the discussion at the top, write your camera and species, and attach the picture file (I posted a few examples already)

# Cool Pictures from Spring Creek



# Cool Pictures from Spring Creek



# Cool Pictures from Spring Creek

