

Camera Trap Image Processing Program for Targets Crossing Linear Features (i.e. fence)

Semiautomated program operation

This document explains the step by step method for how we use the program used in our study.

1 Part 1- “Start Find Animal Program”

This step is used to manually assign regions that will be used for setting the automatic instruction for the next steps.

1. Open “Start Find Animal Program” (Figure 1)
Caution: clicking the exit button on any of the photos or the control panel will close all the windows and end the program.
2. Select desired pictures and press “open”.
3. Half the resolution of the images twice, then make the background image. On the background image the regions can be selected by clicking the image in horizontal lines (top and bottom). The command prompt will indicate the values of the lines that were selected (Figure 2).
4. Return to the main folder for the program, right click on “Template” and click “edit”. Find the below lines:

```
<MouseClicked><X>1</X><Y>0</Y></MouseClicked>
```

```
<MouseClicked><X>1</X><Y>0</Y></MouseClicked>
```

```
<MouseClicked><X>1</X><Y>0</Y></MouseClicked>
```

```
<MouseClicked><X>1</X><Y>0</Y></MouseClicked>
```

Enter in the X and Y locations from the program, from the command prompt where the 1s and 0s are. Other commands can be added or deleted to adjust the rule list as desired.
Save the file, using the name of the set that is being run followed

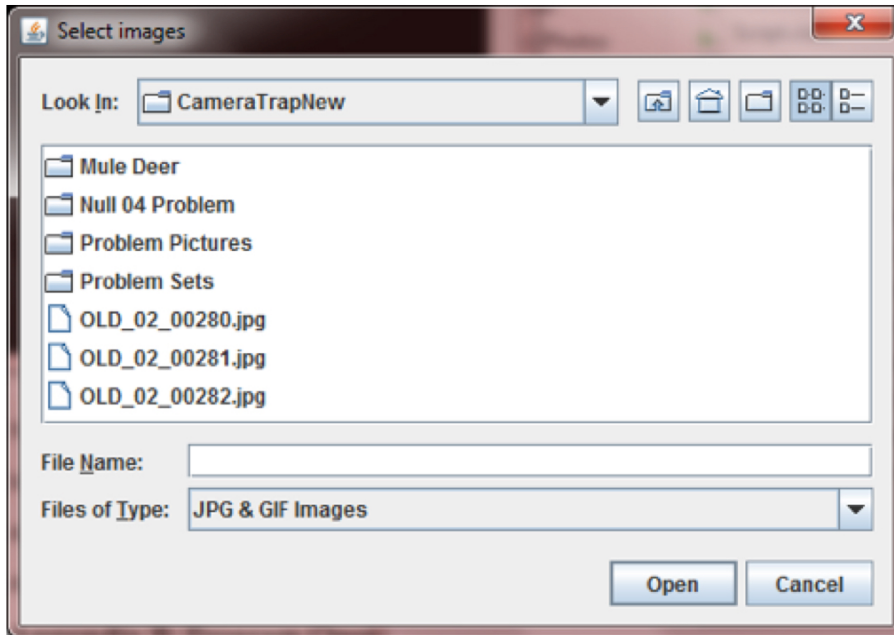


Figure 1: “Start Find Animal Program” start screen.

by .xml i.e. New01_2014_01.xml. This list will be used by the next program to automatically process the images.

Note: Each camera will need its own instruction set. Depending on the movement of the camera between the files for each camera, individual instructions may be needed for each file.

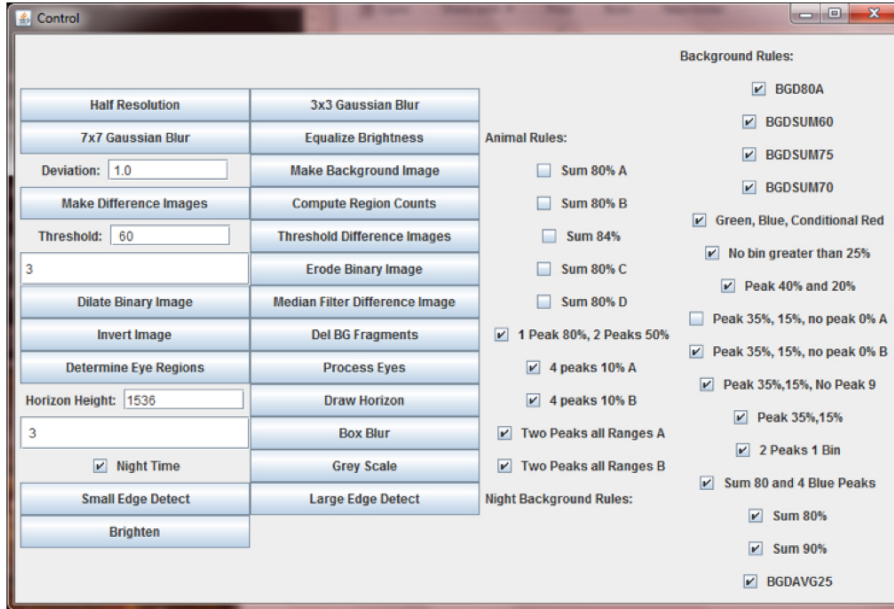


Figure 2: Control screen.

2 Part 2- “Animal Image Processor”

This step sorts all the photos by time, runs through the program and assigns them a value and then exports the data into individual CSV. Files are then combined into a larger CSV file, the smaller files are then deleted.

1. Open “Animal Image Processor” (Figure 3)
2. Click “Add Image Files”. Select all of the images to be run.
3. Click “Set Instruction File”. Select the instruction file that was created in Part 1.
4. Set the Time Diff as 5 seconds. This indicates the maximum amount of time that can be between photos before they are considered to be from different sets. Max Pics/Set can be left at 50.

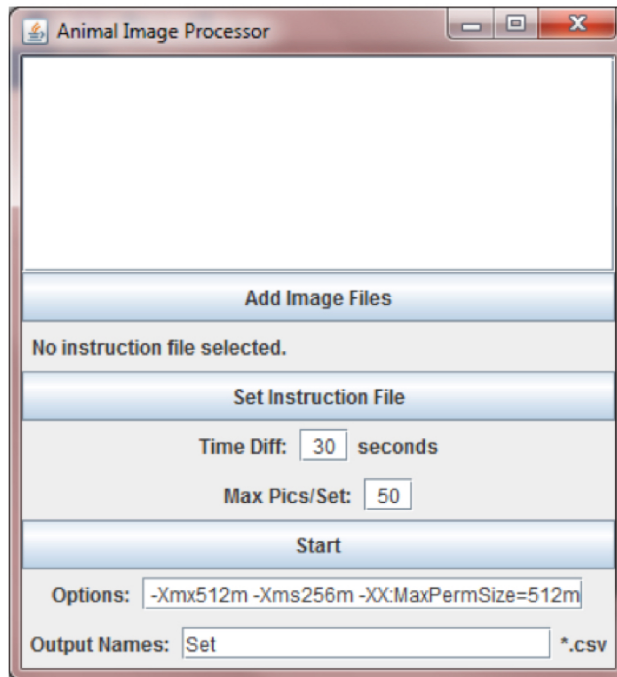


Figure 3: “Animal Image Processor” start screen.

5. Change the Output Name to the desired name for the set. Using the name of the File plus a extra underscore, ie. `New03_2014_01_` is recommended.
6. Press Start. For detail instruction of how the program works please see Methods section.

3 Part 3- “Picture Mover”

For this part, folders are created that the images are sorted into based on the assigned ranking from the previous part.

1. Create a folder labeled after the file name. Create sub folders for the five directories. Directory 1 and 3 can be joined together, as can 4 and 5.
2. Open “Picture Mover” (Figure 4)

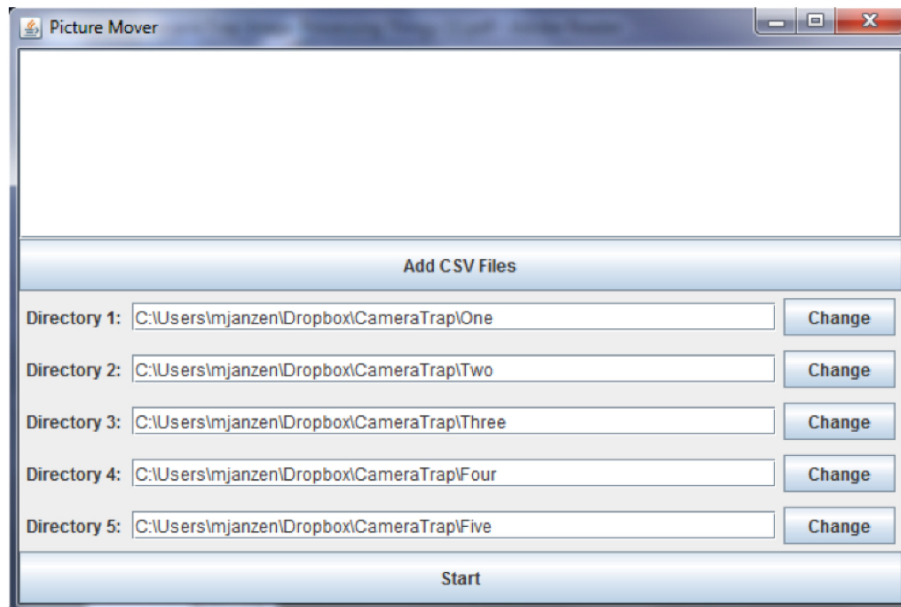


Figure 4: “Picture Mover” start screen.

3. Click “Add CSV Files”. Select the final CSV file that was created in the last part.
4. Click “Change” to select the subfolders created in step 1.

5. Select “Start”. The pictures will be moved into their selected files. The photos are then ready to be moved if needed to a computer that has the Reconyx software and analyzed.