## Instruction for EventFinder, May 2018 version

EventFinder is a set of programs to process camera trap images. It requires at least three input images per sequence (requires taking a minimum of three images per event).

EventFinder is written in Java, but uses batch files that work best on Windows. The files provided run multiple programs including a fence crossing version and a best image version. The instructions described here are for the best image version. This version will process input camera trap images, divide the images into sets each containing one event, and select the best image from each set for human processing.

It is best if the images are stored in a directory labeled input. It is find to have this directory be a sub-directory of other directories. For example, C:\CameraTrapImages\Camera1\input

To use the program start PictureProcessorBest. This can be done by double clicking the bat file (PictureProcessorBest.bat), or starting the command prompt, navigating to the directory containing the program, and typing "PictureProcessorBest". The advanatage to starting from a command prompt is errors will be printed to the console if errors occur. If an error occurs the current set can be skipped by clicking the "x" to close the program and the batch file will continue processing the next set of images.

🕌 Animal Image Processor 📃 🗖	×		
K01_2018_01_13_16_57_00_1.JPG			
K01_2018_01_13_16_57_01_1.JPG	_		
K01_2018_01_13_16_57_02_1.JPG			
K01_2018_01_13_16_57_03_1.JPG			
K01_2018_01_13_16_57_05_1.JPG			
K01_2018_01_13_16_57_06_1.JPG			
K01_2018_01_13_16_57_08_1.JPG	•		
Add Image Files			
No instruction file selected.			
Set Instruction File			
Time Diff: 30 seconds			
Max Pics/Set: 50			
Start			
Options: -Xmx512m -Xms256m -XX:MaxPermSize=512m			
Output Names: Set *.csv			
Thanks to The Albert Conservation Association, www.ab-conservation.com,			
Made at King's University Edmonton, Alberta			

Starting PictureProcessorBest should bring up a window similar to the one on the left. Add image files by clicking the "Add Image Files" button and selecting the files to process. Multiple files can be loaded at once. If you want to process all the files in a directory you can press "CTRL-a" to select all rather than choosing one at a time. Next select an instruction file. There is a sample instruction file labeled "Instructions\_FindBest\_May2018.xml" that should work reasonably well in general. Optionally change the output name from the default "Set" to be more descriptive of your images you are processing.

Optionally change the time difference and max pics/set. The time difference specifies the number of second between unique events. The max pics/set will force a new event if a number of pictures are exceeded even if the time difference between images is not met.

Lastly click start. There should be text displayed in the console as the program processes input images, extracts the time and date from the metadata, sorts the images, divides into sets, and starts processing each set.

The program will bring up multiple windows as it processes with clickable buttons, but the process is automated and can be left to itself until finished. This may take from minutes for a small number of images to days for larger number of images.

When the program completes a .csv file will be created containing the results of the image processing. This can be loaded into Excel or similar program for examination, but is intended for the next program.

To move your images for processing into appropriate directories use PictureMoverBestDated. This program uses the csv file created in the previous set and the dates of the images to know which images belong in each set.

Launch PictureMoverBestDated by typing "java PictureMoverBestDated" or double clicking the PictureMoverBestDated.bat. You should see a similar window as the one on the left (but probably as a Windows window).

The "Add CSV Files" allows you to add CSV files that are created in the

	Picture Mover- Revised April, 2018	
Add CSV Files		
Input Directory :		Change
		Church
Processed Directory :		Change
Unprocessed Directory :		Change
Retained Directory :		Change
	Start	

previous step provided that all CSV files come from the same directory. That is, all files recorded in the CSV should come from the same input directory of images.

If you use a path ending in the directory "input" then it should fill in the information below automatically and you can simply click start. The "Input Directory" is the directory containing the input images. The "Processed Directory" is a directory to which that source images are moved after processing (allowing you to put knew images in "input"). The "Retained Directory" contains copies of the input images for human examination. The "Unprocessed Directory" contains any remaining files in the "Input Directory" that have not been processed. For example, if a set of three images contains a corrupted image file then only two may remain. In this case they will not be processed and will be moved to "Unprocessed Directory" for the human operator to decide what to do with.

Errors that occur while moving files causes the program to stop with an error message. For example, the program will try to move all remaining files to the unprocessed directory. On Windows, a file named "Thumbs.db" may be moved. If this file already exists it will display an error rather than overwrite an existing file. This usually occurs after the other images have already been moved so it should not cause problems for processing your camera trap images.