Protocol camera traps

1. Choosing the location

- The location of the camera trap should be at a bottleneck for muskrat or coypu passage, such as a pipe or small bridge
- Local trappers should be consulted as to where muskrat or coypu passage is most likely to occur
- It is best to choose the more shaded side of the bottleneck (try to let the camera face north), this will diminish the glare on the water surface and avoid unintentional triggering of the camera
- Take into account the wind when possible. More sheltered, narrower, deeper water surfaces will have less ripples and avoid unintentional triggering of the camera
- Be careful that there are not too many plants swaying in front of the camera
- If possible pick a site with little passage of the general public, this will reduce the risk of the material being damaged and will reduce the number of pictures taken as a result of people's reflections in the water

2. Setting the trap

- The recommended camera is the Reconyx HF2X
    - This camera detected 60-100% more animals than Reconyx HS2X or HC600
    - The Reconyx HF2X is cheaper than the HS2X and HP2X, while the HC600 is no longer for sale
- The camera should be equipped with an (at least) 32 GB SD card
- Recommend is to use high quality AA Lithium batteries
- Recommended is to read the manual before operating the cameras:

    https://www.wildlifemonitoringsolutions.nl/media/wysiwyg/manuals/Reconyx_HyperFire_2_manual.pdf

- Required settings for the camera are:

    In the first menu choose **CHANGE SETUP - press ok**

    Choose in each submenu the following options:

    Motion tab - press ok
    - Motion picture → **on**
    - Pictures Per Trigger → **# 10**
    - Picture Interval – **RapidFire™**
    - Motion Videos → **off**
    - Quiet Period – **no delay**
    - Sensitivity - **HIGH (**low, low/medium, medium, medium/high, (setting depends, if there is a lot of false triggering you can set it lower)
    - Motion schedule → **24 hour**

    Time lapse - press ok
    - Lapse Picture → **off**
    - Lapse Video → **off**

    Day/ Night - press ok
    - Take Pictures → **both day en night**
    - Take Videos → **both day en night**
    - Flash output → **hight**
    - Night mode → **optimized**

    User label → MICA: "cameranumber" vb: **MICA:254**

    Codeloc → security number you can remember

    Data bands - press ok
    - Time Format → **24 hours**
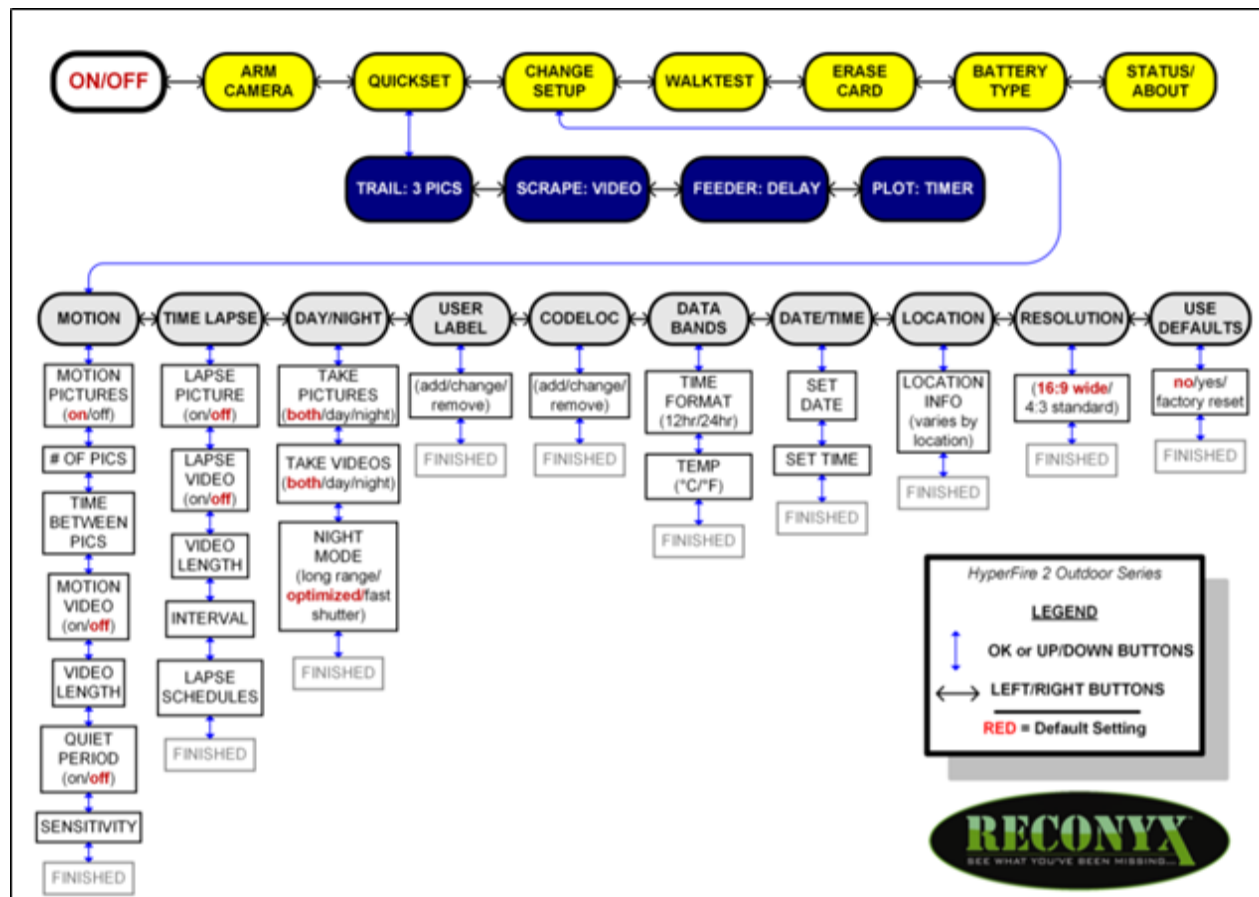   - Temperature scale → **Celsius**
    - Show logo → yes

    Date/ time → set the date and time

    Location → others

    Resolution → 4:3

- The camera should be placed on a pole in the middle of the stream or the middle of the bridge itself no higher than 1.5m from the water surface
- When attaching the camera directly to the bridge it's easiest to first attach a piece of wood and then attach the camera to this piece of wood
- The camera should be hung at an angle (15° - 45°) so that the images taken encapture the entire width of the stream, this can be achieved by placing a stick or a piece of wood between the upper part of the camera and the bridge/pole
- The camera can be secured by attaching the lock directly to a ring screwed into the bridge
- All cameras should have a sticker with the Life logo and the following message: "This camera is used for scientific research of passing wildlife. All images of persons are deleted. This camera is protected by a code and therefore not accessible to third parties. For more information please contact: [email address of institution]."
- Notifying the surrounding landowners/-users and giving them your contact details is advised since they will be around more often to keep an eye on your camera

3. <u>Checking the trap</u>

Once a month:
- Turn the camera off
- Remove SD card and read out SD card on your computer. Before removing the SD card, **always** turn the camera off !
- Replace the empty SD card and put the camera back on
- Check the battery tension on the camera, if lower than 1 marked block (marked low battery) you should replace the batteries with new ones: remove all the batteries and check them with a battery tester, only replace the empty batteries
- After batteries are replaced check the date and time of the camera to ensure this is still correct
- Clean the lens of the camera
- Remove vegetation that can trigger the camera
- Remove small animals trapped in the encasing (spiders, beetles, etc.)
- Make sure the camera is still securely attached and undamaged
- Make a shelter above the camera if it's raining or snowing.
- When you've gone through all the steps described above choose "arm camera", this should result in a green blinking led for 10 seconds. Close the camera, secure the camera in the housing and close with the lock

4. Use of Agouti for photographic material

What is Agouti?

Camera traps provide an easy and non-invasive way to study wildlife. However, the processing and storage of the thousands of images that a typical study generates quickly becomes difficult. Also, project management can get challenging, especially if many cameras are involved. Agouti helps users to solve these challenges. It is a complete solution for organizations that use camera traps to survey wildlife. It lets camera trappers organize collaborative surveys, quickly and easily process images, obtain standardized summaries of the results, safely archive images and data, and ultimately summarize and share data.

Workflow

Agouti follows metadata standards, making comparison across projects easy. Agouti is a collection of projects initiated by organizations or individuals. Project participants upload the entire contents of memory cards from camera traps and enter the location and other metadata. Agouti imports these images, pulls dates, times and other data from the images themselves, and groups images in sequences that represent the same event. Analysts inspect each sequence and annotate them with one or more observations, using an easy interface.

The data are summarized in graphs and tables, and can be exported for analysis in various packages. Images and data are safely archived and can ultimately be transferred to a permanent repository in a museum environment. Users can choose to make data available to scientists for research.

Import	Annotate	Analyze	Export
Upload images and videos using only your browser	Tag images with observations with convenient tools	Browse data with built-in tools and presentations	Generate standardized data files for analysis or sharing

Url → Agouti (different languages possible: German, English, Dutch, French, ...)

First you need to register for an Agouti account with your email:
https://www.agouti.eu/#/user/register
After a confirmation mail you can sign in and start using Agouti.
Click on this link:
https://www.agouti.eu/#/project/86cabc14-d475-4439-98a7-e7b590bed60e/request-access
and send an e-mail to axel.neukermans@inbo.be to get access to the MICA project.
These steps and further explanations on how to work on the project will be given on the info day