

Environmental Sensor Training Project

Background

Remote cameras and sound recorders are examples of environmental sensors that can be used to remotely monitor wildlife.

These sensors are user-friendly tools for collecting long-term information on multiple species at a time. However, training is required for sensors to be used consistently for monitoring our environment and to allow comparisons among different locations.

To meet a growing community interest in environmental sensors, a comprehensive and easily accessible online training program is necessary. This project addresses this need: training materials are currently in development to provide a combination of in-person and remote learning, depending on resources, availability of instructors and trainee locations.

Audience

The intended audience of the training materials are Indigenous communities, government employees, and other interested parties who will lead and deliver environmental sensor monitoring programs.

Advisory Committee

An Advisory Committee oversees the development of the training program. Membership currently includes:

- Alberta Biodiversity Monitoring Institute
- Canadian Wildlife Service
- Dehcho First Nations
- Fort Smith Métis Council
- Government of the Northwest Territories
- Kahsho Got'ine
- Kát'odeeche First Nation
- North Slave Métis Alliance
- Sahtu Renewable Resource Board
- Sambaa K'e First Nation
- Tłı̨chǫ Government
- University of British Columbia
- Wek'èezhìi Renewable Resources Board
- WildCAM

Ways to Be Involved

Indigenous Partners are invited to participate in this program, and may choose to take part in some or all of the following:

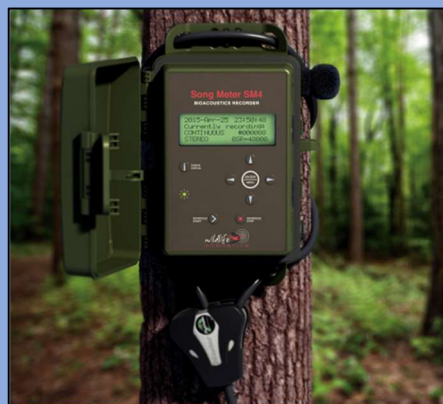
Remote Cameras



Source Hal Korber, Pennsylvania Game Commission

- Takes photos when movement is detected
- Can monitor wildlife such as caribou, bears, hare and moose
- Cameras are attached to trees or installed on poles

Sound Recorders



Source Wildlife Acoustics
<https://www.wildlifeacoustics.com/products/song-meter-sm4>

- Are called Autonomous Recording Units (ARU)
- Are set to record at certain times
- Can monitor anything that creates sound, such as birds, frogs and bats

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Training Materials

This project aims to deliver a publicly available certified online curriculum that guides participants in using environmental sensors, covering content such as:

- Field set-up of cameras and sound recorders;
- retrieval of units;
- troubleshooting/repair; and
- data management, processing and analysis.

Information will be shared using different approaches including:

- 1) clear, written explanations and visuals;
- 2) instructional videos and presentations;
- 3) example exercises; and
- 4) supplemental resources, e.g., protocols and datasheets

This project will address multiple scenarios that could be encountered in environmental sensor programs, including operating in different types of habitats, and differences in protocols that may be needed based on program objectives.

Sound Recordings

ARUs record sound from which species can be identified based on their unique song patterns.

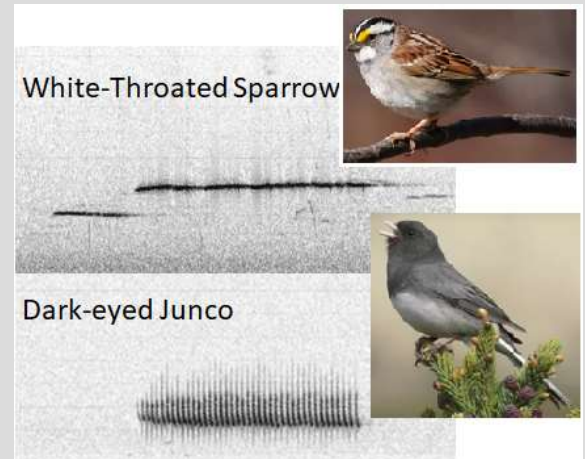
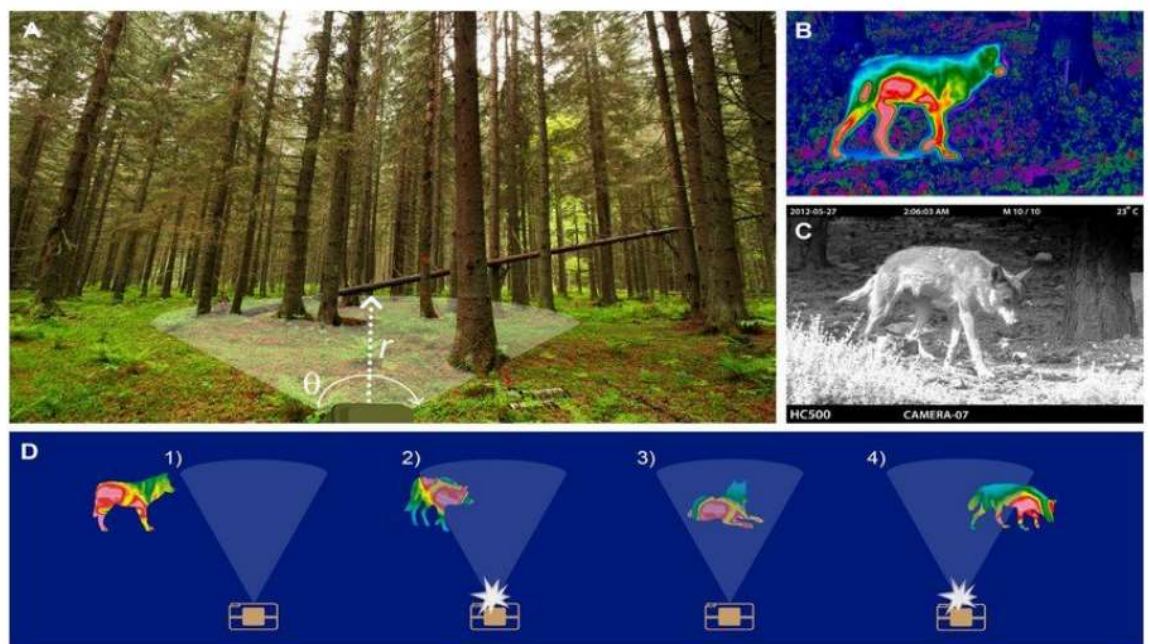


Photo credits <https://www.adirondackalmanack.com/2014/10/white-throated-sparrow-migration.html> and <https://feederwatch.org/birdspotter-2014/dark-eyed-junco-8/>

Remote Cameras

Cameras capture photos of wildlife as they move into view. Images are reviewed for species ID.

Image source WWF camera trap guidelines



Project timelines

Year 1: Develop curriculum outline and explore delivery options (complete)

Year 2: Develop standard content template, develop 50% of content, pilot a video, investigate online implementation (complete)

Year 3: Develop remaining content, engagement, complete delivery set-up (ongoing)

Year 4: Pilot programs with stakeholders, create additional how-to videos, engagement and gather feedback. Adjust program as needed

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