Remote Camera Coordination

Webinar June 12 2020

Slides prepared by A. Hubbs
Purpose of this Webinar

- **Update** you on recent camera coordination efforts
- Introduce you to **new participants** in these efforts (e.g. B.C. wildCam)
- Learn more about how we can **meet the needs** of Community of Practice
- Introduce **new research** that showcases collaboration
Webinar Agenda

• What have we Done?
• Where do we Want To Go?
• Collaborative Studies – benefits & learnings
How did We Get Here?

Photo: T. Whittaker
Growing Interest in Remote Cameras

Rovero et al. 2013
Reflected by Diversity of People on this Call

Provincial & Federal Governments
Researchers
ABMI, FRI
First Nations

- Wildlife
- Fisheries
- Recreation
- Traditional Knowledge

Alberta
B.C.
Ontario
U.S.
Alternatives to Traditional Methods
Information

Anthropogenic stressors

Human activity

Organisms

*Individual*
health & behavior
(e.g. condition, home range, diet)

Population
(e.g. abundance, occupancy, composition)

Community
composition & structure
(e.g. species richness, inter-specific interactions)

Natural drivers

Climate & Phenology
(e.g., green-up)
Key Questions

• Rates and Drivers of Change
• Hypotheses – ecological systems & processes
• Response to management actions

Steenweg et al. 2017
Some Common Challenges

- Large datasets (e.g. data storage capacity, image classification)
- Limited Resources (short-term, small scale studies)
- Lack of Knowledge among Practioners (design to analyses)
- Inconsistency in methodology & metadata collected across studies

See Scotson et al. 2017 – additional challenges & possible solutions
Strength in numbers

Better Methods
Reduced Costs
Bigger Questions
Stronger inferences
Remote Camera Workshop

Funding from

Workshop Objectives:

- To explore collaborative opportunities to use remote cameras to improve the monitoring and management of wildlife, habitat and human-interactions in Alberta
Emphasis on Collaboration
Workshop Agenda

• How Can Cameras Help Us?

• What are Challenges & Opportunities (short- and long-term)?

• Remote Camera Networks
50 participants
Researchers (Universities)
Agencies (ABMI, FRI, CMN)
Government (Wildlife)

Focus: Medium- to Large-sized Mammals
What We Heard

Needs – Challenges - Opportunities
REMOTE CAMERA STAGES

Objectives
(information needs)

STUDY DESIGN

DEPLOYMENT

PROCESSING

ANALYSIS

SCALING UP

Reporting
Highest Priorities

• Objectives
  • More projects human-use, relative abundance & density
  • Plus occupancy / habitat use/ distribution

• Study Design
  • Develop guidelines for each study objective (e.g. occupancy)

• Processing
  • Pool images for auto-tagging libraries for machine learning

• Deployment & Analysis
  • Cost-, Data- & knowledge sharing through Community of Practice

• Scaling Up
  • Standard protocols, metadata standards, Steering Committee
Since the Workshop...

- **Establish Community of Practice (COP)**
  - You! Plus others who may be interested
  - Keen on expanding beyond initial wildlife-focus
  - To join the COP, contact Patricia Tomchuk ptomchuk@ualberta.ca

- **Establish an Alberta Steering Committee**
Cole Burton
University of British Columbia

Stan Boutin
University of Alberta
Canadian Mountain Network

Jason Fisher
University of Victoria

Monica Kohler
ABMI- Co-Director, Application Centre

Erin Bayne
University of Alberta
Director - WildTrax
Jesse Whittington
Banff National Park - Wildlife Ecologist

Dan Farr (Co-Chair)
AEP - Director, Oilsands Monitoring

John Paczkowski
AEP - Park Ecologist

Tyler Muhly
B.C. Government - Modeling Specialist

Anne Hubbs (Co-Chair)
AEP - Wildlife Management (+ wildCam!)
Hire Alberta Remote Camera Coordinator

Thanks to...

Funding from the CMN and support from ABMI