Session 3:
Without good data our models have limited value

Koustubh Sharma & Justine Shanti Alexander
PAWS Process

Image sorting and Tagging → Individual Identification → DNA Amplification → SNP Analysis → Prey Analysis → Ungulate

Camera Trapping → Genetic Sampling

SCR Analysis → Snow Leopard Density & Maps → Design based Inference

Local Abundance → National Abundance → Regional Abundance → Global Abundance
How to do we maximize the value of our camera trap data?
Long battery life
Tolerant to extreme weather conditions
Durable casing
Teams are still using camera traps from 2008
Fast Shutter Speed! (<0.5 seconds if possible)
3-5 pictures per trigger!

No Delay between triggers!

High sensitivity

Video by SLCF Mongolia/SLT
Not directly towards the sun
Mindful of vegetation growth
Marking location- allows multiple angles.

Video by SLCF Mongolia/ SLT
No marking sites? - travel routes!
Easy to install but mindful of theft
Sharp images to identify individuals
Costs?
Camera trap manufacturers across five criteria – reliability, image quality, sensor quality, usability and value for money – and whether respondents overall would recommend the camera trap to others.
Field tested
Survey for snow leopard signs!
Set up

• No target species get missed
• Animals don’t walk too close or too far
• No obstacles such as grass, rocks
• Marking locations (multiple angles)
• Easy to install
• Meets SRC recommendations!

Camera traps

• Long battery life
• Tolerant to extreme weather conditions
• Durable casing
• Fast shutter speed (Rapid fire!)
• No Flash (use infra red)
• Balance Costs/Number CTs/Quality pics
PAWS GSLEP guidelines

1. Get suggested coordinate based on optimal design set up.

2. Drive, walk or ride to the closest point from the suggested coordinate and hike within 2-3km around the point of interest and look for locations with possible snow leopard scapes or urine markings. Typically overhanging rocks, saddles, canyons or vertical walls are considered to be good signposts for snow leopards.

3. Choose the location that seems most promising in terms of likelihood of tunneling snow leopards to a point where the camera focuses on relatively low human traffic, safe from potential avalanches, landslides, sudden rush of stream or other calamities, preferably with less vegetation that can obstruct or trigger unnecessary captures.

4. Find a rock to tie the camera on, at a height of about 40cm above ground level. Avoid aiming the camera in a way that it can be triggered by the lens and sensors get damaged by direct sun rays during the day. Tie the camera using bungee cords so it looks straight towards the possible marking site, scrape or track the animal is likely to take. Use walk-test mode to ensure camera covers area of interest.

5. Set up the camera on no sleep mode (camera stays on all day and night), no delay between triggers, 5 photos per trigger in rapid fire mode, high sensitivity mode that uses heat and motion sensor, and battery type that matches the batteries installed (typically, NiMH work best).

Additional notes:
Before leaving, ensure to walk in front of the camera to trigger it once. Always walk in front of the camera at each follow up visit to record if it has been working. Dismantle the additional installation rocks after removal of the camera to prevent misuse by poachers.
The bottleneck!!!

Individual ID of hundreds and hundreds of pictures!