Manul Working Group

Central-Kazakhstan Monitoring Network Update 2024–2025

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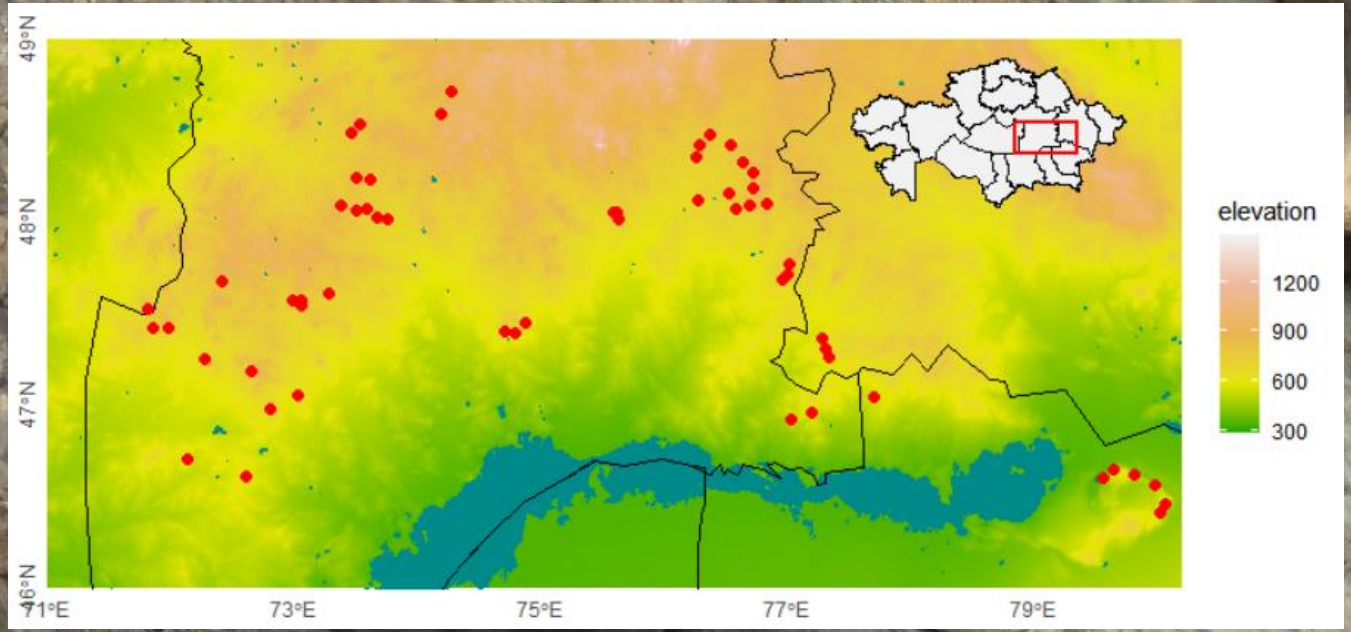
Following the 2024–2025 field season, we are pleased to share the first results of trail camera data processing

Survey effort

Survey effort and data processing:

- **57** camera locations
- **15,136** camera days
- **332,220** images/videos processed
- **25+** mammal species
- **16** volunteers involved in data classification



Map of the monitoring area in Central Kazakhstan to the north from the Balkhash Lake

Manul data

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Manul records:

- **160 manul detections**
- **152 manul independent records** (≥30 min apart)
- **28 (49.1%) cameras with manul detections**

Impact of “Adopt a Camera”

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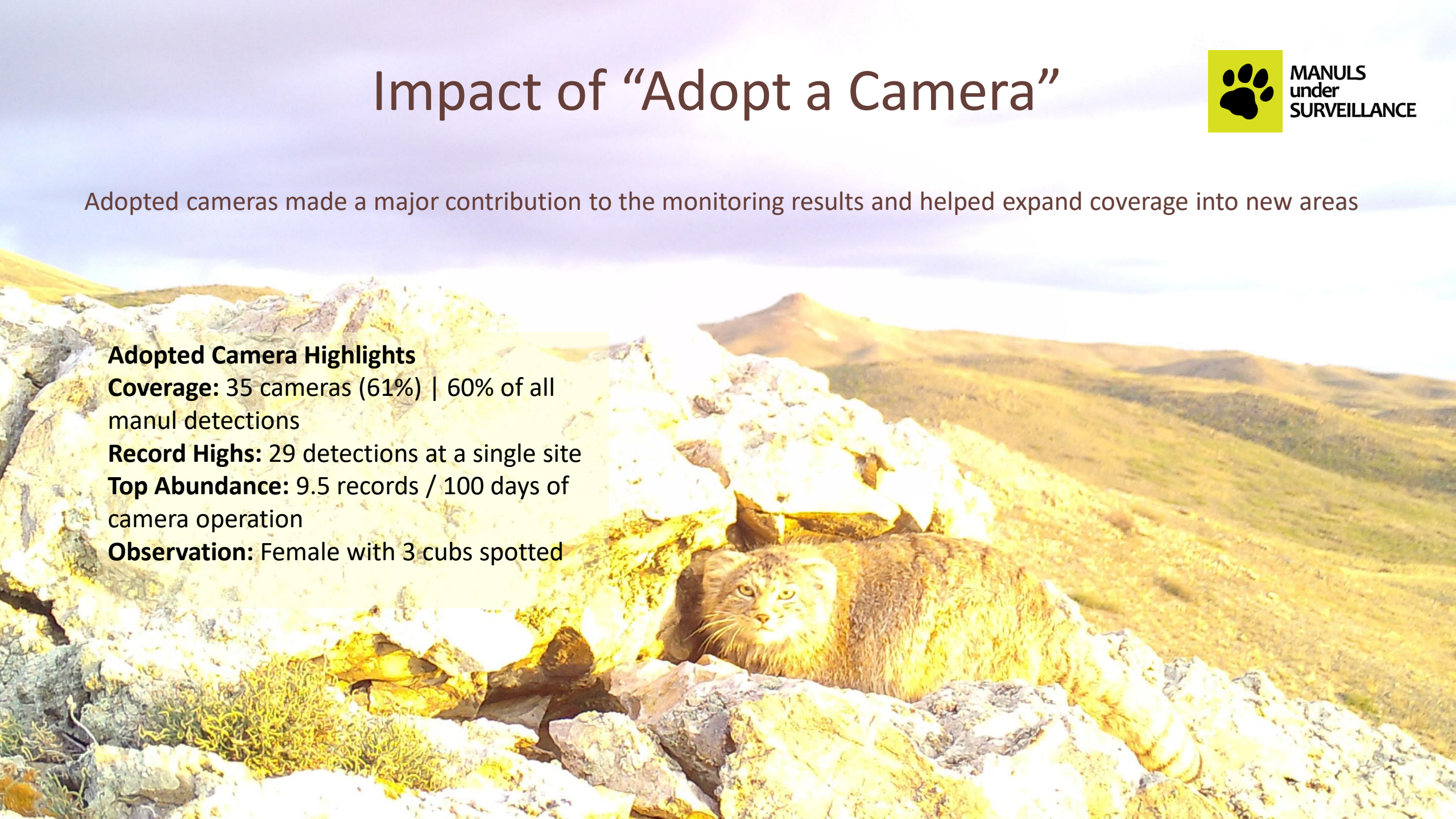
Adopted cameras made a major contribution to the monitoring results and helped expand coverage into new areas



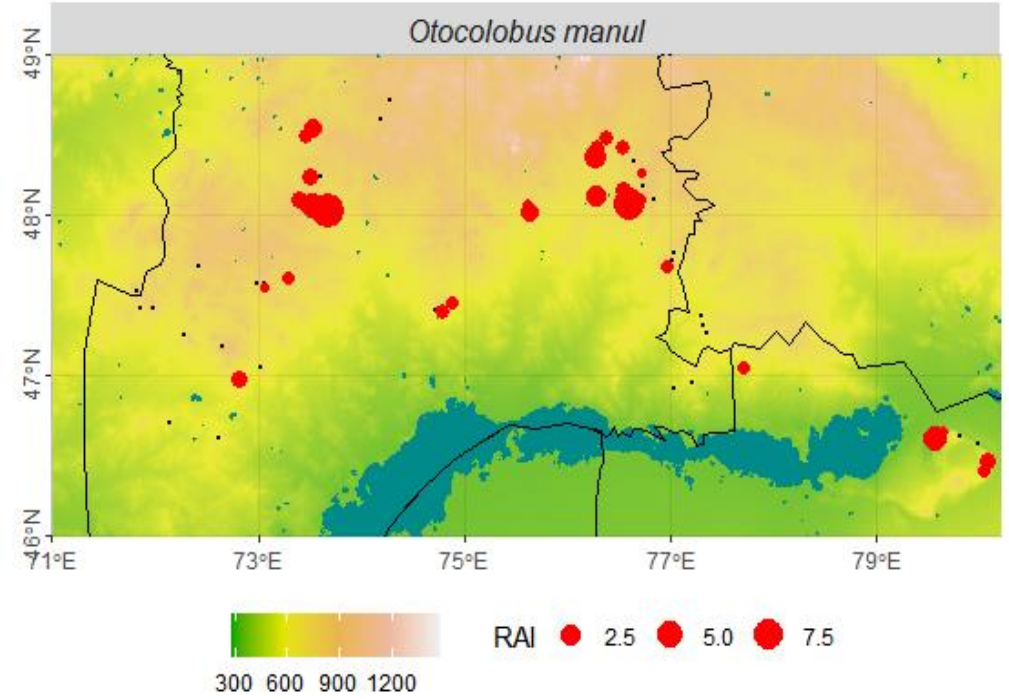
Adopted Camera Highlights
Coverage: 35 cameras (61%) | 60% of all manul detections
Record Highs: 29 detections at a single site
Top Abundance: 9.5 records / 100 days of camera operation
Observation: Female with 3 cubs spotted

What did we learn about manuls?

Key findings:

- Present at ~50% of sites
- Evidence of reproduction (2 records of kittens)
- High activity at selected locations

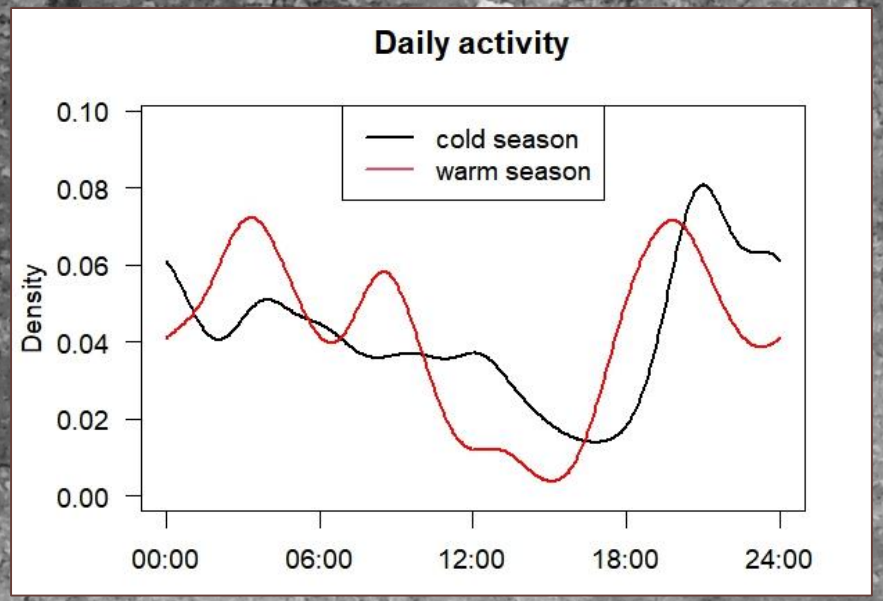
Indicates favorable conditions in 2024–2025



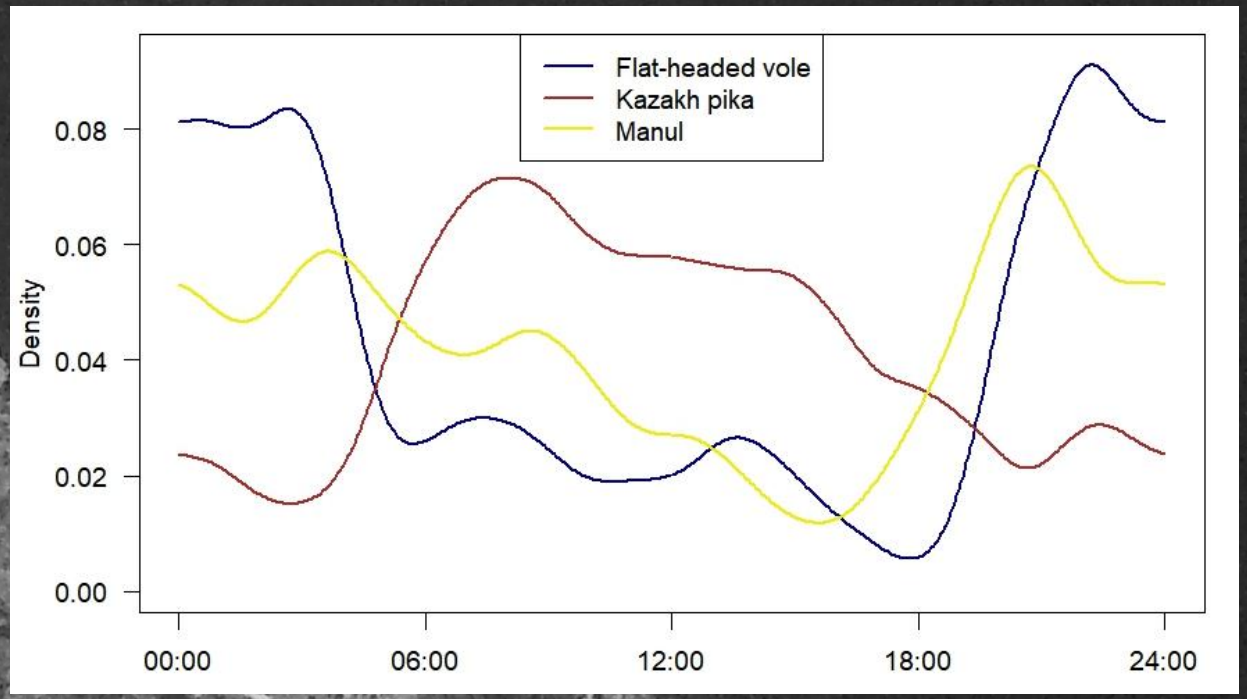
RAI (relative abundance index) - # of independent records per 100 days

Manul female with cubs

Activity

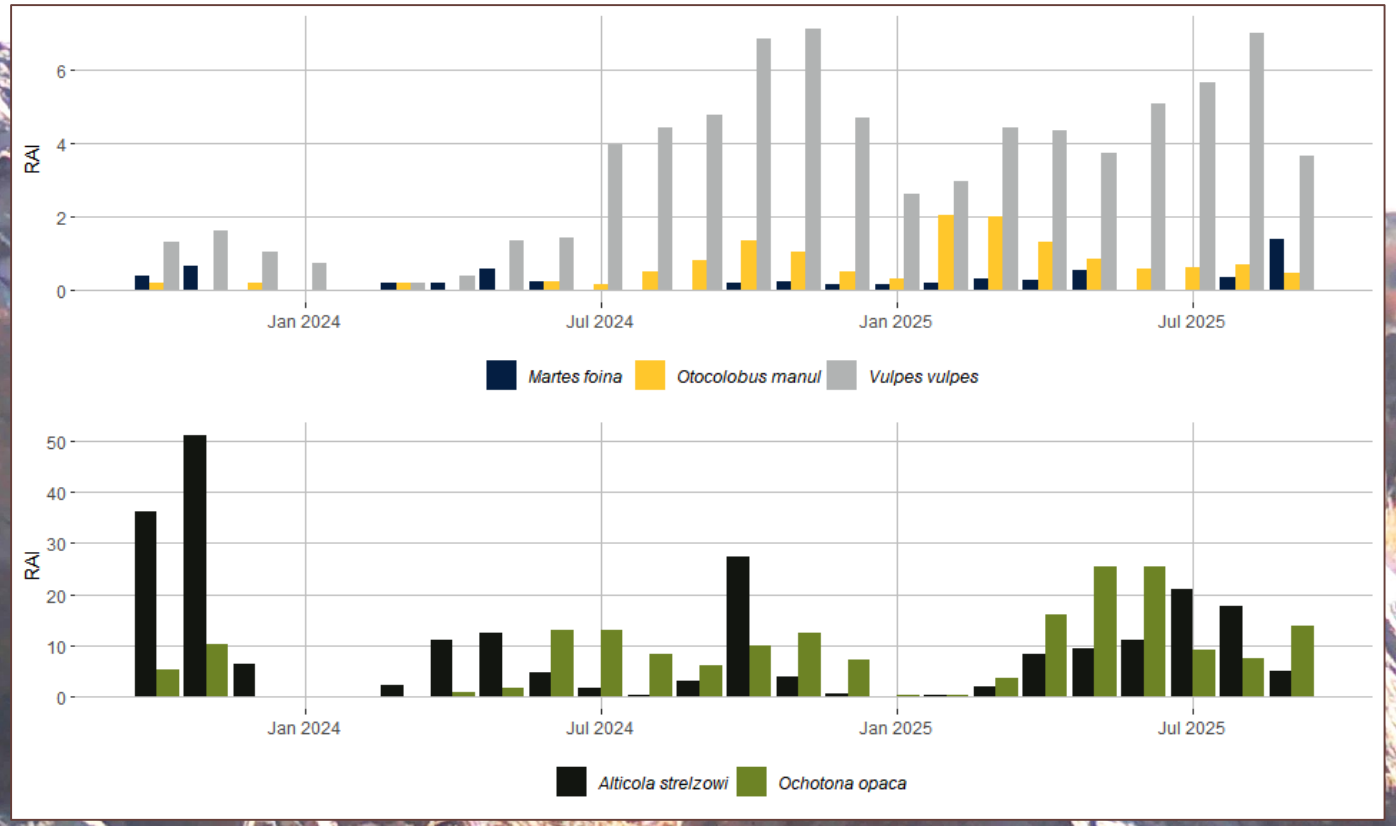


Manuls were active during the day with mostly night and crepuscular activity though more active at day in cold season (October – March)



Daily activity of manul in relation to prey species (vole, pika)
➞ Helps understand predator–prey relationships
➞ Gives base for the long-term species trends

Dynamics



Relative abundance of manul, red fox, stone marten in relation to prey species (vole, pika)

➞ Helps understand predator–prey relationships over time

➞ Gives base for the long-term species trends

Prey

The Kazakh pika and flat-headed vole are among the main prey species of manuls in the area

The Kazakh pika, endemic to Central Kazakhstan, was strongly linked to manul presence, indicating a close predator–prey relationship.

In addition to manuls, the monitoring network recorded 13 carnivores, including Eurasian lynx, Asiatic wildcat, stone marten, Asiatic badger, red fox and corsac fox, Altai and least weasels, steppe and marbled polecats, stoat, gray wolf, and golden jackal.


Asiatic badger


Stone marten


Steppe polecat

Eurasian lynx

A remarkable record

An adopted camera recorded three wild cat species:

- Manul
- Asiatic wildcat
- Eurasian lynx

Manul

Asiatic wildcat

The monitoring area is also important for the endemic subspecies of the globally Near Threatened **argali sheep** (*Ovis ammon collium*):
326 detections in 60% of locations


Besides the mammals trail cameras recorded different birds of prey some of which are keystone of steppe ecosystems
Golden eagle and a red fox are recorded at one time
fox

Key implications for conservation and monitoring

The results of 2024-2025 monitoring season allow us to:

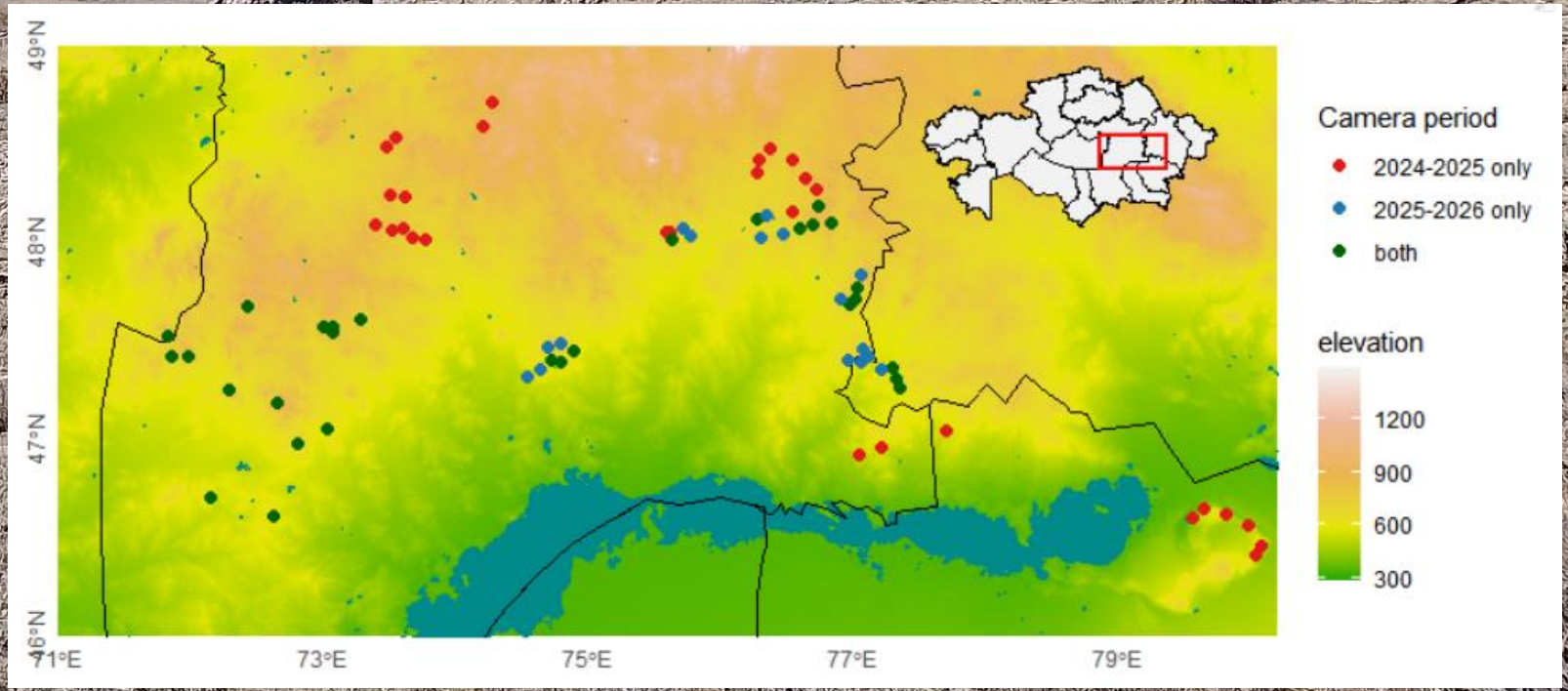
- identify more key habitats for manuls in Central Kazakhstan
- evaluate the effectiveness of current camera placements
- improve long-term monitoring design
- better understand population status and trends

What’s next

Based on these results, we will:

- continue long-term monitoring at key sites under unified design
- expand the network into underrepresented habitats
- integrate environmental variables (e.g., snow cover)
- develop indicators of population change over time

*In 2025-2026 we are establishing the trail camera network, according to the **large-scale monitoring design** to track distribution and population trends across landscapes*



Manul Working Group

Adopt a Camera program participants

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We are deeply grateful to all participants who support our monitoring efforts across different regions. The results presented here from Central Kazakhstan are part of a broader effort made possible by your contributions.

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PALLAS'S CAT INTERNATIONAL CONSERVATION ALLIANCE
PICA

MANULIZATION
PALLAS'S CATS

Manulization & Co
manulovers community

EURASIAN WILDLIFE AND PEOPLES

GLOBAL HERITAGE SOCIETY
PRESERVING EARTH'S LEGACY

FUZZ

Camera Trap Networks Maintenance and Support

This work would not have been possible without the support of our volunteers, who helped process and classify thousands of images. Their contribution enabled us to transform raw trail camera data into meaningful ecological insights.

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We are grateful to all people and organisations for being part of this work. Together, we are building one of the most comprehensive monitoring datasets for manuls across their range.

News from North-Eastern Mongolia are coming..