

# An introduction to GPS telemetry of Carpathian lynx on the western edge of its native range

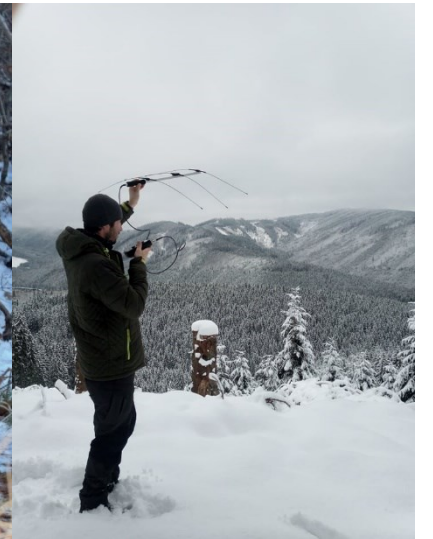
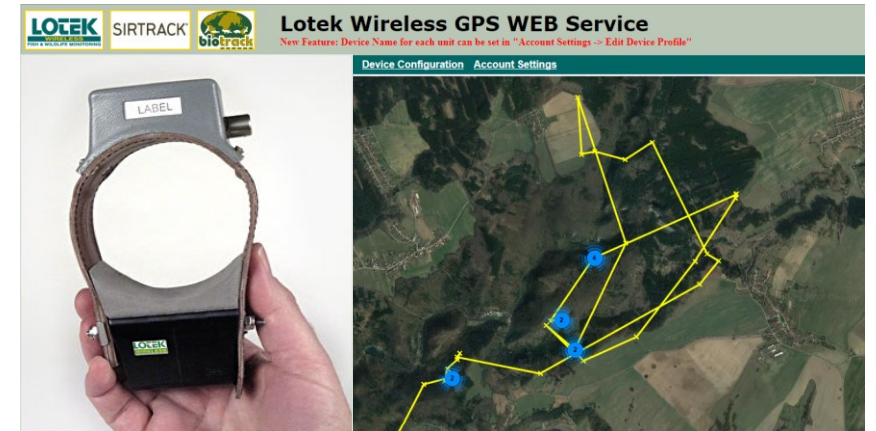
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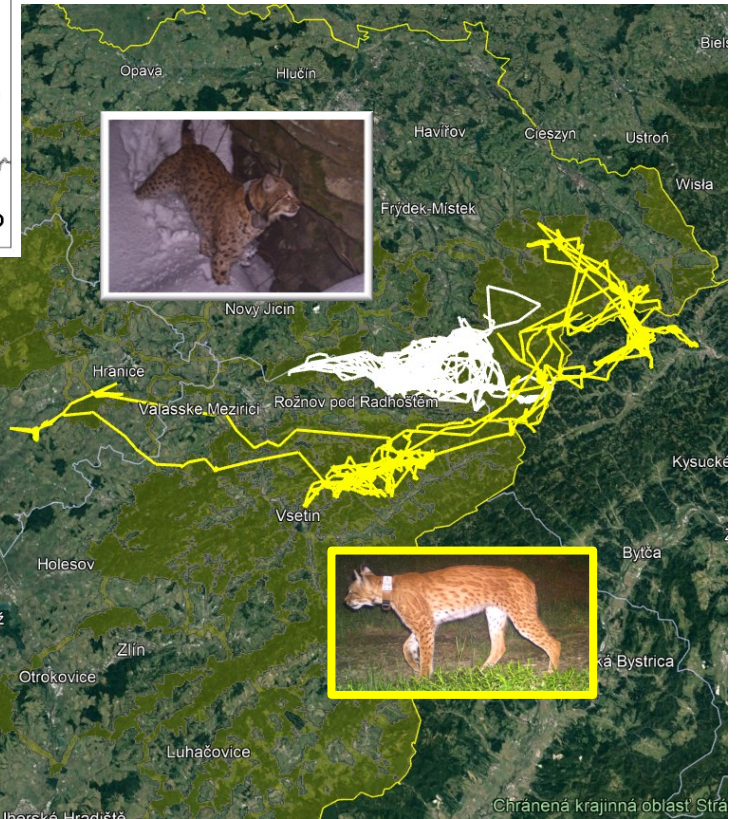
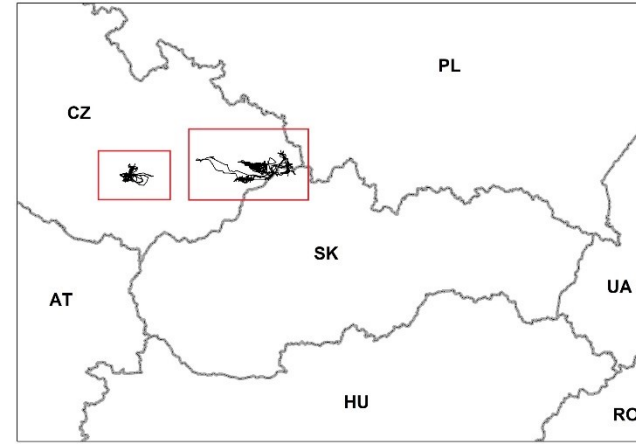
# GPS telemetry

- GPS GSM or Iridium collars
- high quality data - GPS positions & activity data
- two way communication, 5-8 GPS positions per day
- limitations – high costs, personal and time capacity
- 7 individuals collared so far (4/2020 – 5/2022)
- home range estimates, spatio-temporal patterns, movement corridors, feeding ecology, habitat preferences/resting sites etc.



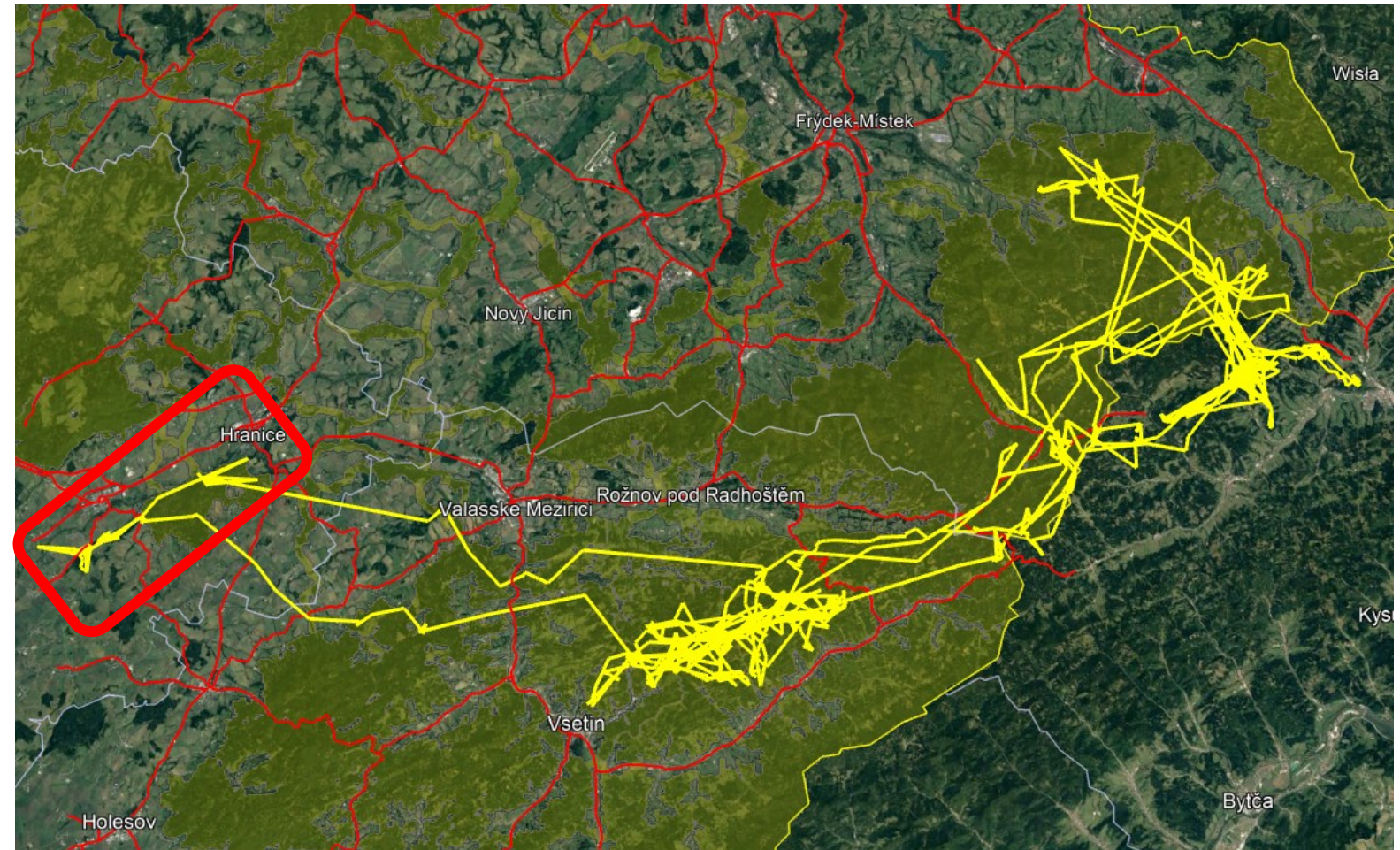
# Spatio-temporal ecology of large carnivores in the West Carpathians edge

- large home ranges (HR)
- residents vs. dispersers
- population core vs. edge
- impact of human-dominated landscape



# Lynx „Eman“

- subadult male, tracking period: 8/4/2020 – 26/6/2021
- GPS Iridium Lotek Lite Track 250
- MCP 95% - 1742 km<sup>2</sup>
- at least 69 road crossing events (primary to tertiary road)

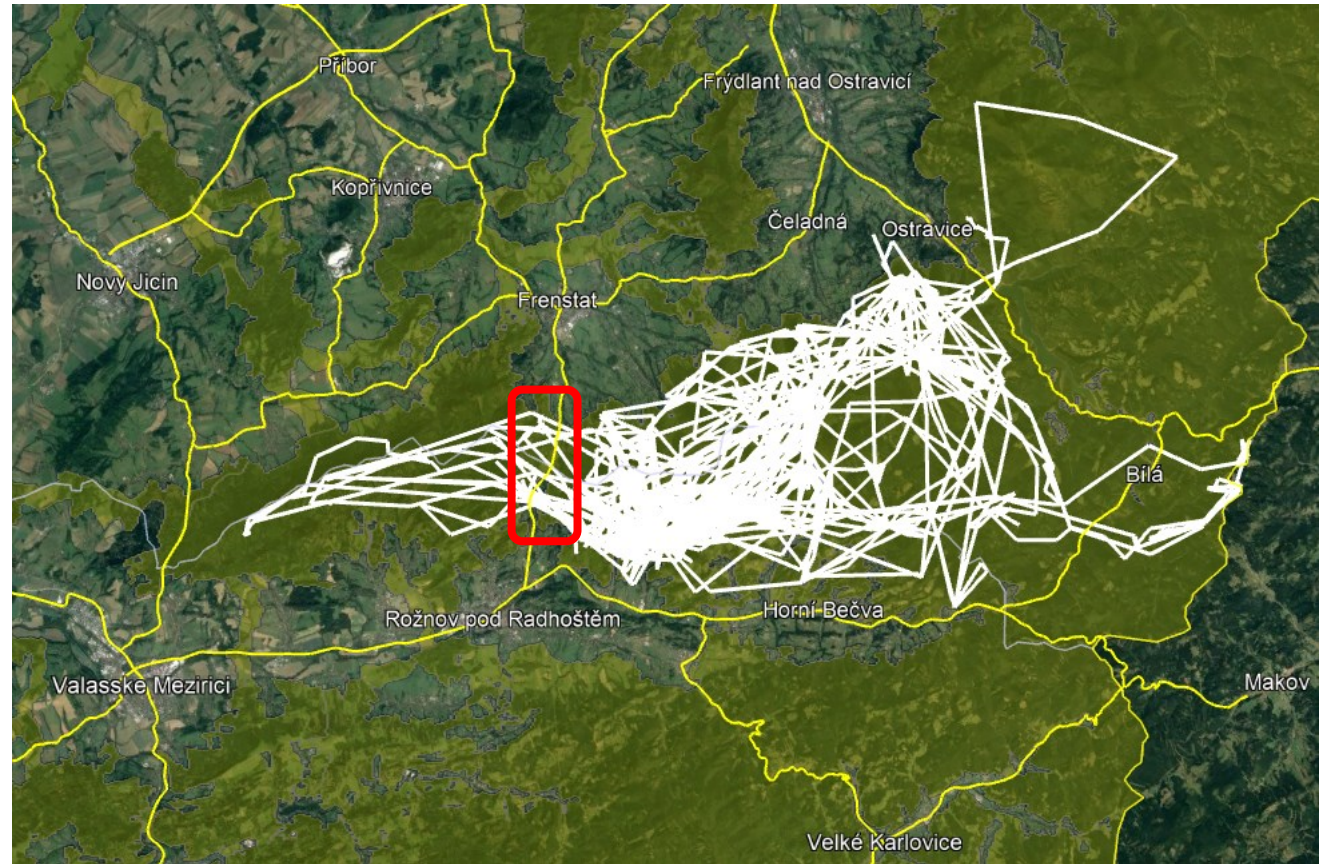


# Lynx „Eman“ movement corridors/barriers

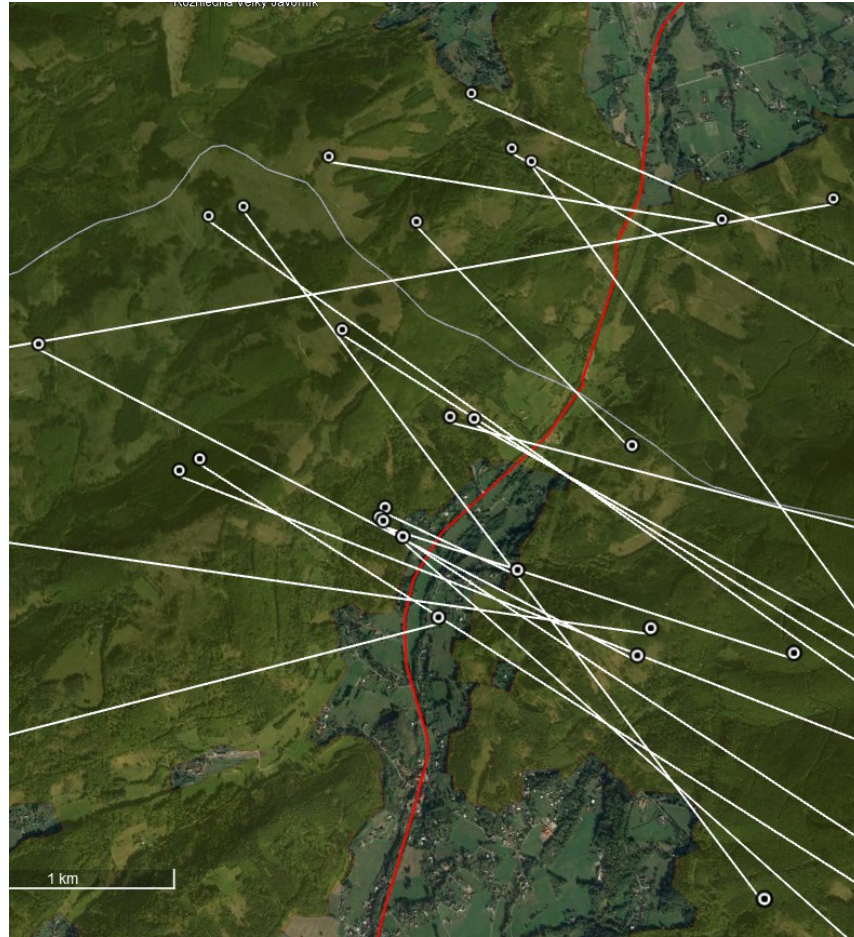


# Lynx „Květoslav“

- adult male, tracking period 7/3/2021 – 14/11/2021
- GPS/GSM Vectronic Vetrex Lite
- MCP 95% - 314 km<sup>2</sup>
- at least 128 road crossing events (primary to tertiary road)

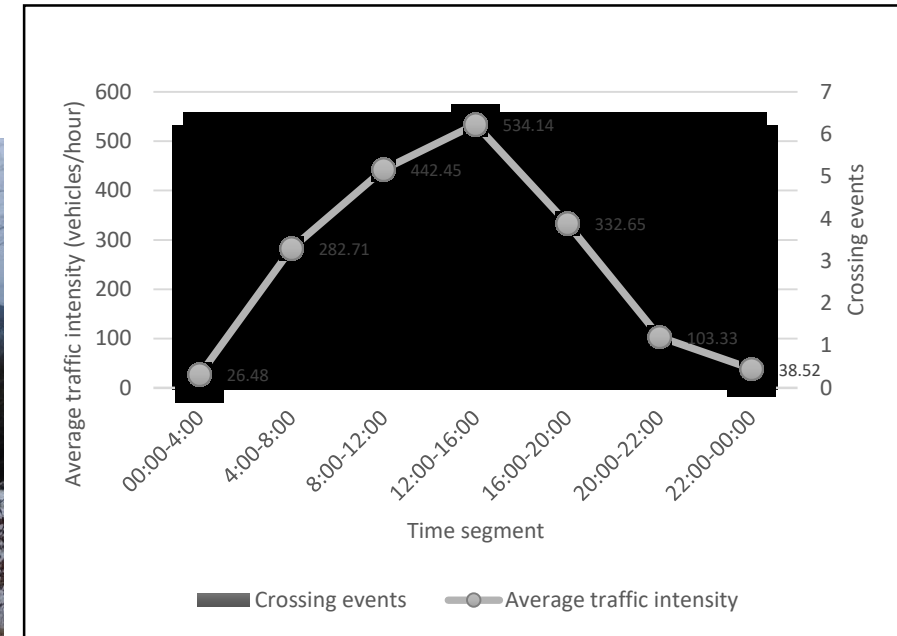


# Lyn Květoslav movement corridor - Sedlo Pindula

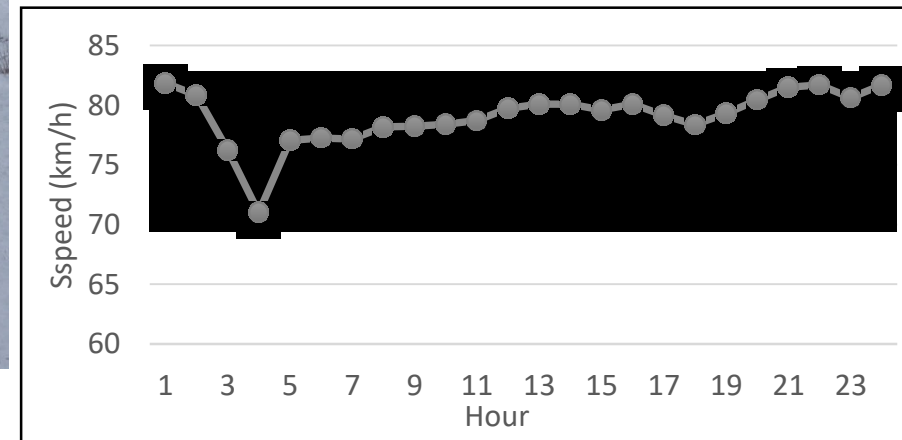


At least 20 crossing events (7/3/2021 – 14/11/2021)

Lynx crossing events (n=17) - 7/3/2021 – 14/11/2021  
vs  
Average traffic intensity – 8/9/21 – 18/3/22

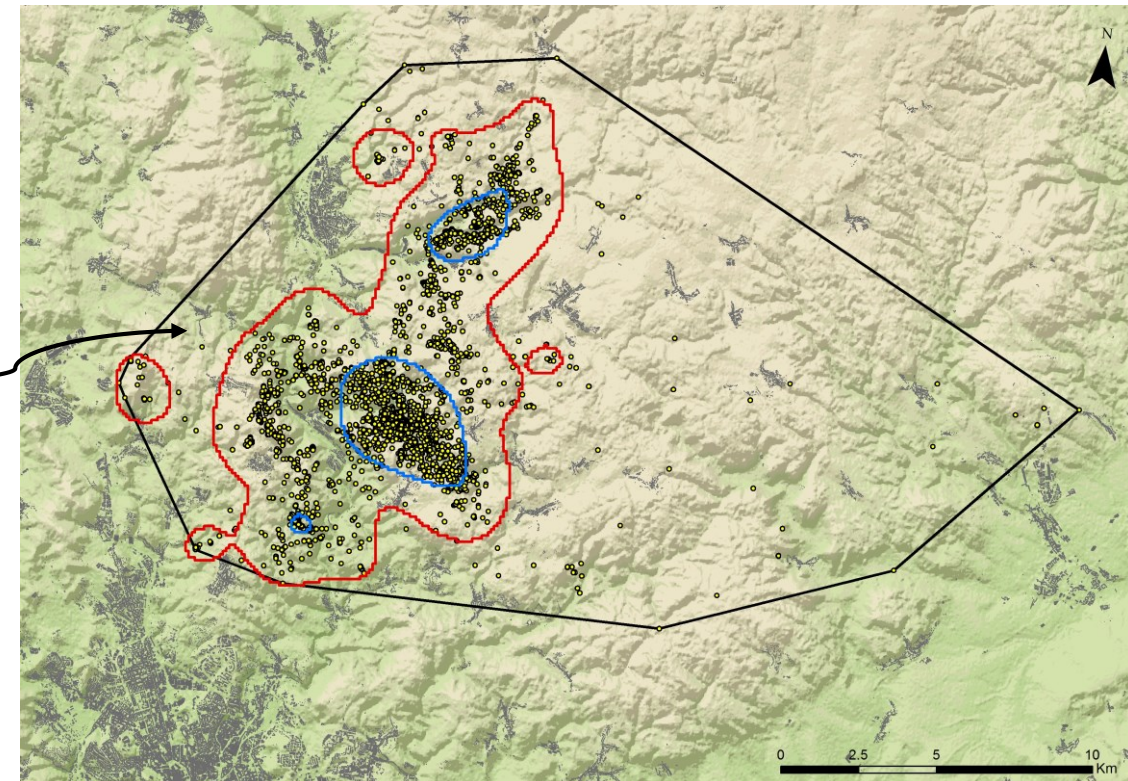
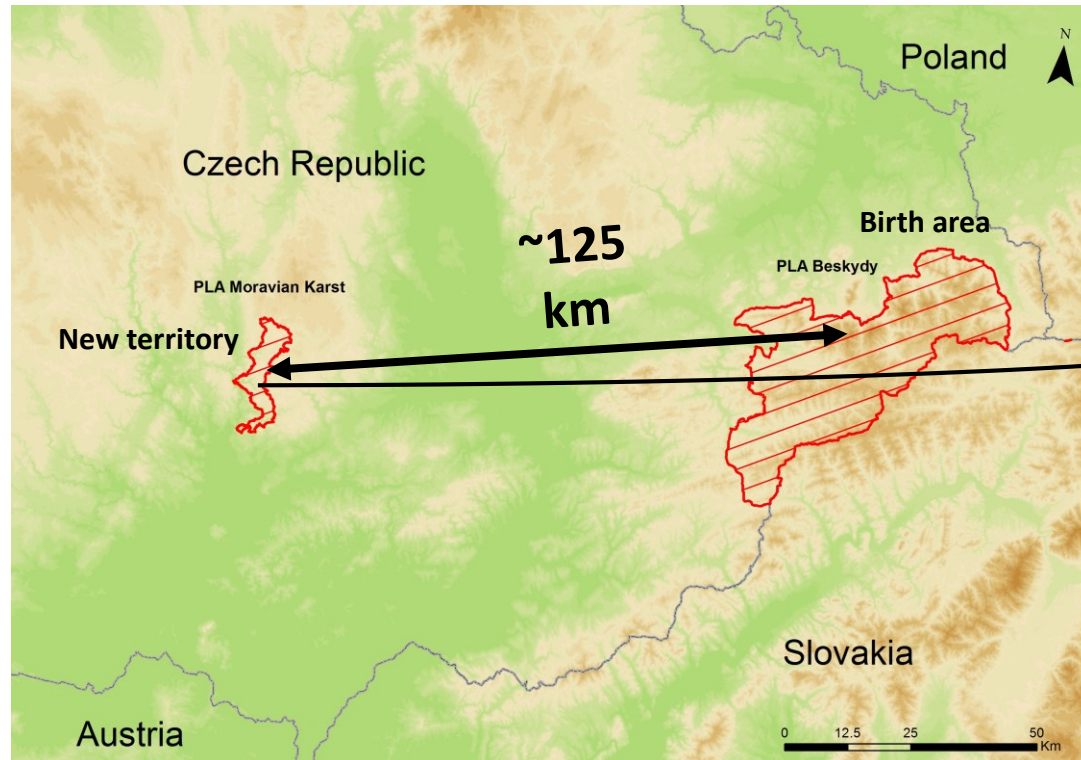


Average speed limit



# Lynx „Kryštof“

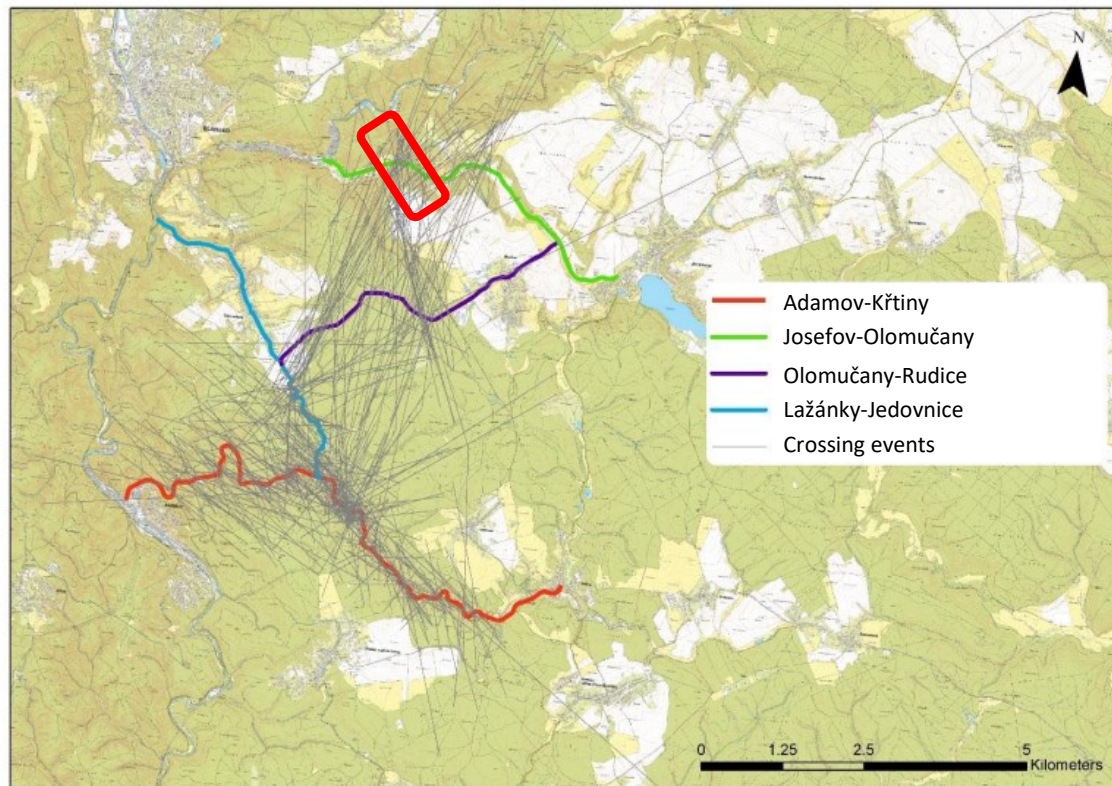
- adult male, tracking period 15/6/2017 – 15/6/2018
- GPS/GSM Lotek Small WildCell
- MCP 95% - 143 km<sup>2</sup>
- at least 673 road crossing events (primary to tertiary road)





# Lynx „Kryštof“

## Movement corridors



Road section	Crossing events	Traffic intensity
Adamov-Křtiny	273	1484–1607
Josefov-Olomučany	91	2538
Olomučany-Rudice	87	n/a
Lažánky-Jedovnice	72	3738–5354



# Destruction of functional movement corridor of lynx: Lažánky – Moravian Karst

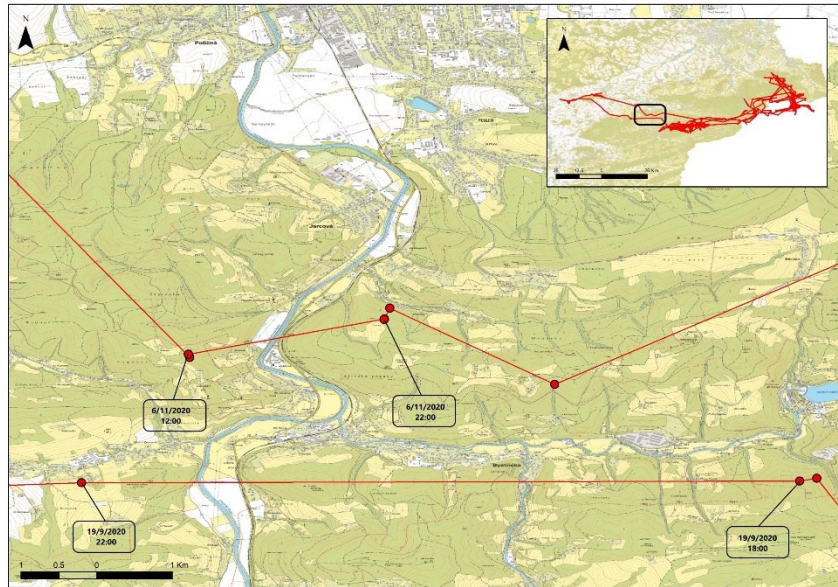
Past (2017/2018)

Present (2022)

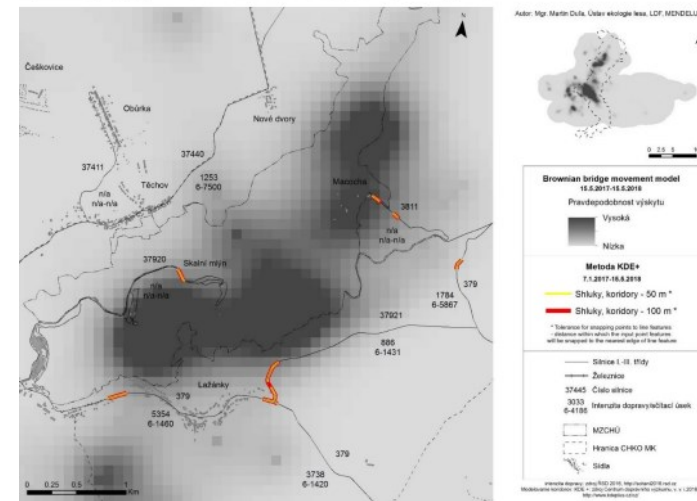
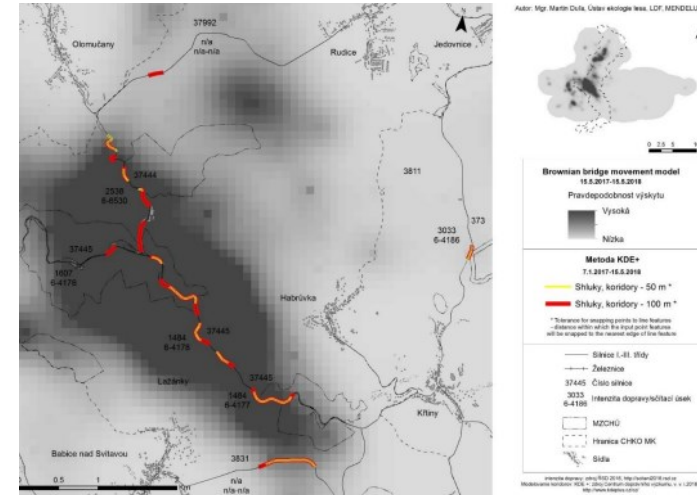
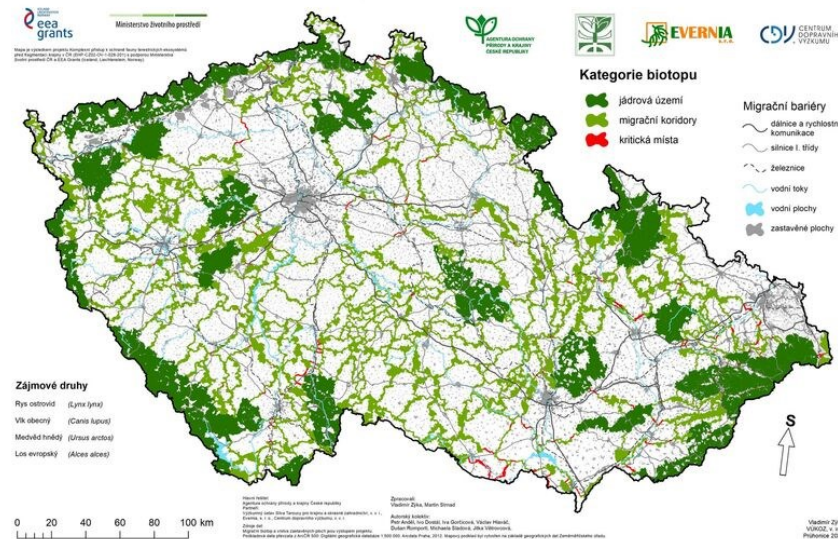


# Further analyses and application of results

- 1) **Identification** of movement corridors and critical sections - KDE+, BBMM etc.
- 2) **Negotiations**, results/data sharing with key stakeholders

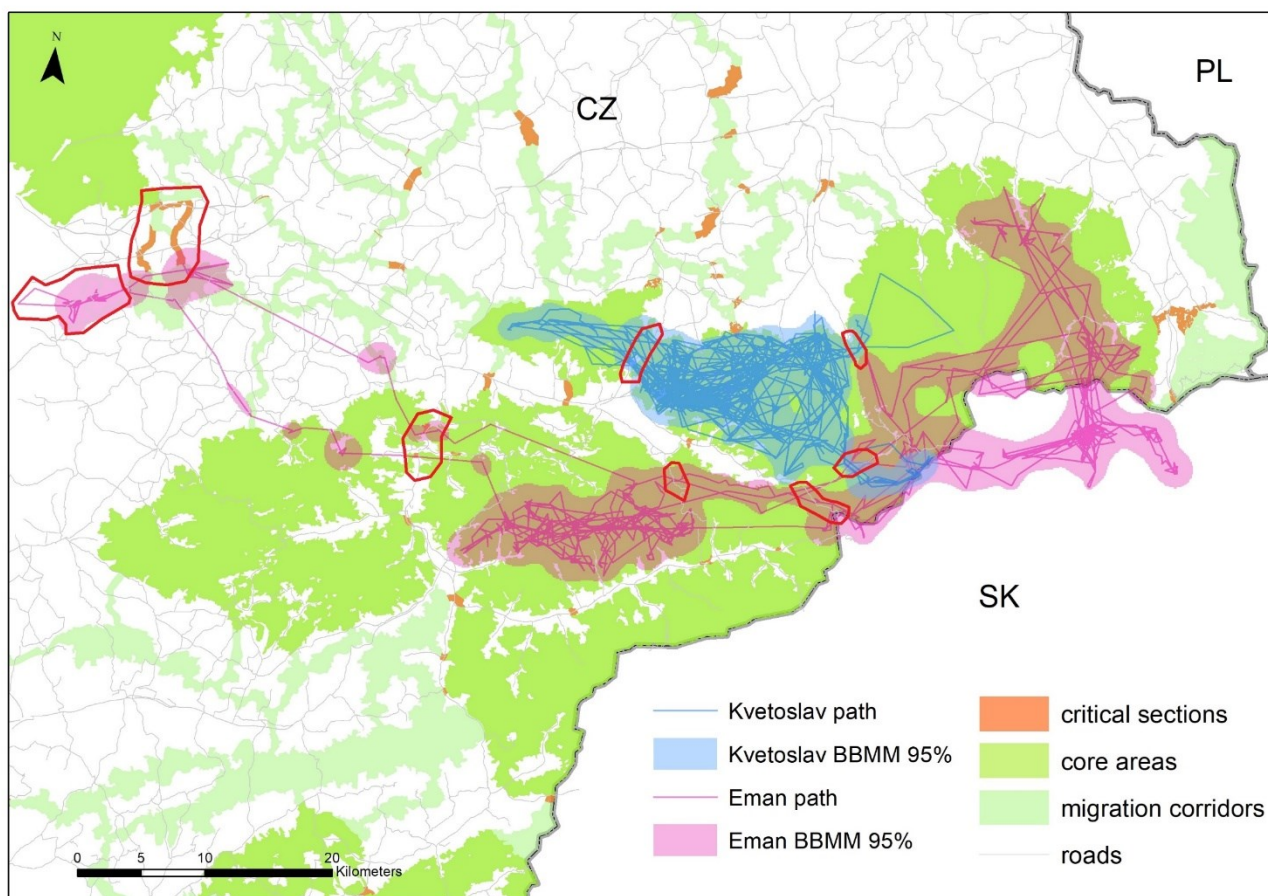


## BIOTOP VYBRANÝCH ZVLÁŠTĚ CHRÁNĚNÝCH DRUHŮ VELKÝCH SAVCŮ ČR, stav k roku 2020

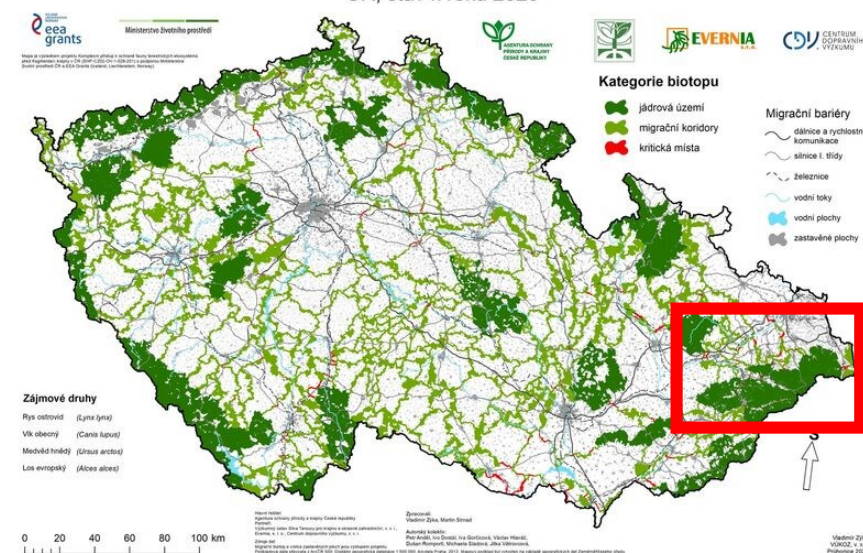


# Further analyses and application of results

## 3) **Updates** of habitat layer of large protected mammals – core areas, corridors, critical sections



## BIOTOP VYBRANÝCH ZVLÁŠTĚ CHRÁNĚNÝCH DRUHŮ VELKÝCH SAVCŮ ČR, stav k roku 2020



# Thank you for your attention!

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