

Status of the Saker Falcon (*Falco cherrug*) in Hungary between 1980 and 2022

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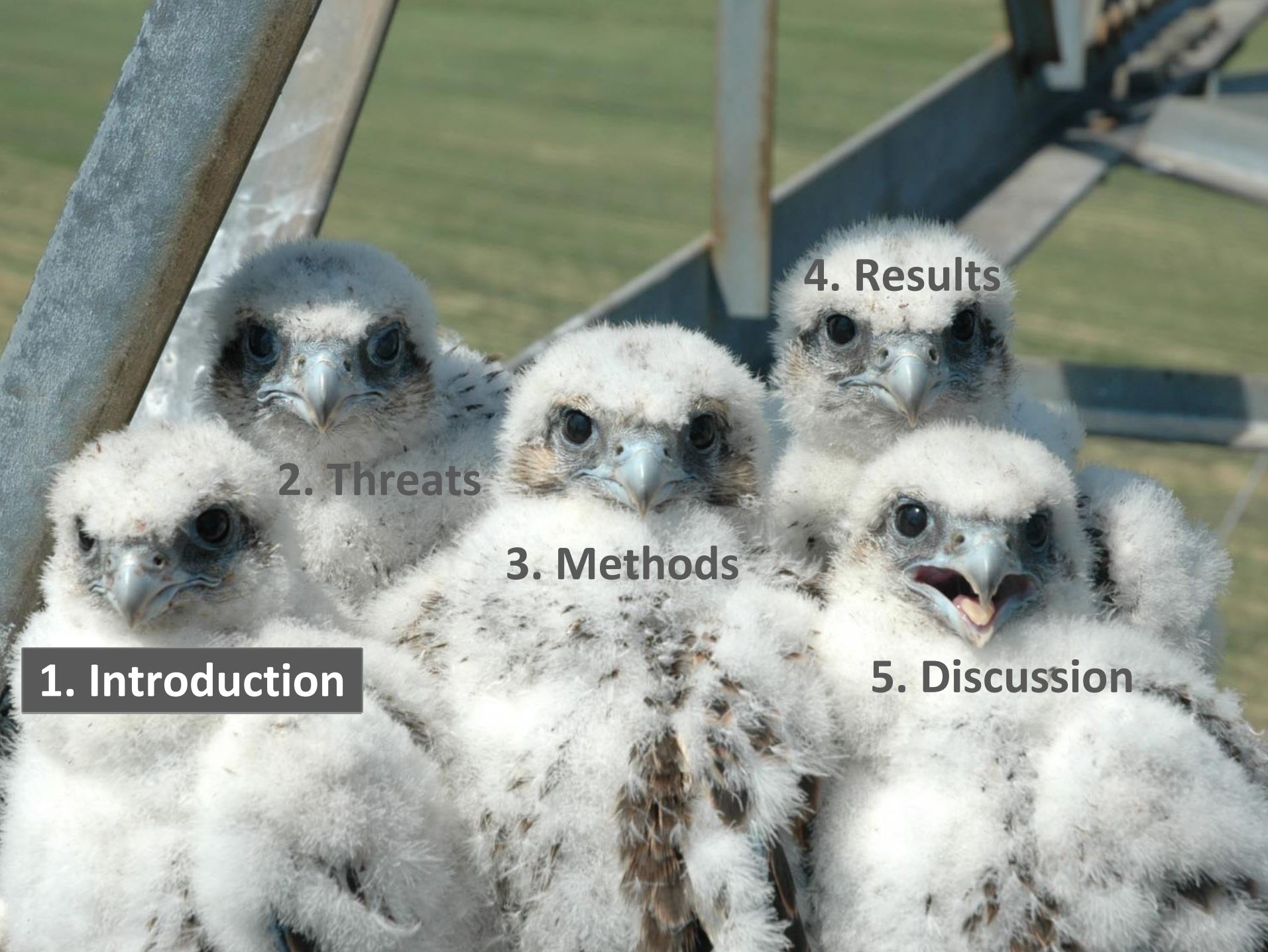


Eagles of the Palearctic: Study and Conservation
Third International Scientific and Practical Conference
International Workshop: Population Status and Problems of Conservation of the Saker Falcon
Almaty, Kazakhstan, 24. September 2023





János Bagyura



1. Introduction

2. Threats

3. Methods

4. Results

5. Discussion

Introduction

1900: *regular, but not common*

1950: *rare*

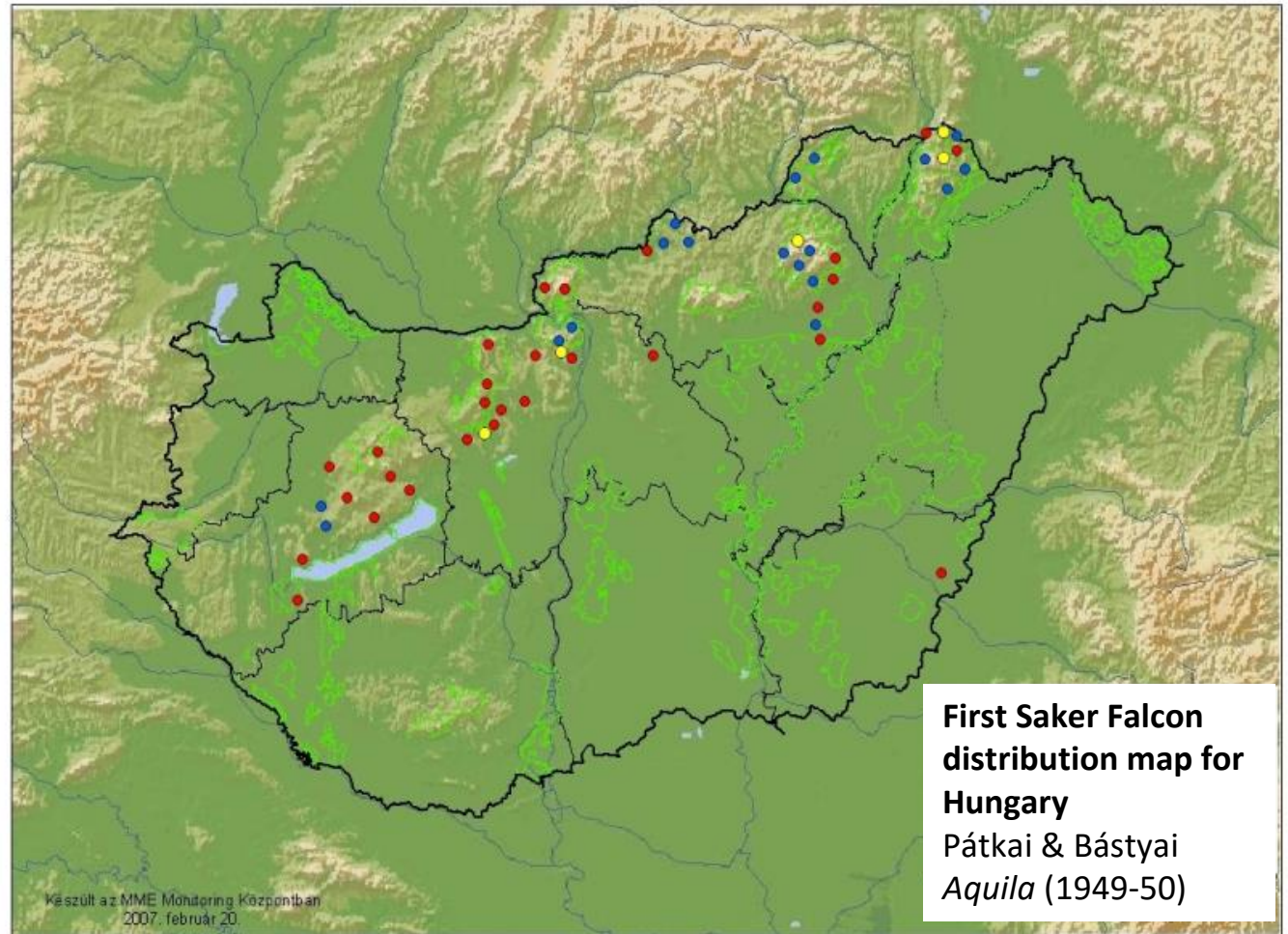
1970: *brink of extinction* due to DDT + persecution

1950:

Saker Falcon
(28)

Imperial Eagle
(5)

Peregrine Falcon
(18)

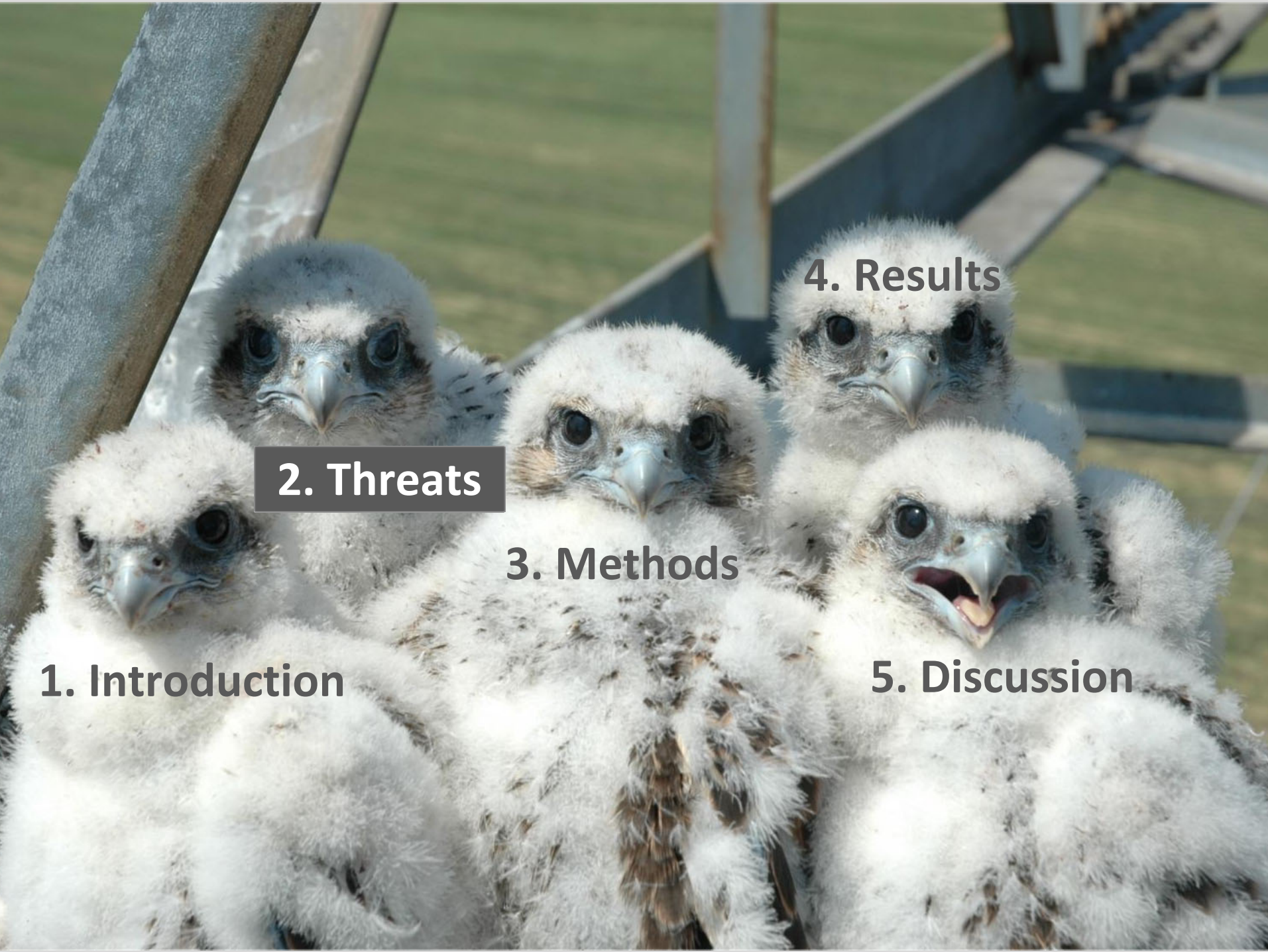


**First Saker Falcon
distribution map for
Hungary**
Pátkai & Bástyai
Aquila (1949-50)

Hungarian Saker Falcon Conservation Program

MME BirdLife Hungary 1974
MME Raptor Conservation Group
10 National Park Directorates 1973-
2002
Saker Falcon Working Group





2. Threats

4. Results

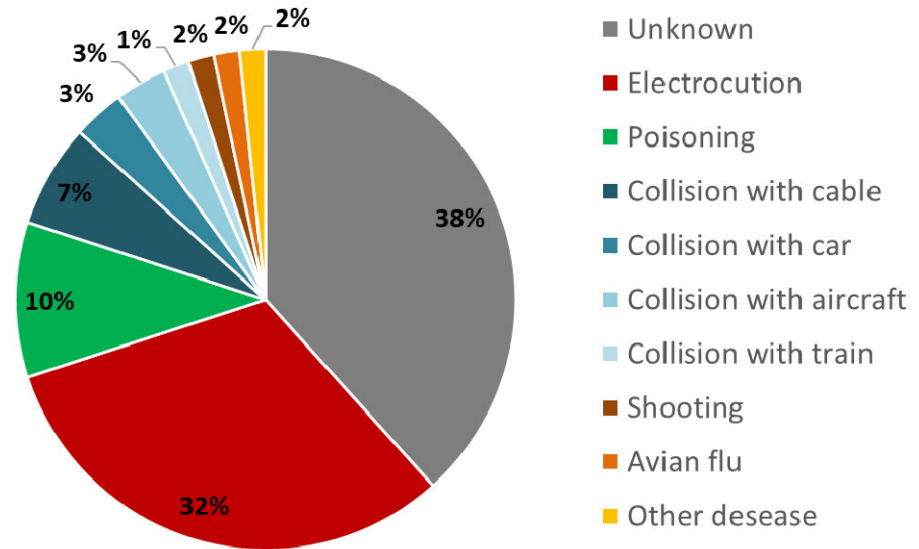
3. Methods

1. Introduction

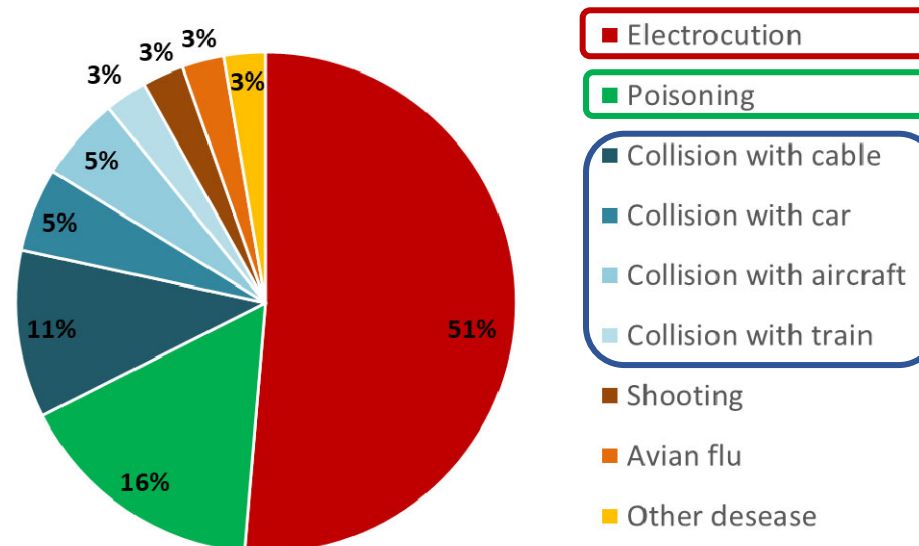
5. Discussion

Causes of mortality in Hungary

Causes of mortality of Saker Falcons in Hungary (2010-2019, n=60)



Known causes of mortality of Saker Falcons in Hungary (2010-2019, n=37)



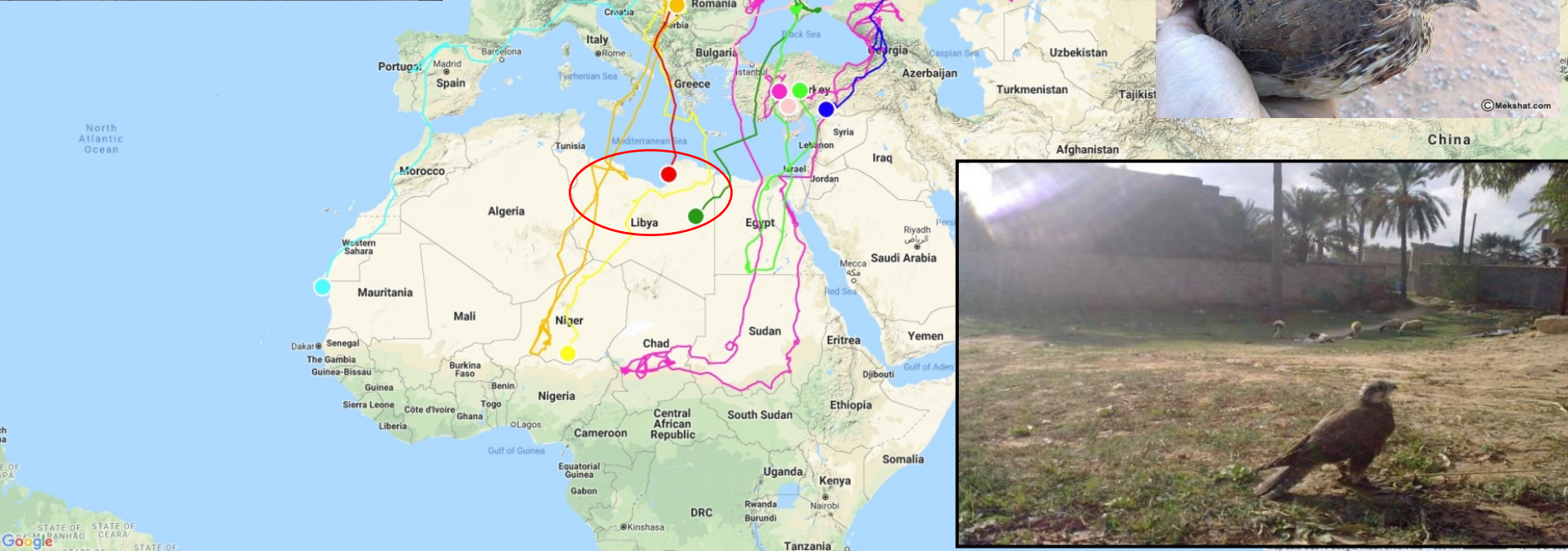
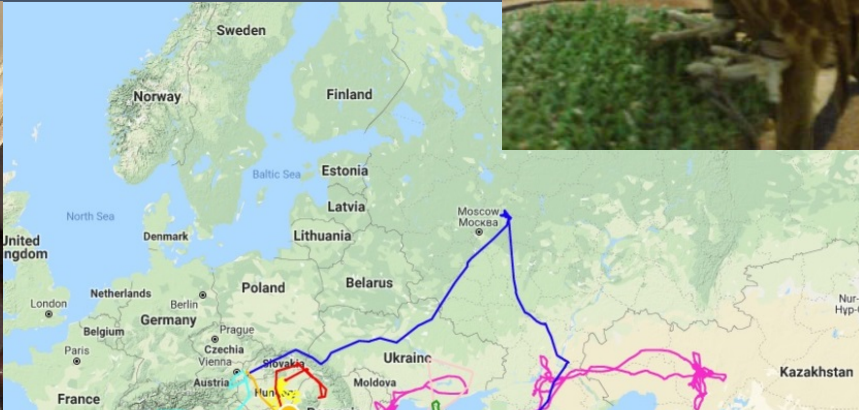
Electrocution



Poisoning



Trapping: North-Africa (Libya) & Middle-East

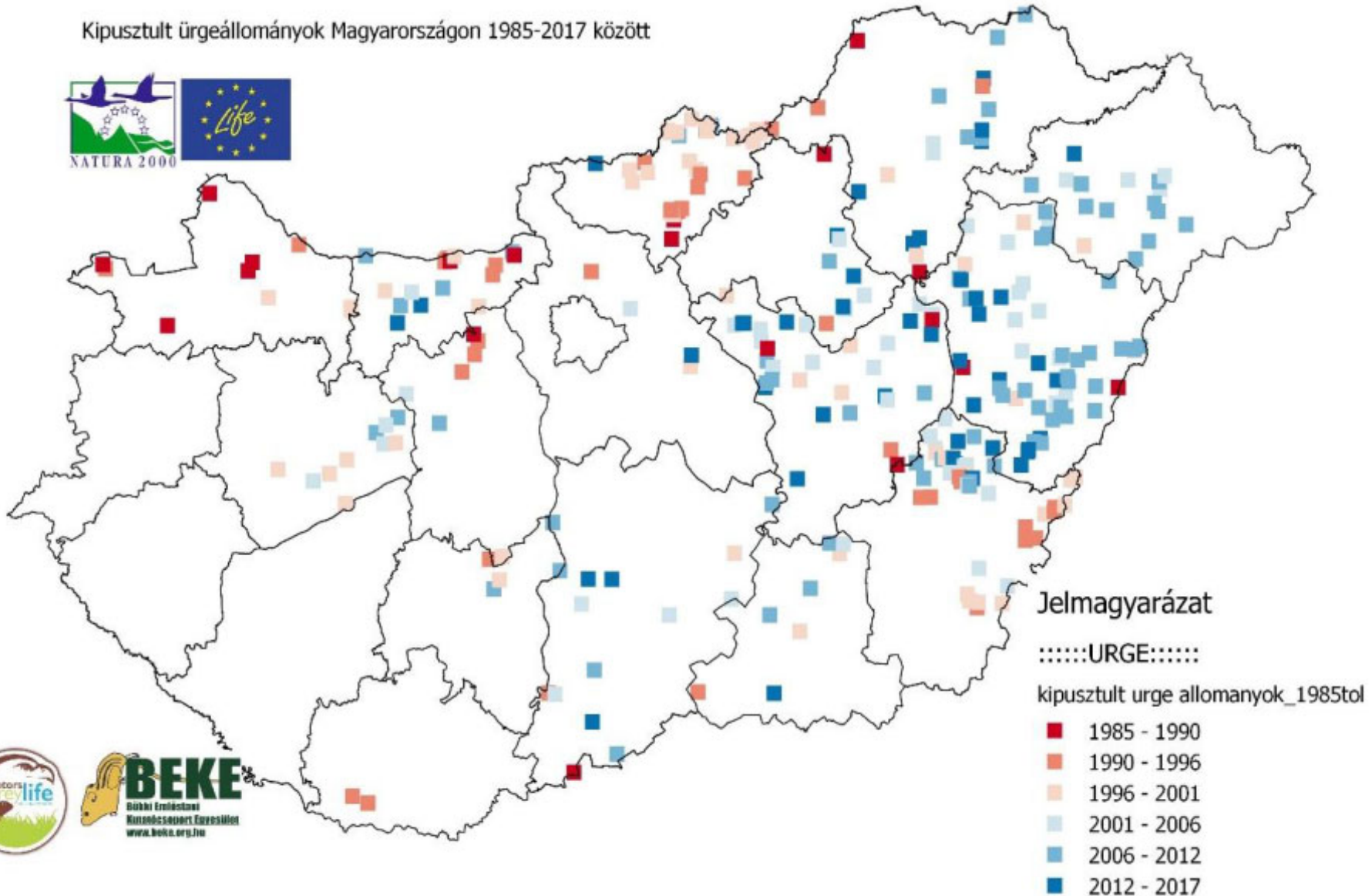


Habitat loss

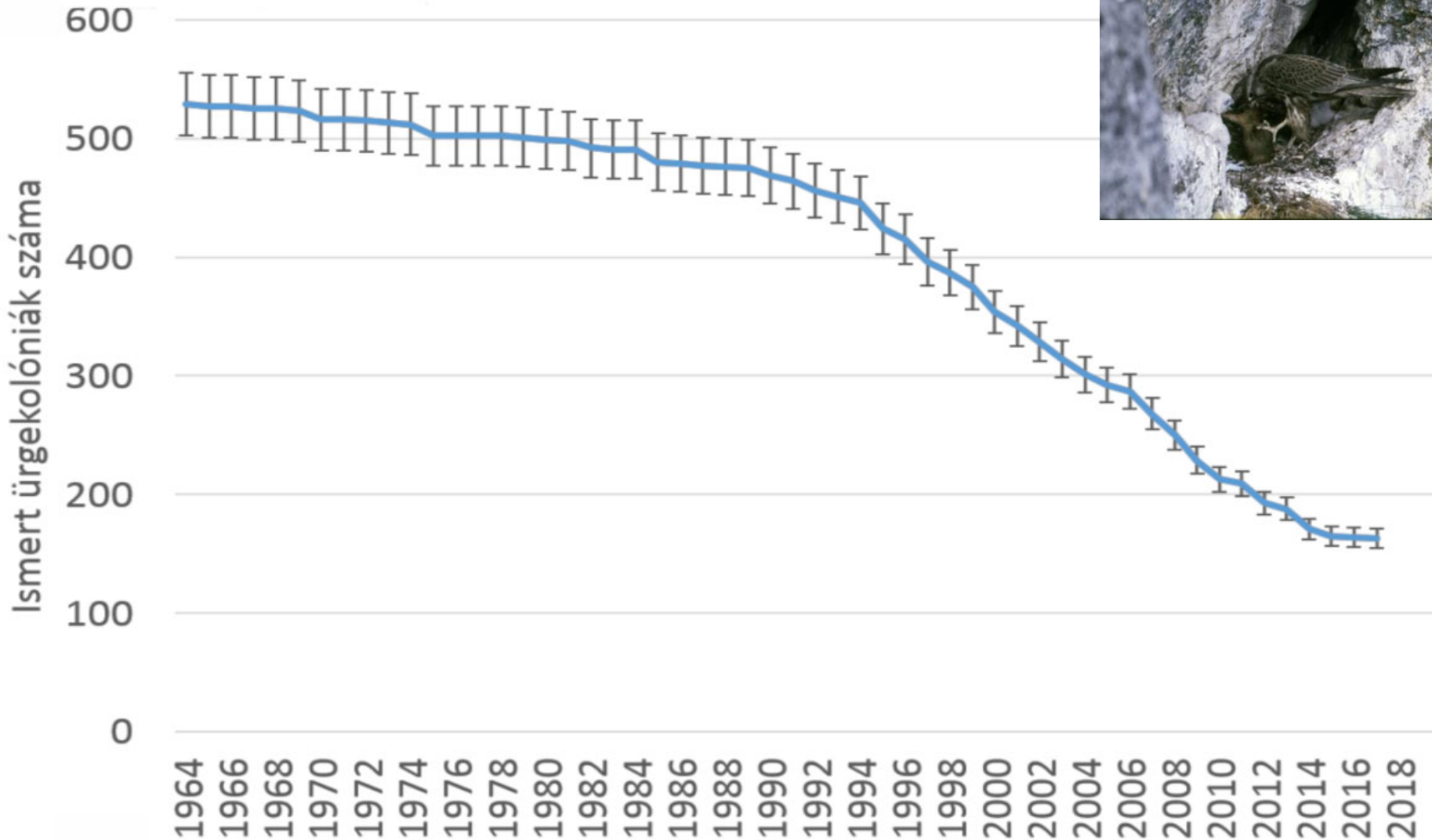


Extinction of local European Ground Squirrel (*Spermophilus citellus*) populations: 1985 – 2017

Kipusztult ürgeállományok Magyarországon 1985-2017 között



Number of known European Ground Squirrel (*Spermophilus citellus*) colonies in Hungary between 1964 – 2018 (Cserkész *et al.*)

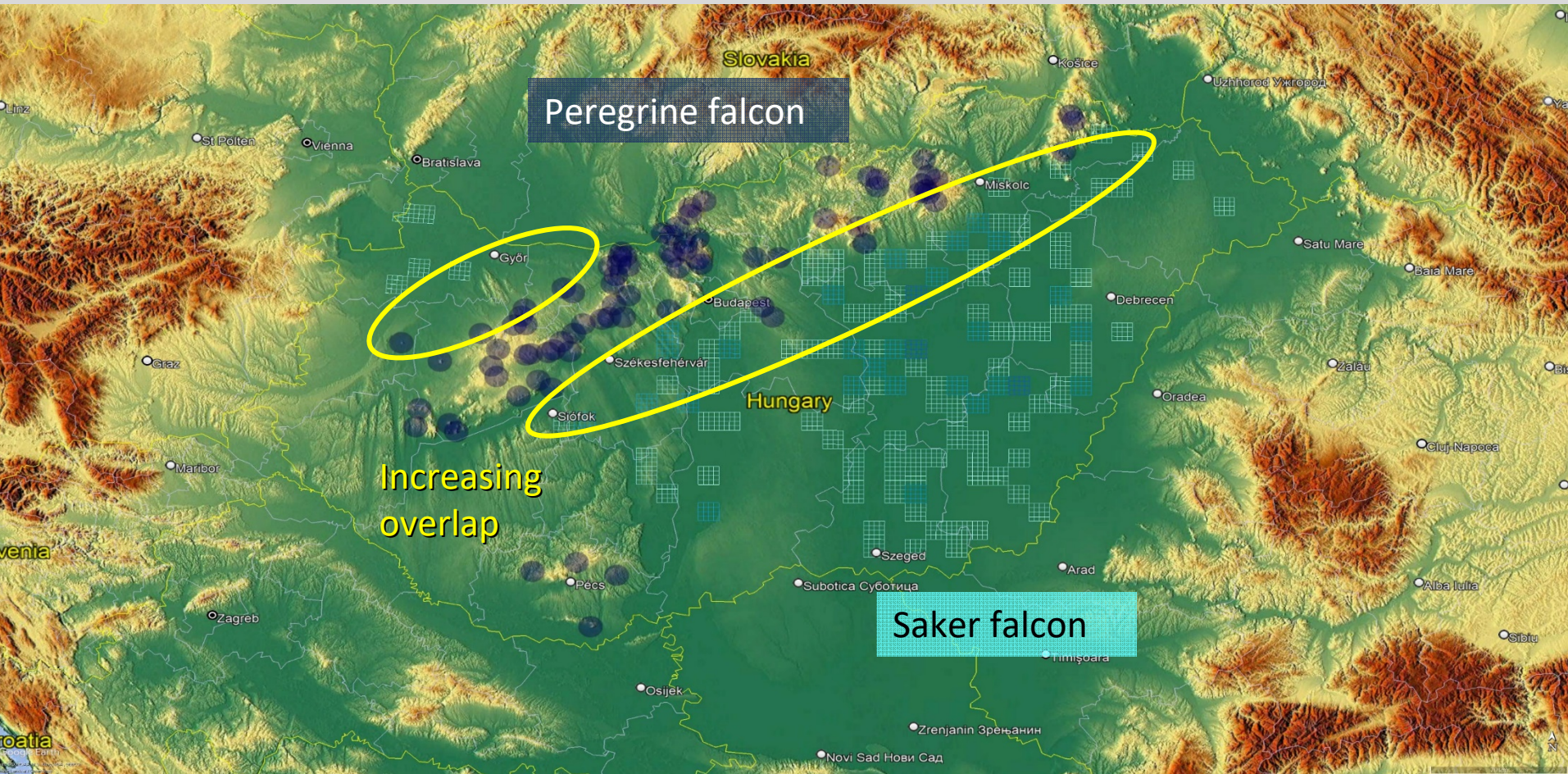


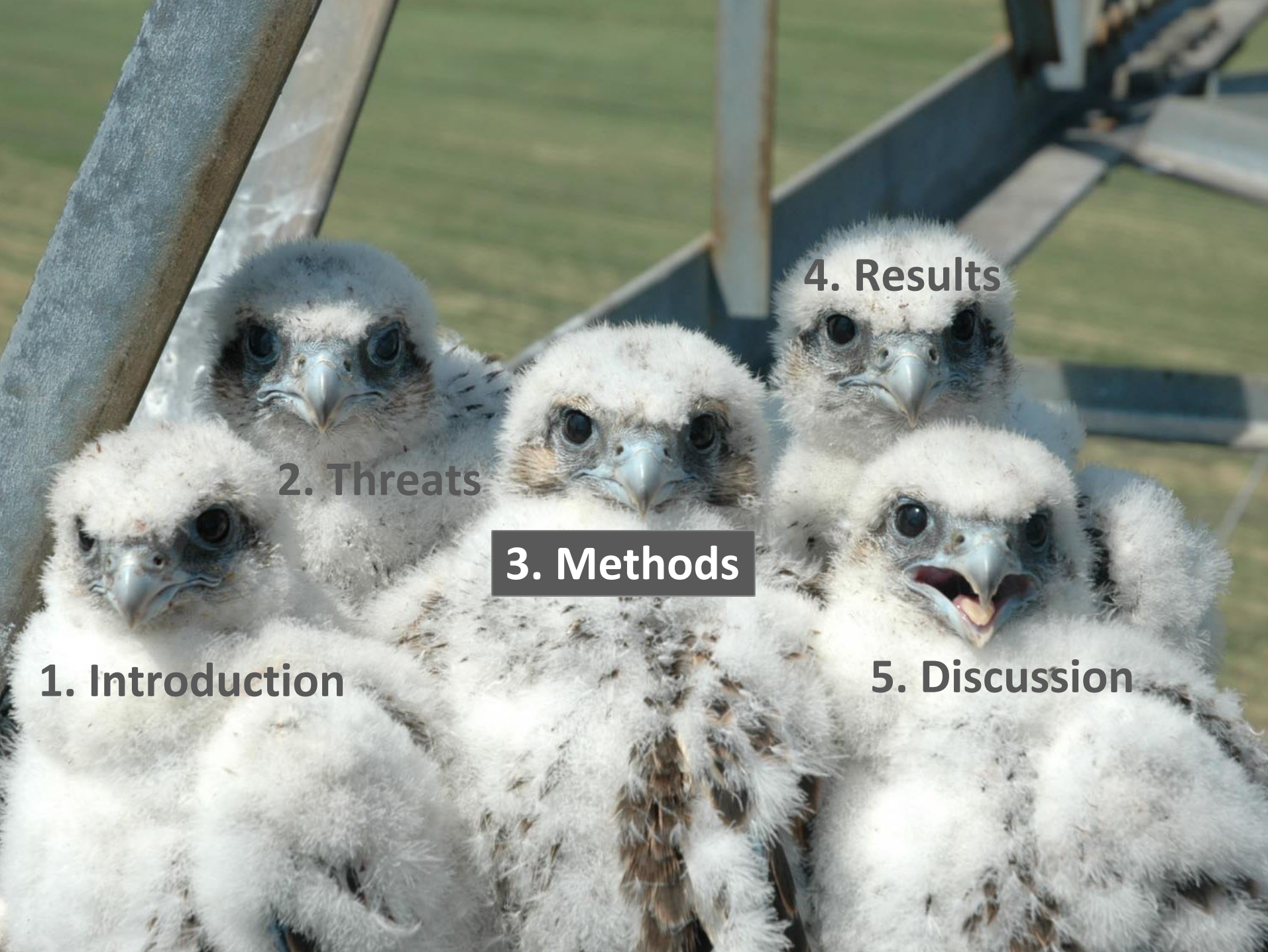
Competition with Peregrine Falcon (*Falco peregrinus*)



Distribution of Saker and Peregrine Falcon (*Falco peregrinus*) in Hungary in 2020

(Bagyura & Prommer)





2. Threats

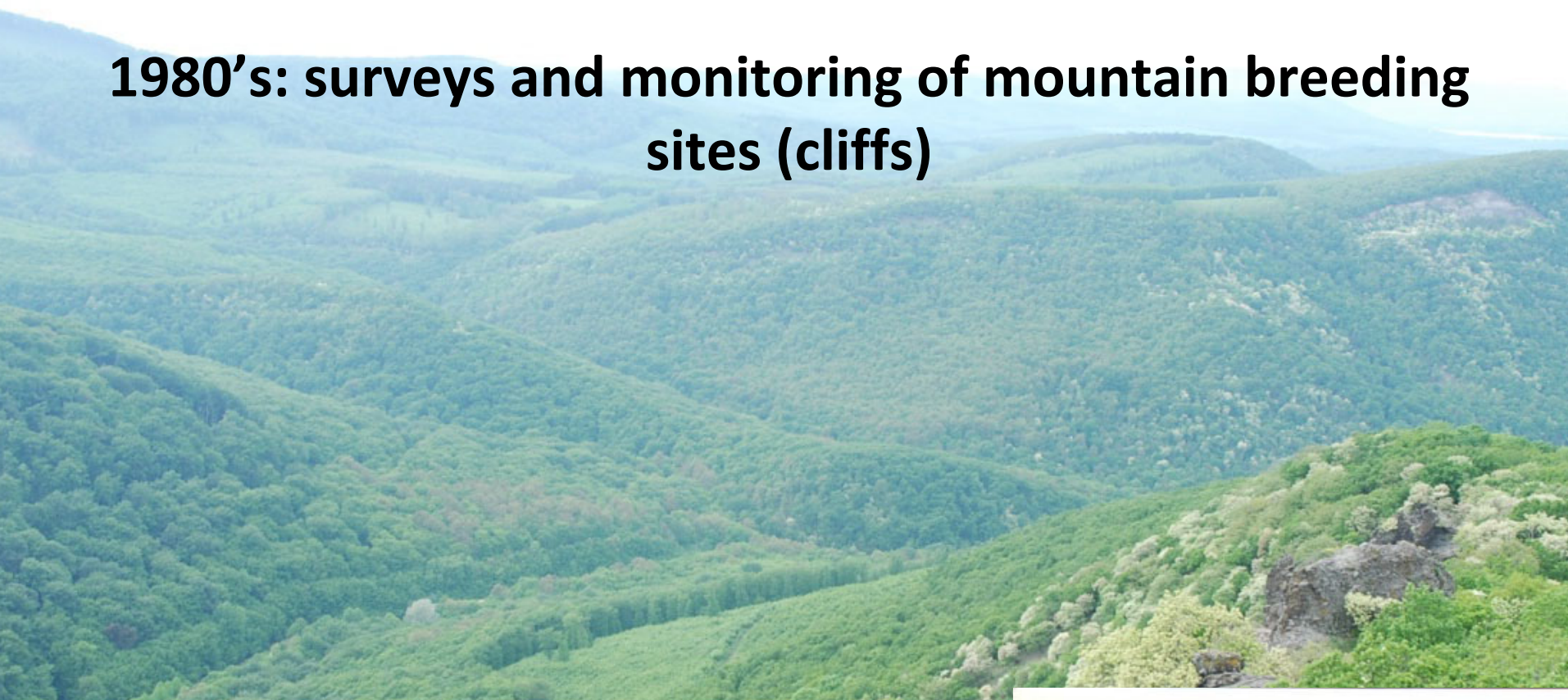
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1980's: surveys and monitoring of mountain breeding sites (cliffs)



1980's: 100% cliff-nesting population



1980's: Nest guarding with volunteers

>1700 participants, 102 breeding, 238 fledged juvenile



1990's: surveys and monitoring of lowland breeding sites



Fotó: Bagyura János

Natural & artificial nests on trees & pylons

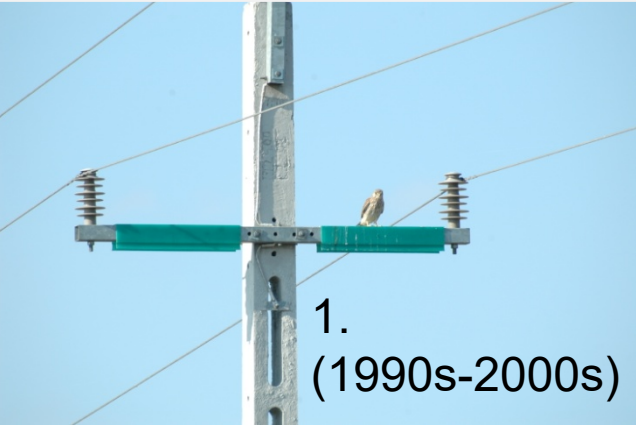


MAVIR – MME Cooperation

2023: >90% of the population is high-voltage (120-400 kV) pylons



Bird-friendly modification of medium-voltage (22 kV) poles



3.
(2010s-2020s)

Reintroduction of European Ground Squirrel (*Spermophilus citellus*) colonies in Hungary (1980s-2010s)



Rehabilitation of injured specimens



Ringling chicks



Satellite-tracking



Camera traps



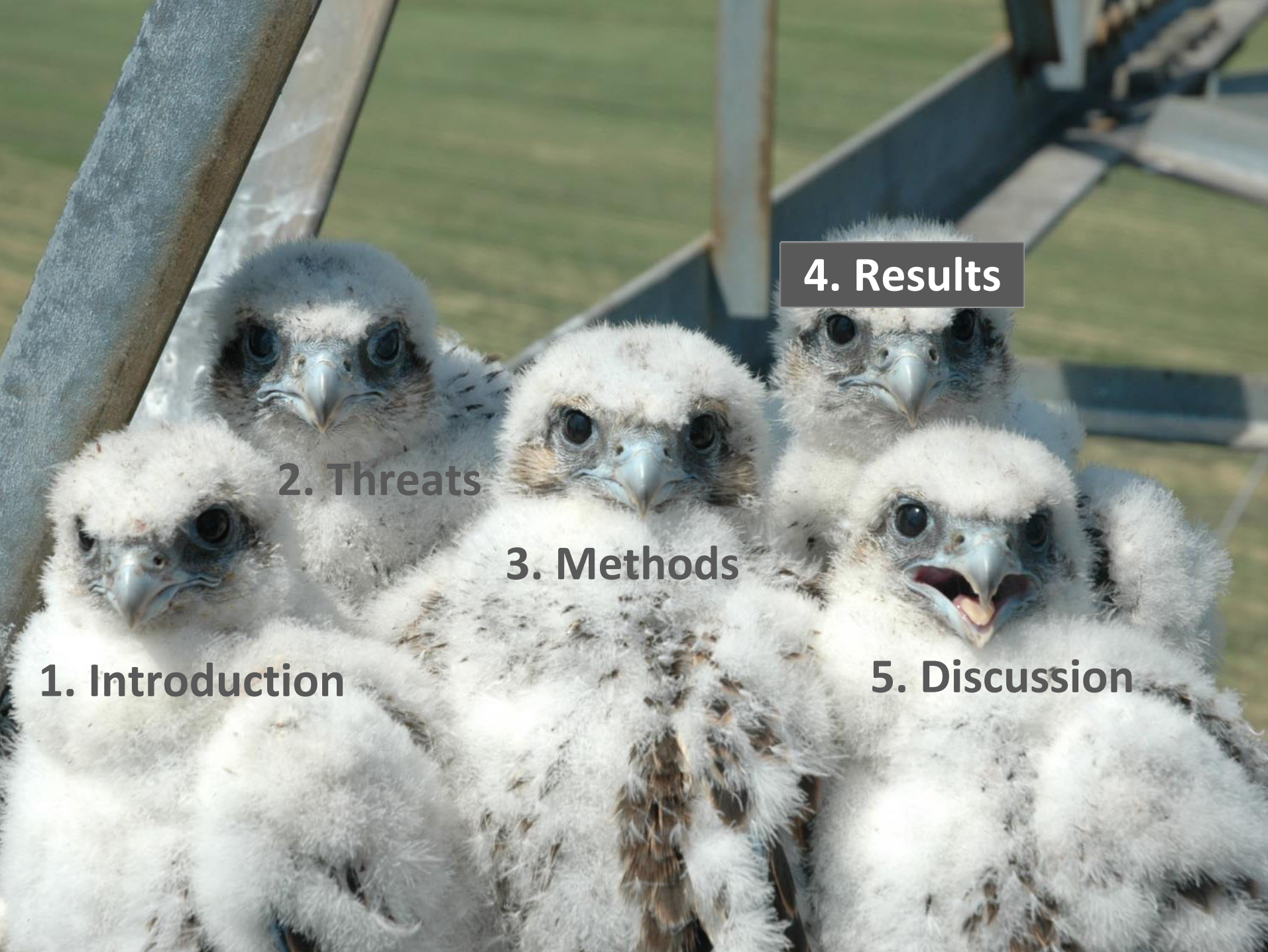
UOVISION 06.03.2019 17:52:53 ●01 023°C 073°F 5



UOVISION-mavir1 05.19.2017 18:16:58 ●24 023°C 073°F 9



UOVISION P 05.31.2017 09:49:41 ●06 023°C 073°F 9



1. Introduction

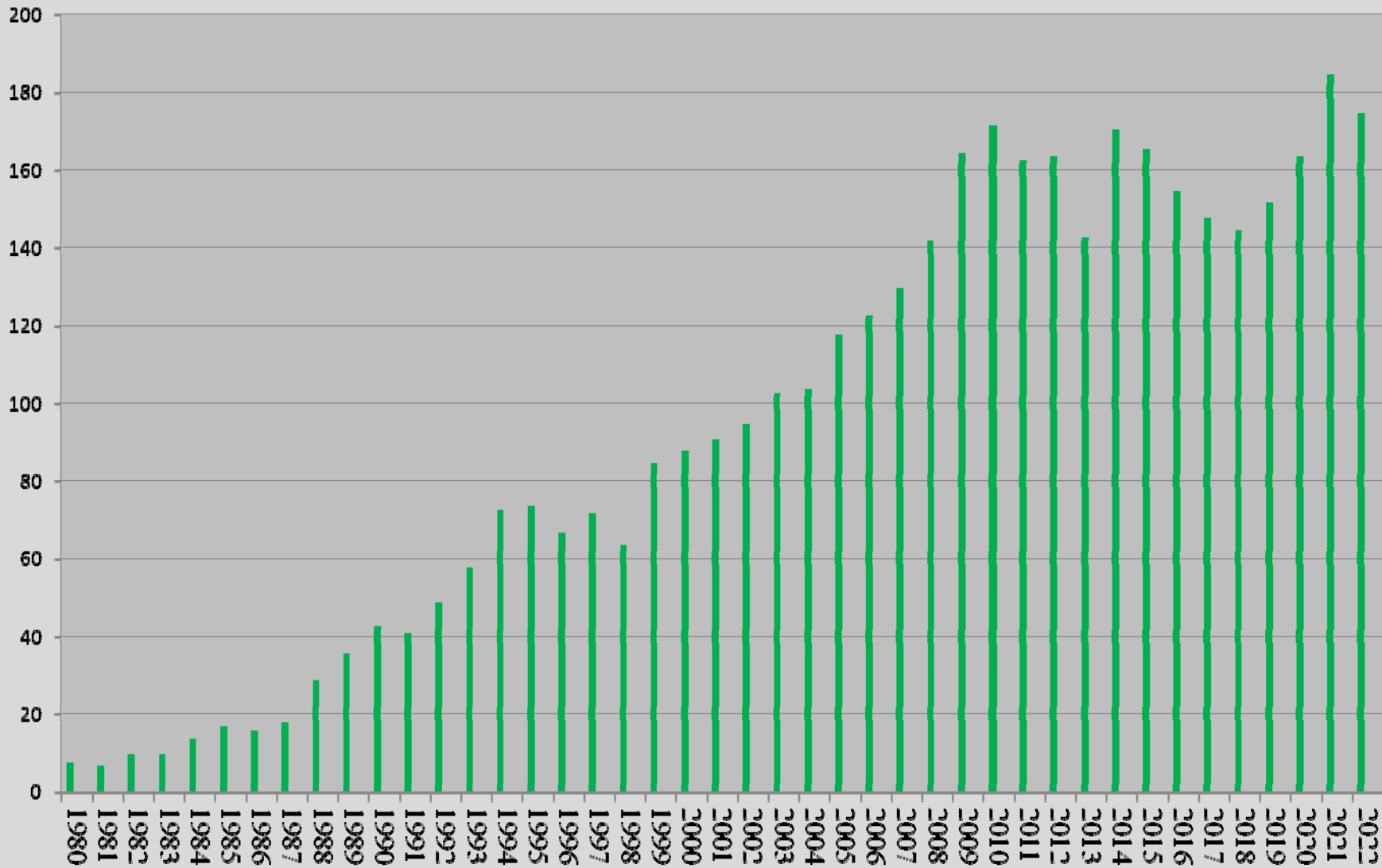
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3. Methods

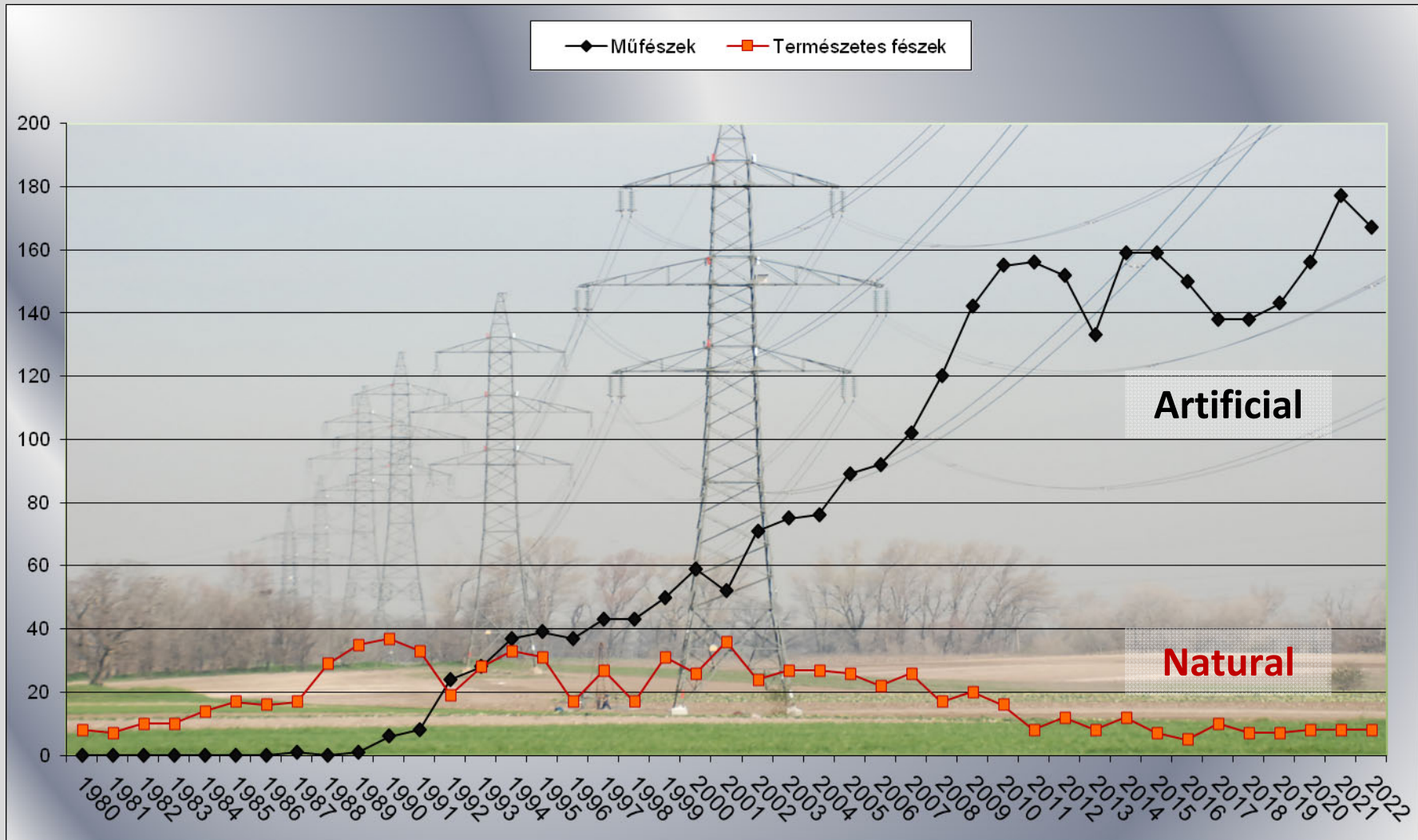
4. Results

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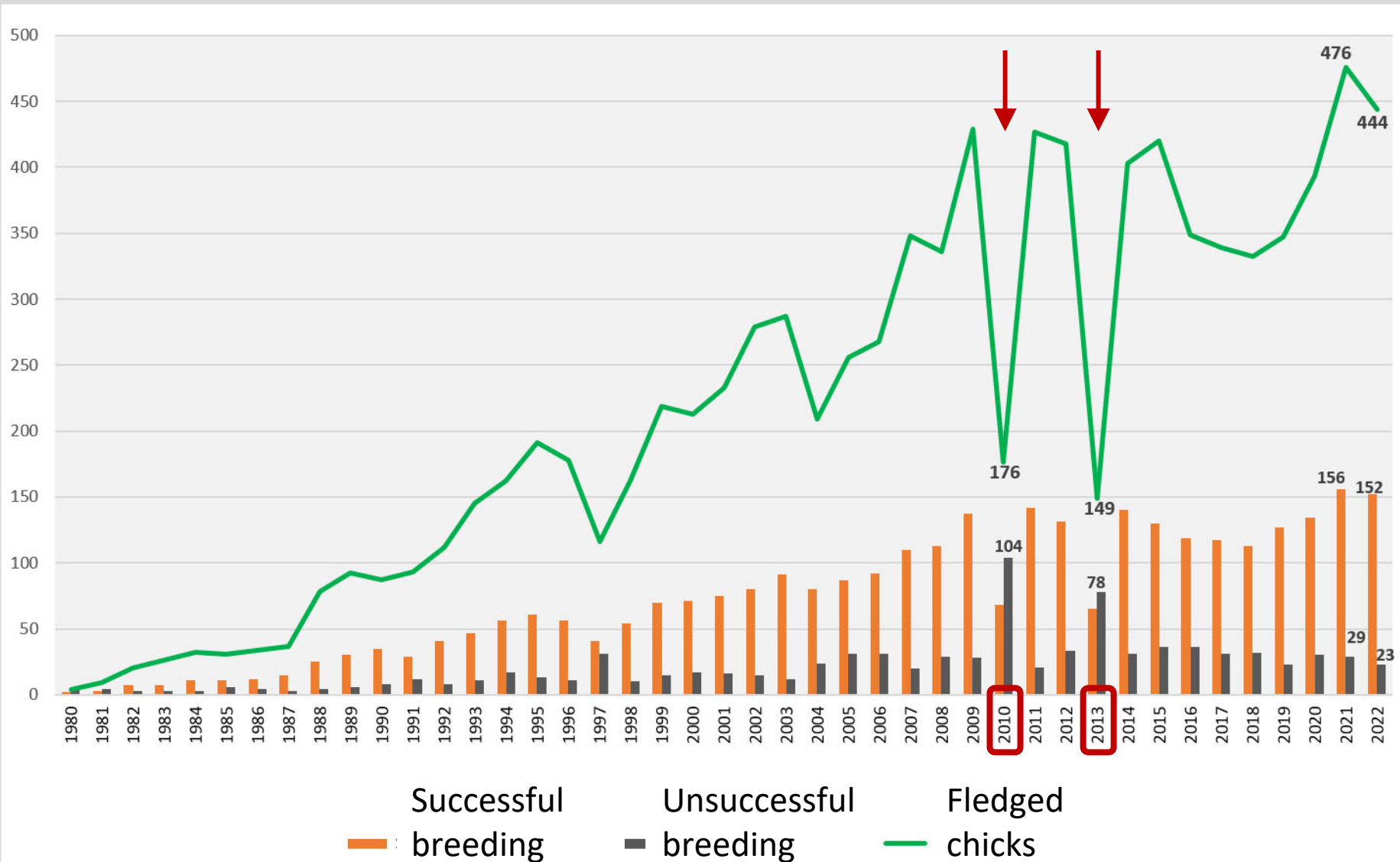
No. of nesting Saker Falcon pairs in Hungary 1980 – 2022



Change in occupancy of natural and artificial nests by Saker Falcons in Hungary (1980 – 2022)



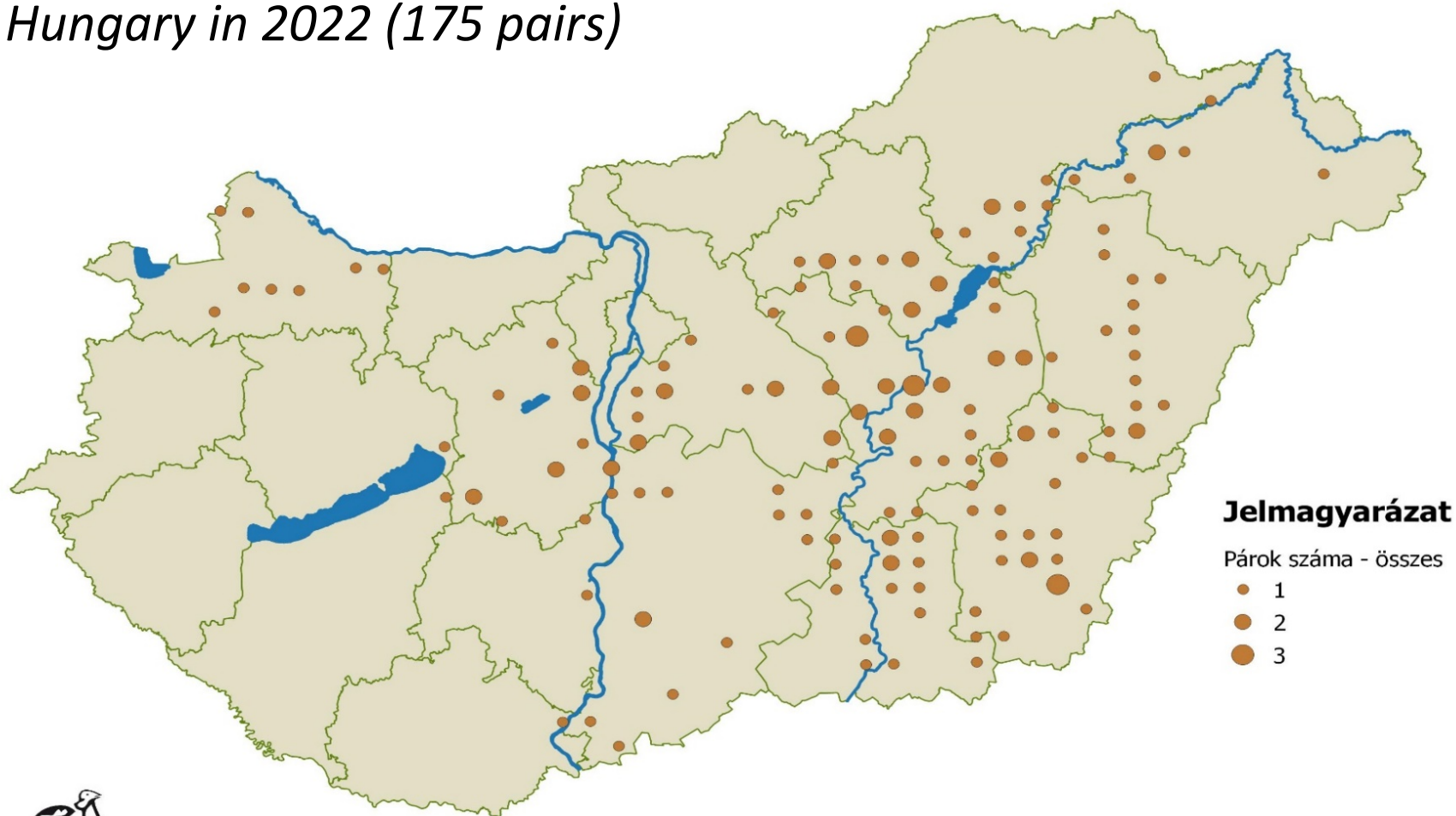
Change in breeding success of Saker Falcons in Hungary (1980 – 2022)



Extreme weather conditions



Distribution of Saker Falcons in Hungary in 2022 (175 pairs)



Magyar Madártani és Természetvédelmi Egyesület
Ragadozómadár-védelmi Szakosztály

Ringling (1951-2023)

Ringed SFs in HU:

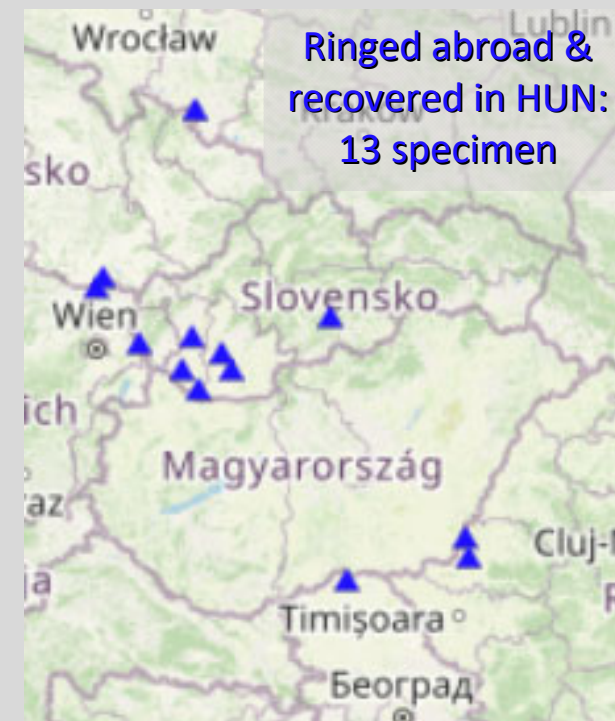
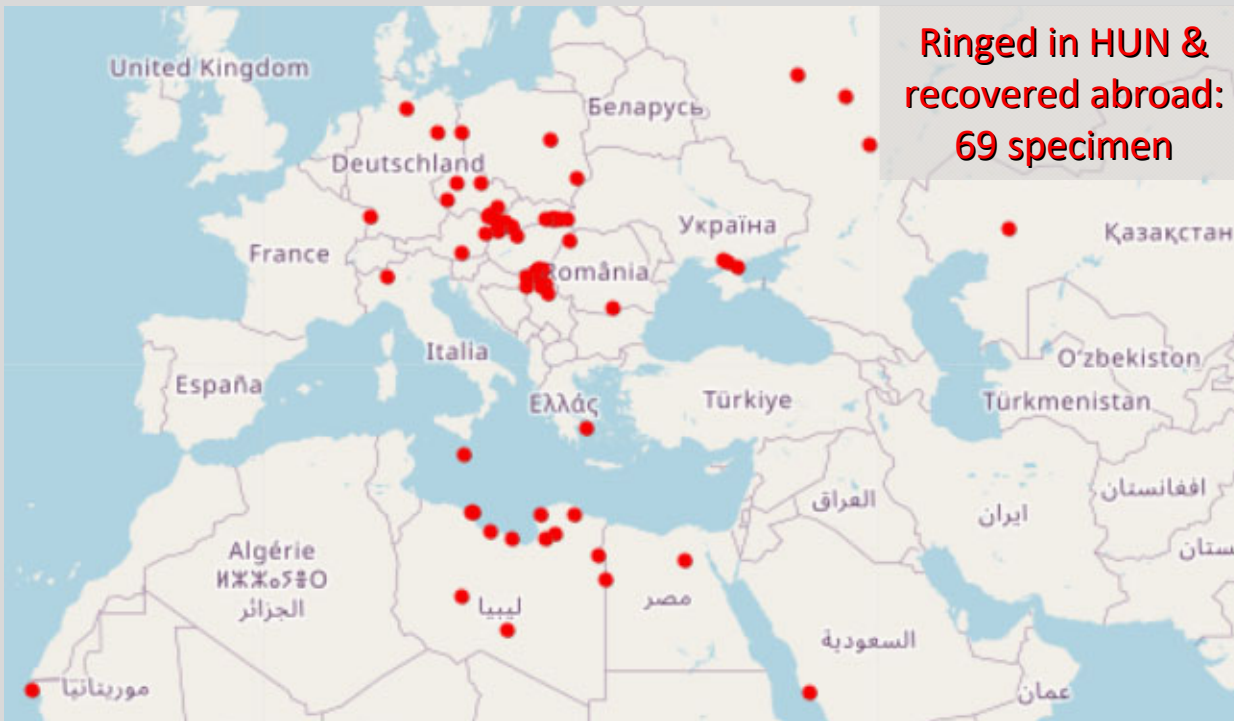
4441 (4302 chick)

Recovery of SFs ringed in HU:

204 (69 abroad) – 4.6% of ringed SFs

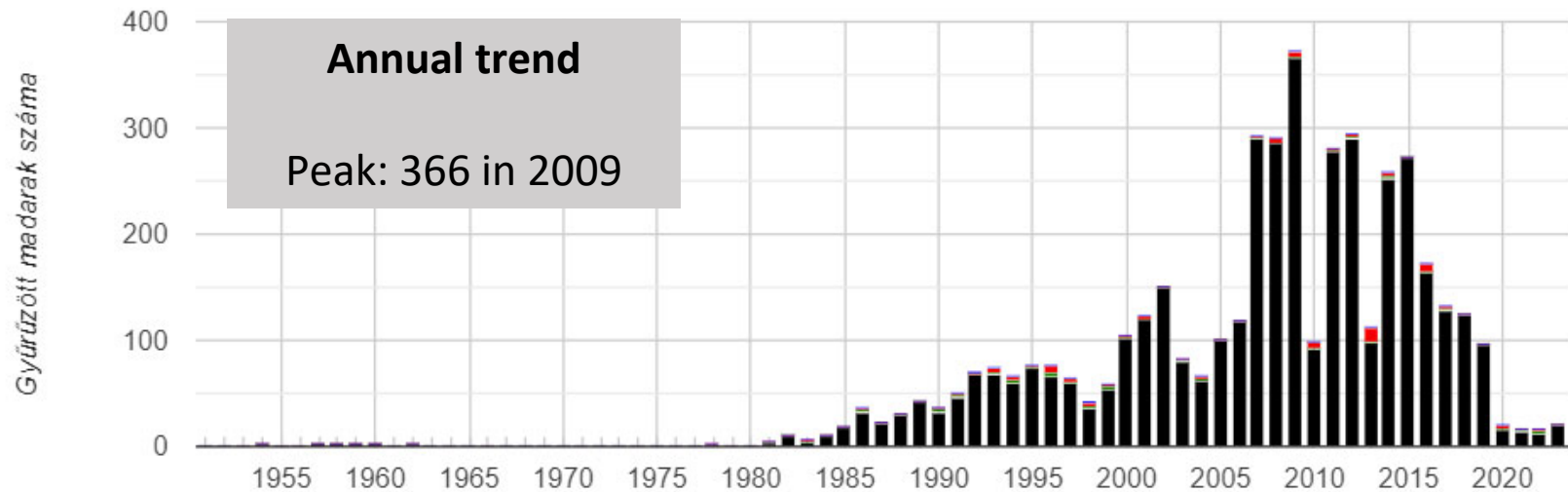
Furthest recovery: 4289 km (Mauritania)

Oldest recovery: 6825 days (18y 8m 5d)

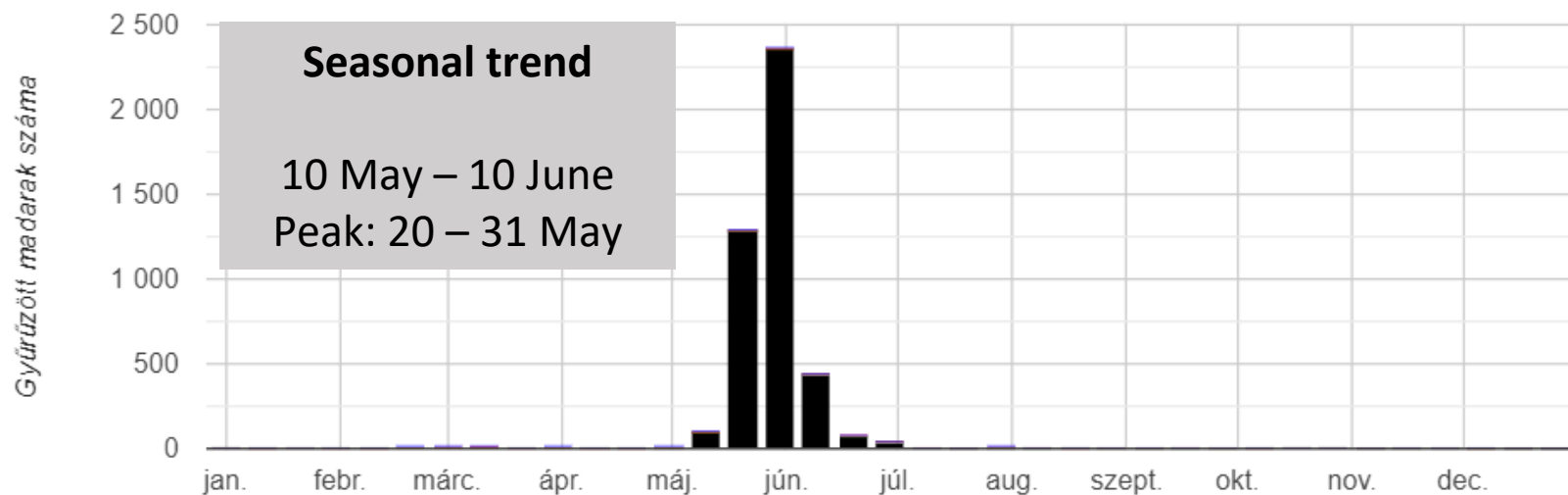


Ringling (1951-2023)

A Magyarországon megjelölt madarak évenkénti száma (1951-)



A Magyarországon megjelölt madarak (1951-) gyűrűzési ideje (10 napos összesítések)

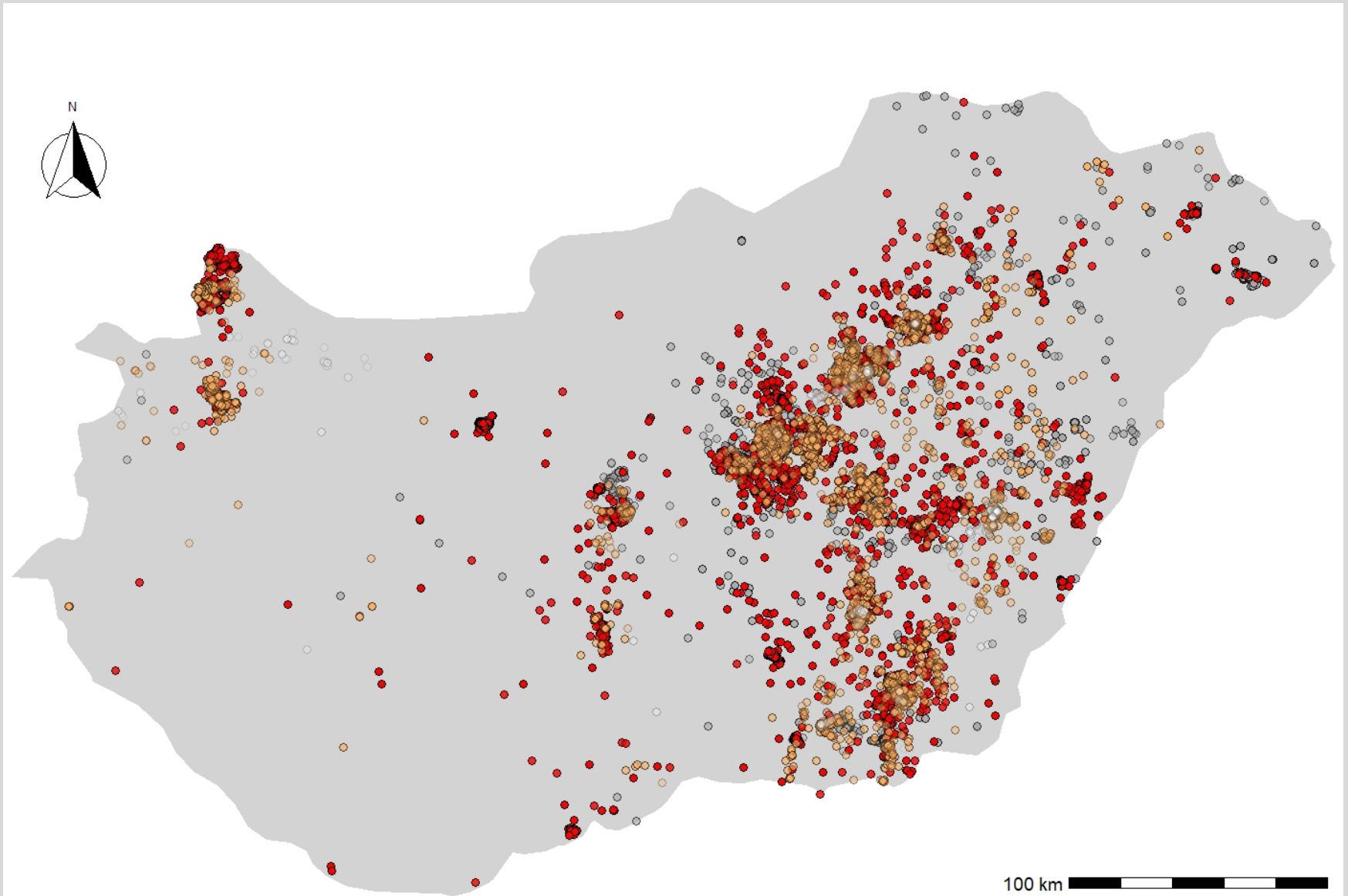


Dispersion and migration of Saker Falcons from Hungary

Kazakhstan, Belorussia, Portugal, Niger, Egypt, Saud-Arabia etc.

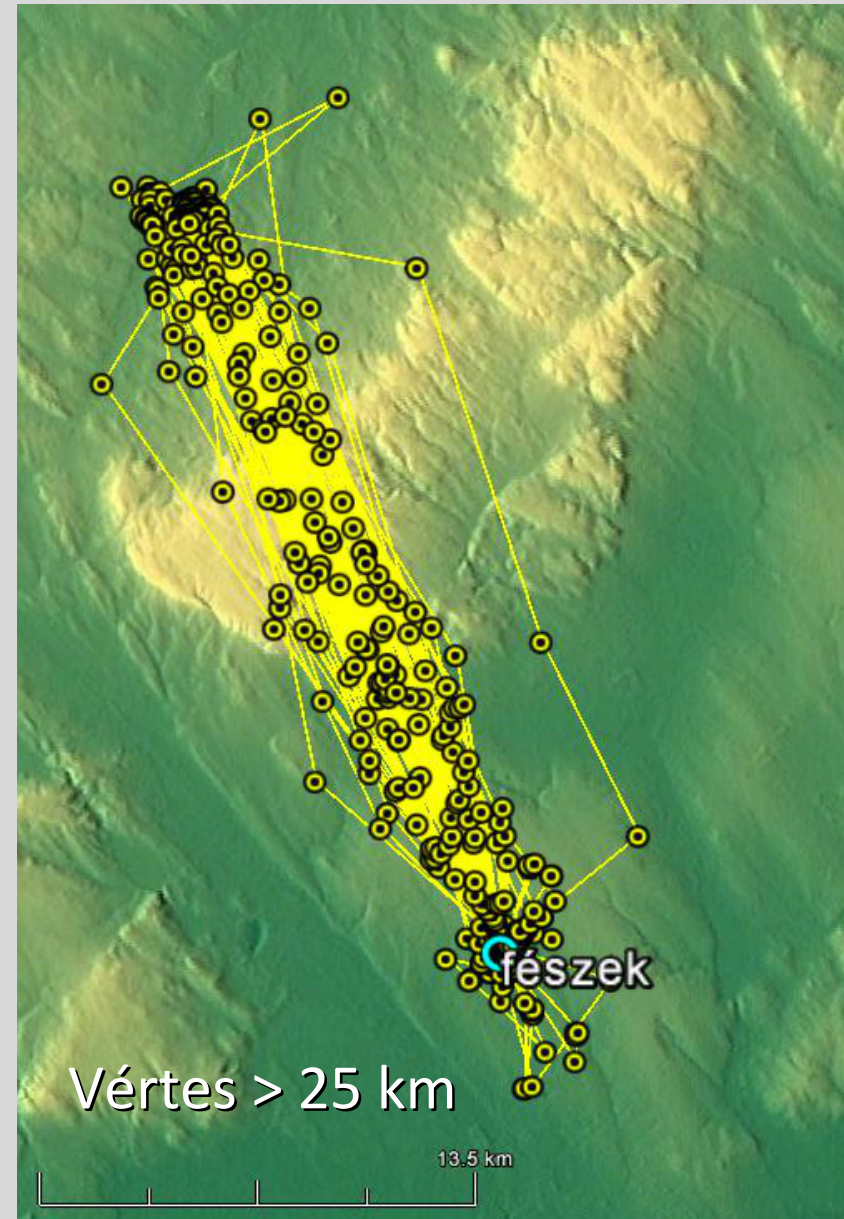
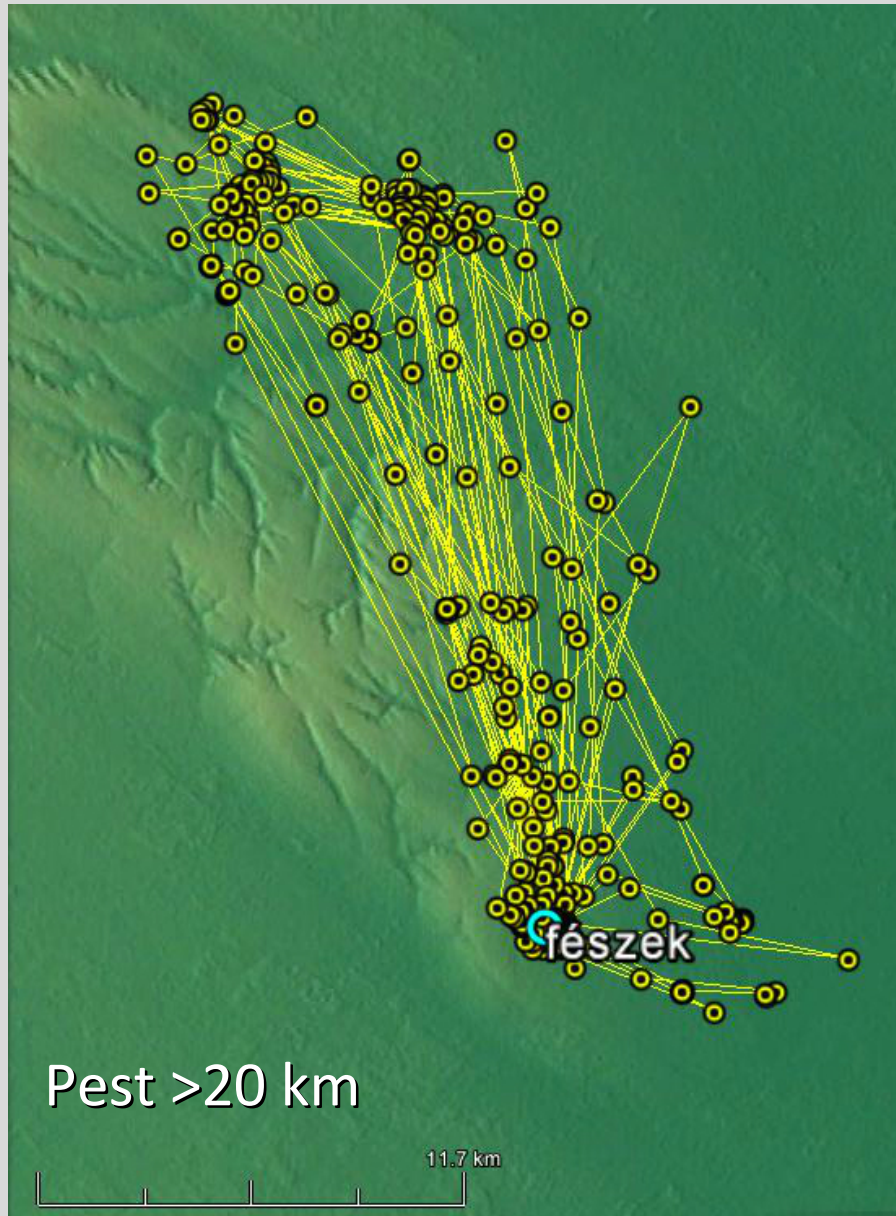


Dispersion of Saker Falcons in Hungary

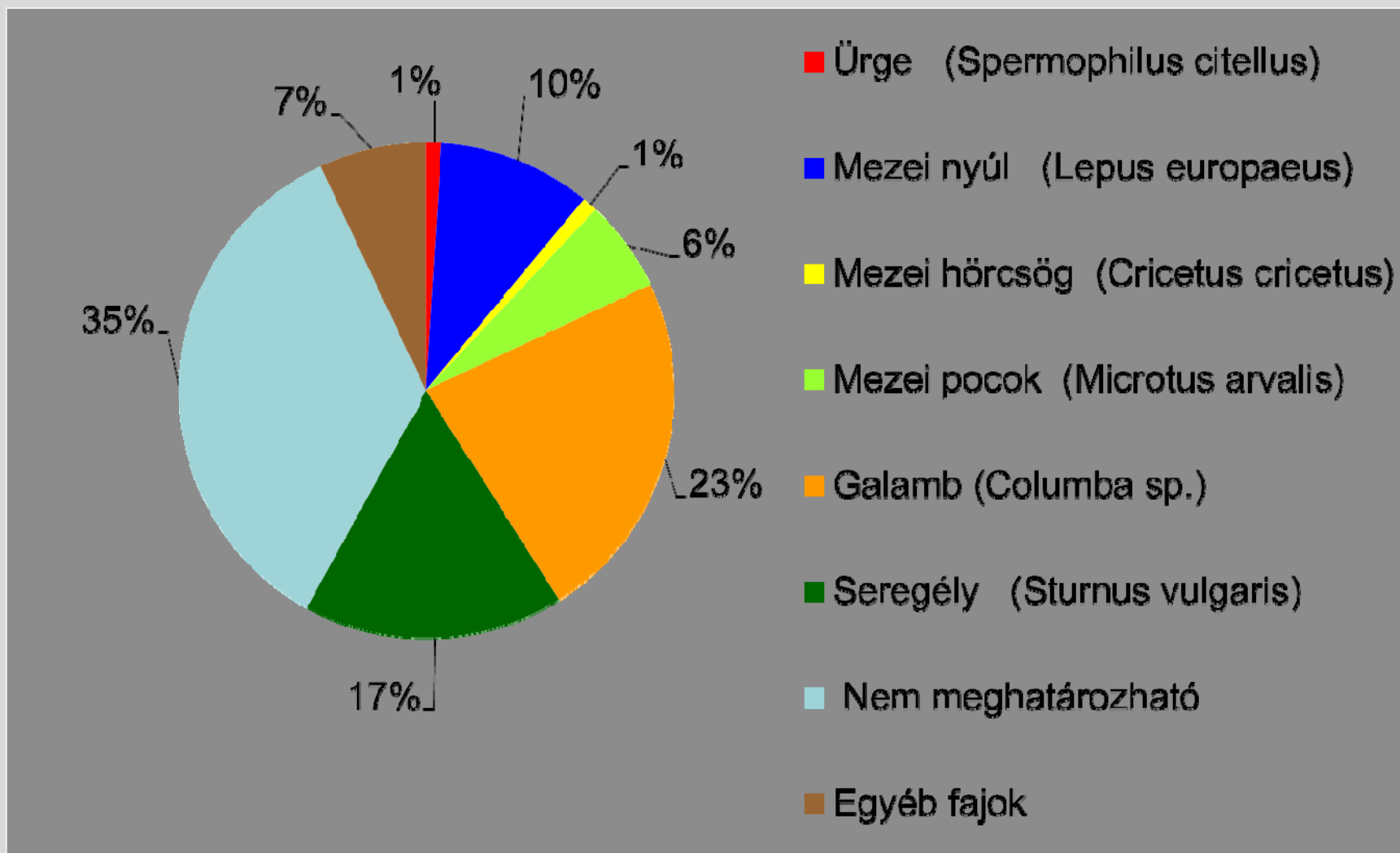


Habitat use in breeding territory of Saker Falcons

(adult males)

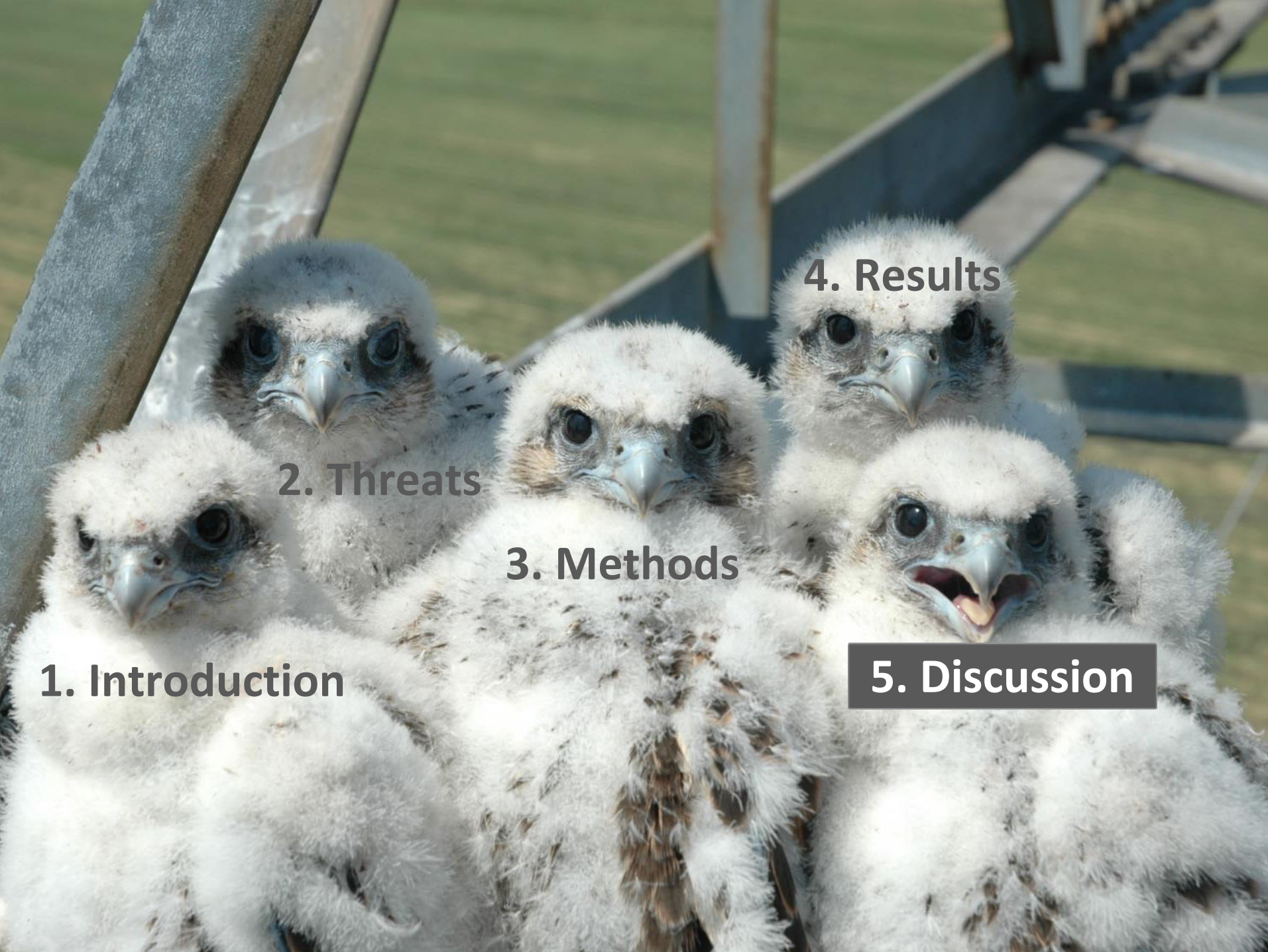


Diet analyses of Saker Falcons in Hungary by camera traps (2015 – 2018)



42 nests, 67 breeding, 3,603 prey items

1986 -1991: Columba sp. 52% + European Ground Squirrel 27%



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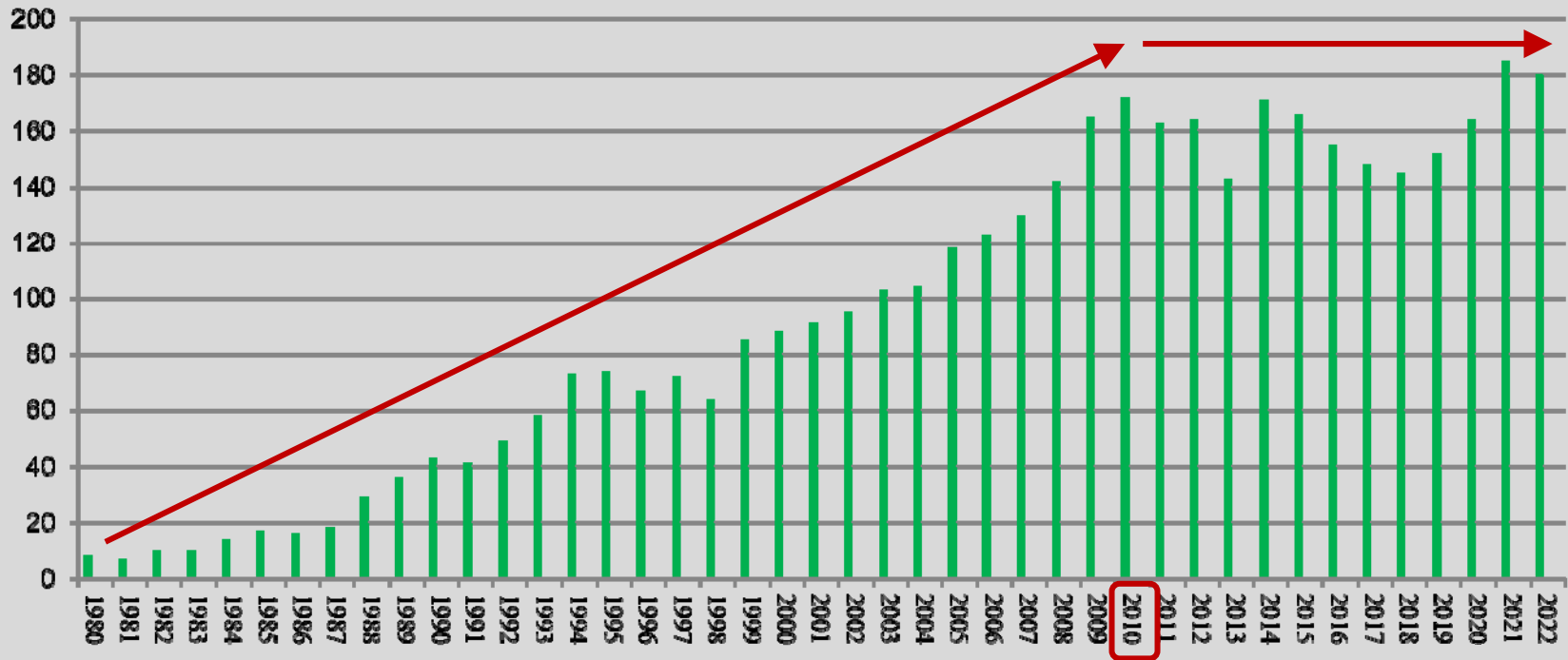
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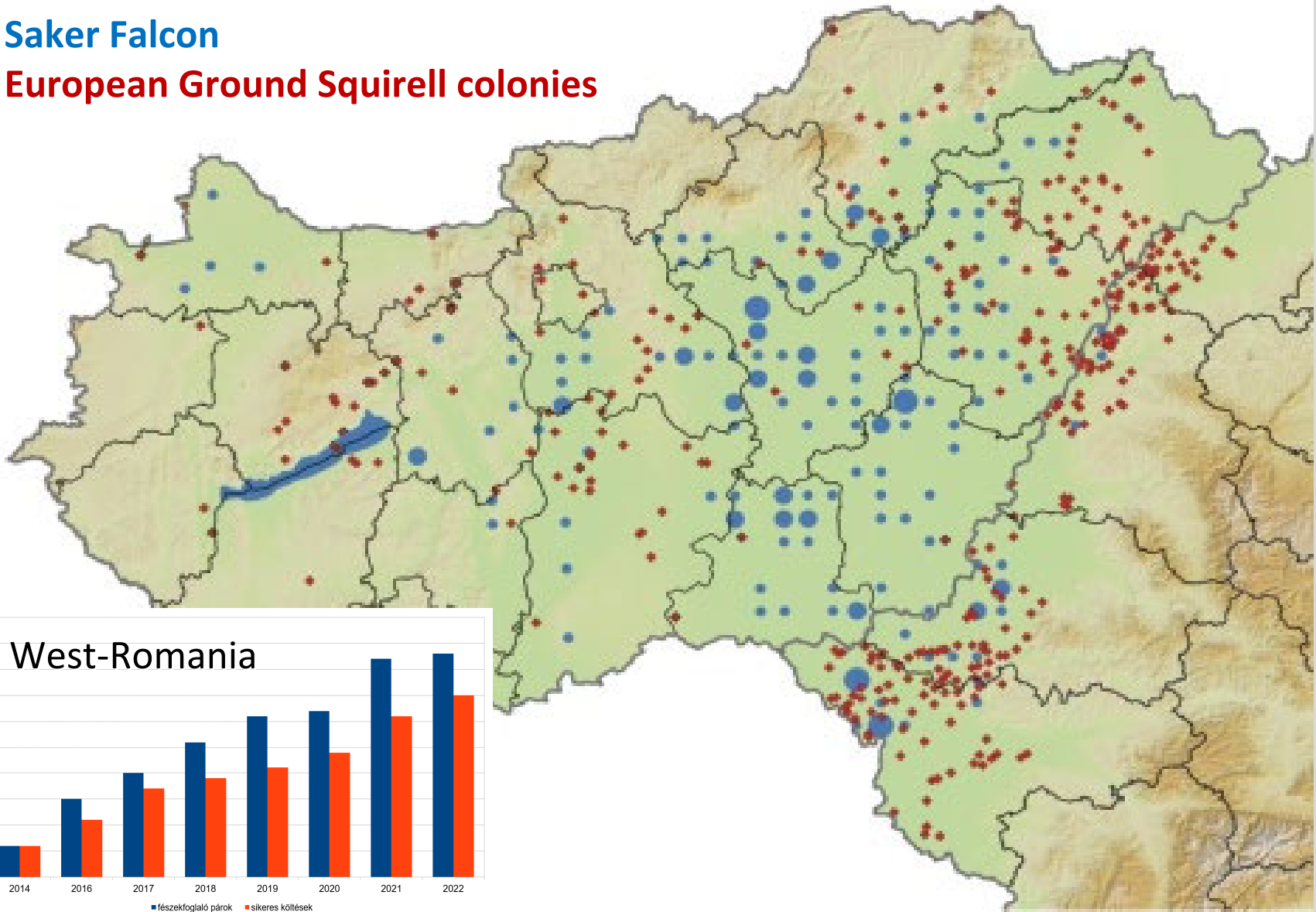
Nesting population of Saker Falcons (*Falco cherrug*) in Hungary between 1980-2022



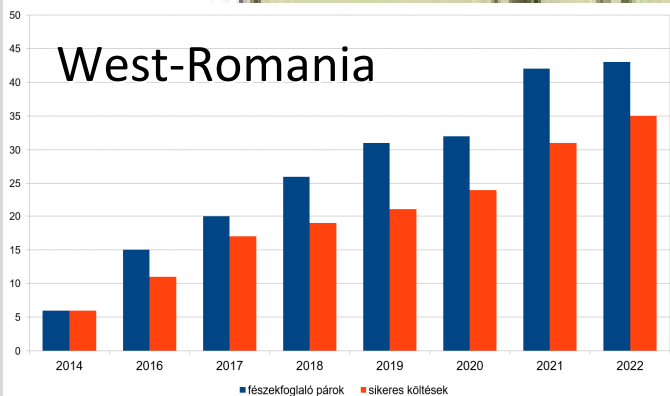
Increase in neighbouring countries (2017-2023): Romania, Serbia, Austria

Saker Falcon

European Ground Squirrel colonies



West-Romania





Ottlaka (Romania)
2020
chick

Tiszaalpár
(Hungary)
2022
breeding
106 km



Continuation of the Saker Falcon Conservation Program in Hungary

- **Monitoring**
 - breeding distribution & success
 - diet
- **Conservation**
 - Artificial nests
- **Research**
 - Habitat use
 - Mortality & toxicology (eggs, chicks, adults)
 - Effects of agricultural intensification
 - Interspecific competition (raven, peregrine, imperial eagle, white-tailed eagle)
 - Possible effects of electromagnetic fields



High-voltage pylon



Nest box

Ring

HABITAT

!!!

Satellite
tag

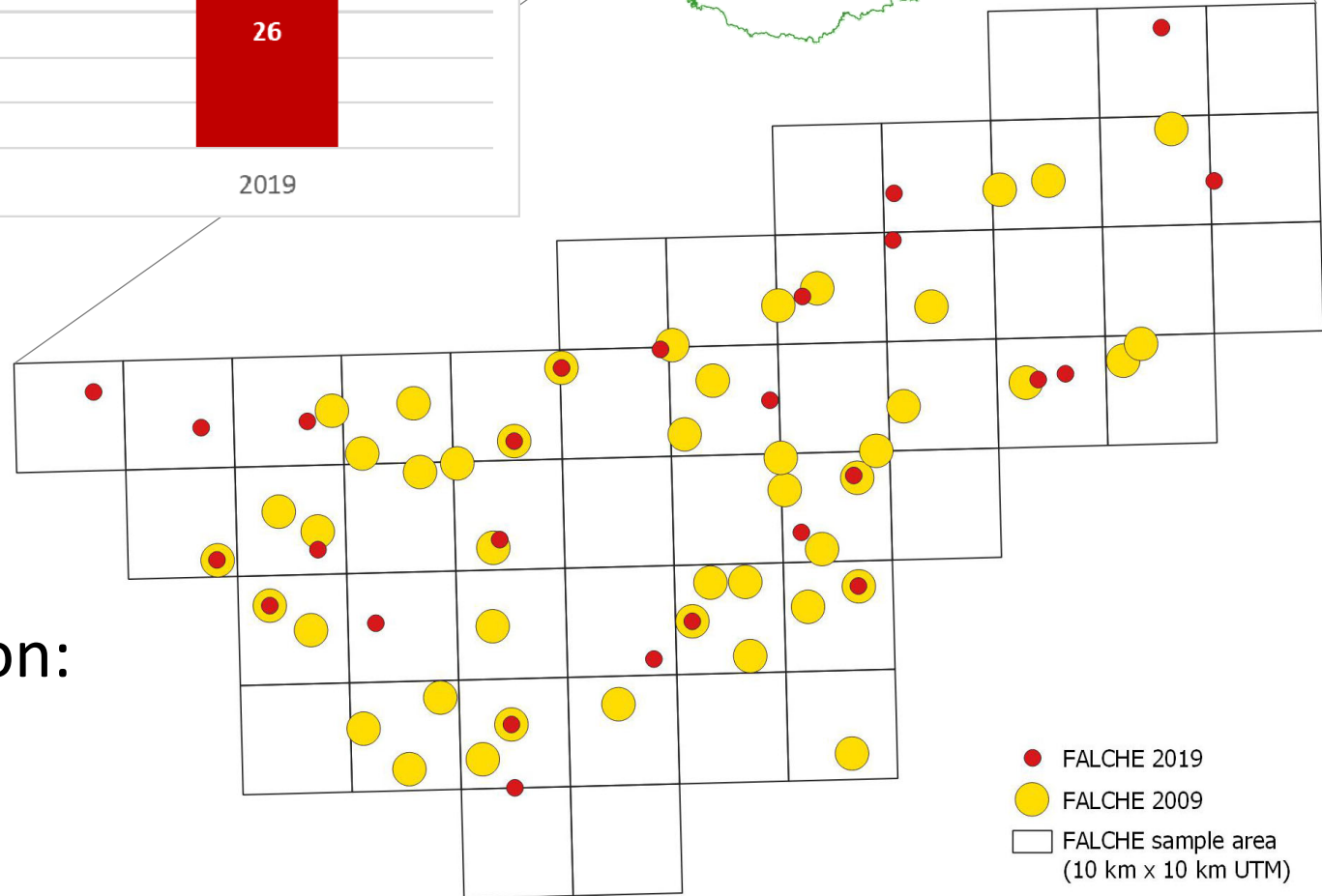
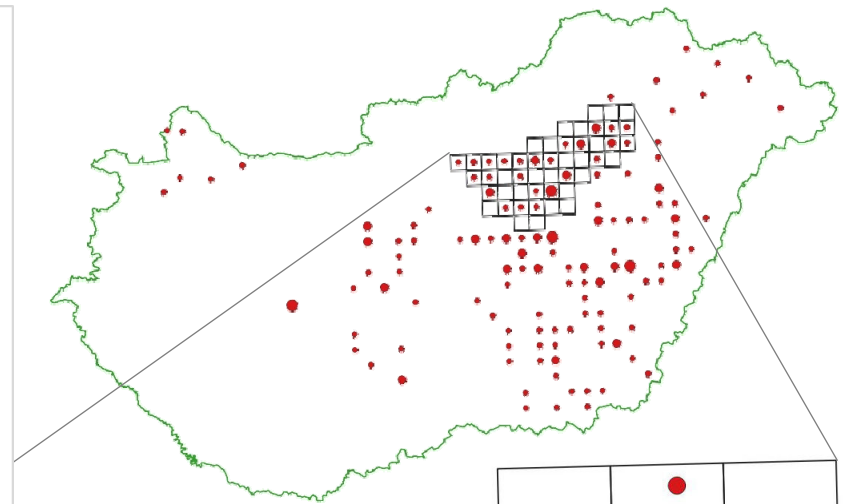
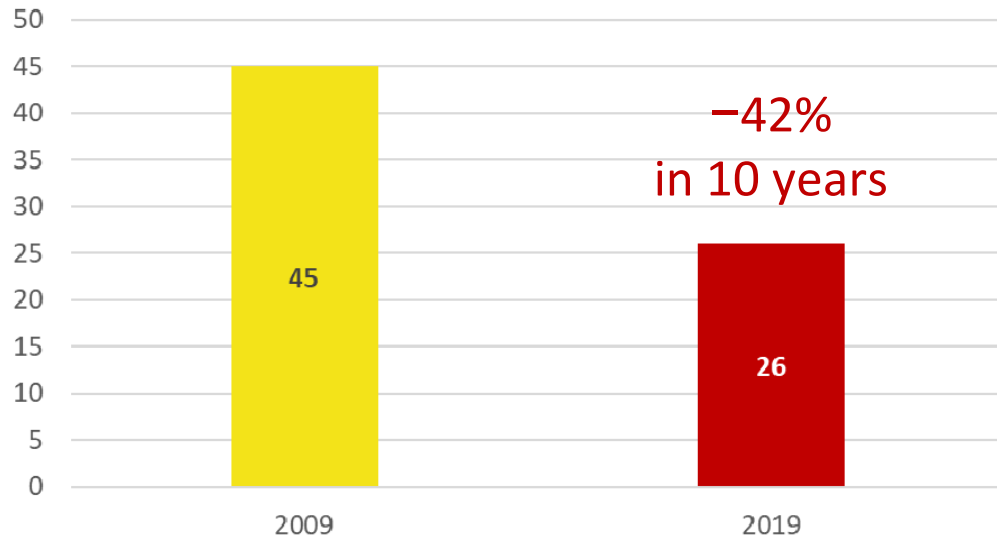
Camera trap

LIFE SakerRoads

Recovering the Saker Falcon population
of the North-Hungarian Plain

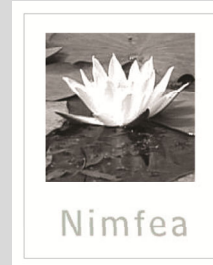
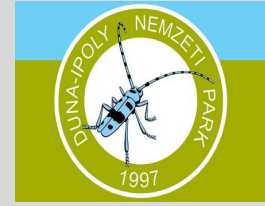


Nesting pairs of Saker Falcons in the North-Hungarian Plain (Jászság, Hevesi sík, Borsodi sík, 4800 km²)



Project duration:
2023-2028

ACKNOWLEDGEMENT



Revír
Nonprofit
Kft.







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