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Control of Corvids in urban environment: applications in human-wildlife conflict management



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Introduction

- City = independent ecosystem (urban ecology)
- Since 60' appearance of the Hooded Crow has been observed in many European countries
- Reasons: diverse sources of food, nesting possibilities, no predators, wildlife management, habituation ability, ecological flexibility
- At present: HC is a permanent, common breeding species in Debrecen
- Moreover, really intensive population increase since 2000!



Corvus cornix



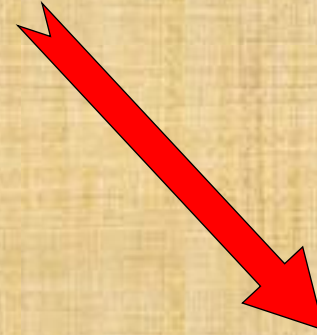
Research interests related to HC



**Colonization and
nest site selection**



**Study the territory size and motion
pattern → colour ring program**



Trapping experiment



Why we are trapping?



Local issue

Nagyerdő Stadium, 01.05.2014

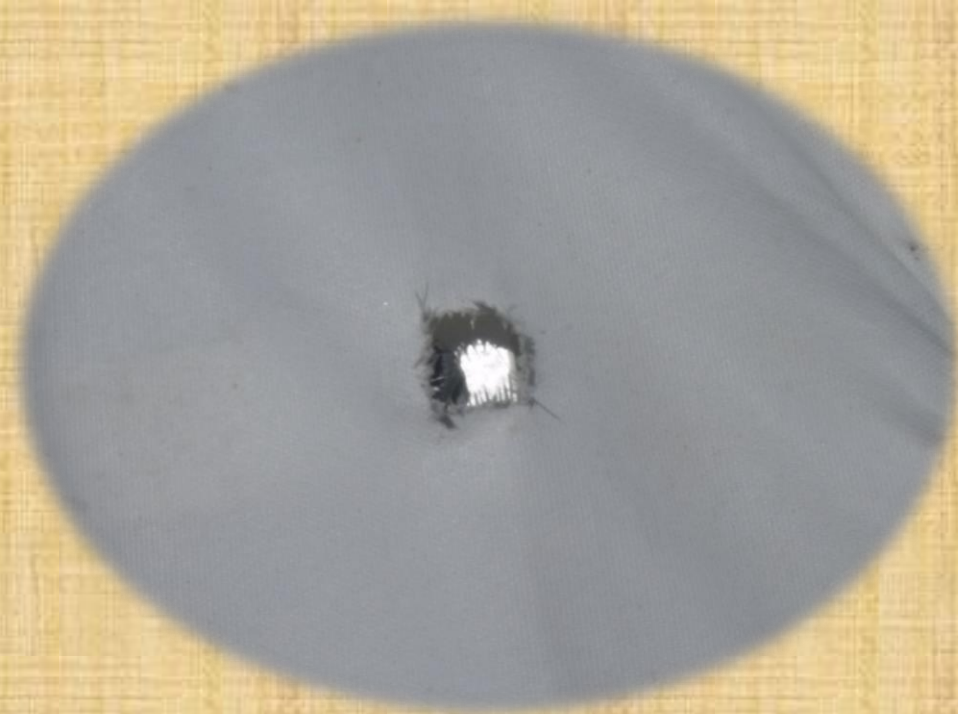
capacity: 20.000 seats; budget: 14.5 million USD



**16.000 m² really thin
but extremely strong foil roof**

2014-08-13 19:46:16





DAMAGES!

(198 holes)



Aim of the research

Probably the control/management of HC will be needed

→ Urban wildlife management

Testing different trap types for crows

Material and Methods

- Nov. 2016 – Feb. 2017 (104 days)
- Bösörményi Street Campus, UD
- tested four types of traps – 7 traps used!
- #1 bait
#2 bait & live decoy bird were used
- set 25 m apart from each other
- the traps were rotated every week
- bait & food: bread, kitchen leftovers
- traps were checked after sunset
- caught birds were banded & release
- we noted the weather conditions

Legal background



Bern Convention, 4th Appendix

Hunting Act 1996/LV

Nature Conservation Act 1996/LIII

Animal Protection Act 1998/XXVIII

KÖM regulation, 2001/13 (V.9.)

FMV regulation, 2004/79 (V. 4.)

Used trap types



Larsen trap (side door)



Larsen trap (upper door)



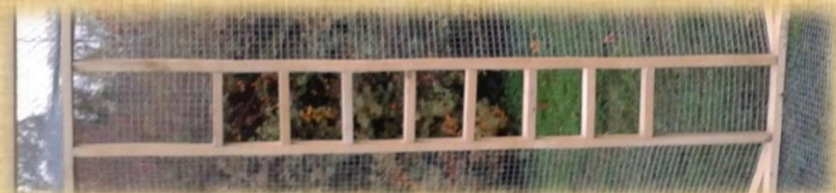
Ladder entrance trap

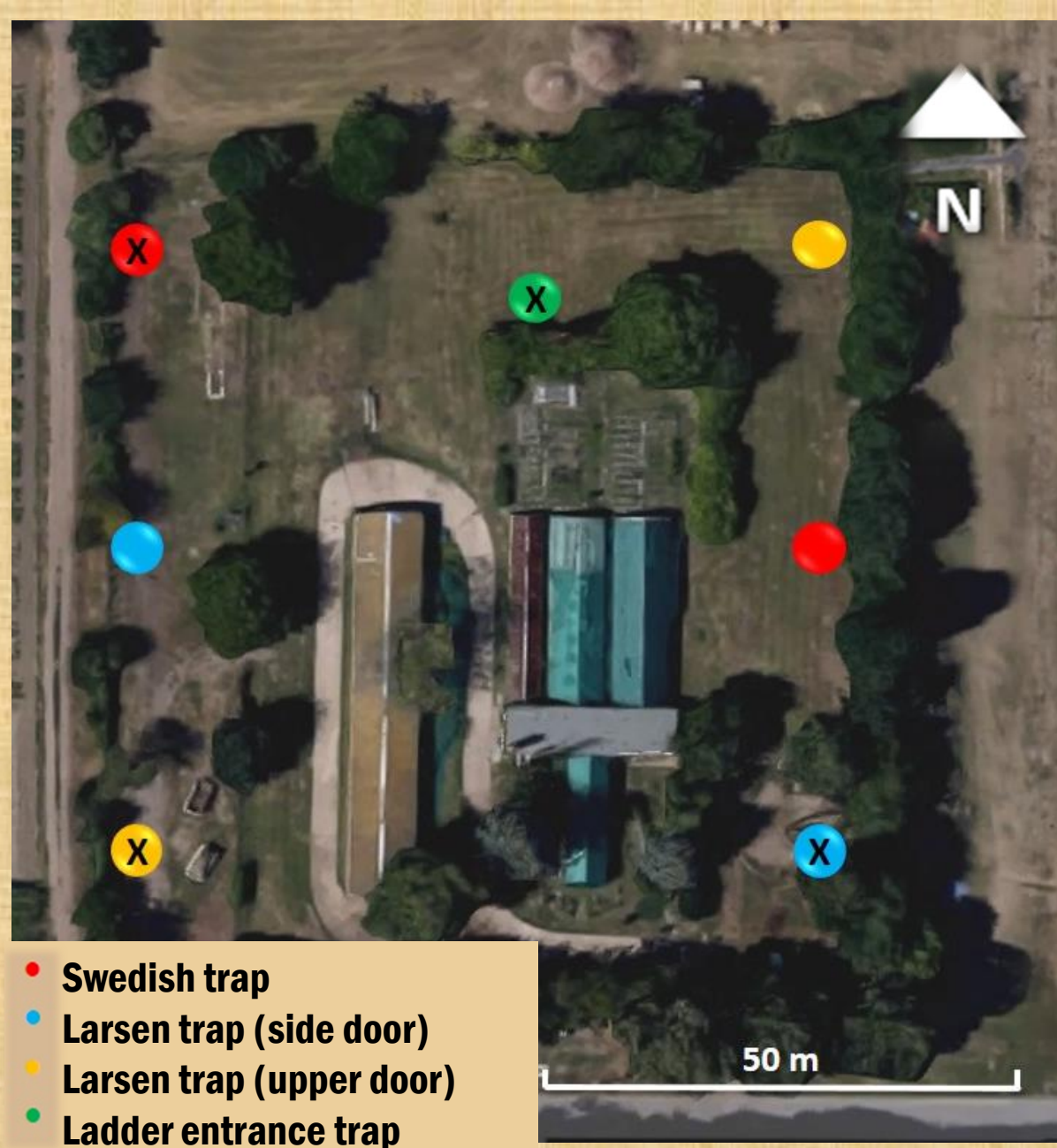
2x2x2.5 m

16x20 cm



Swedish trap





- Swedish trap
- Larsen trap (side door)
- Larsen trap (upper door)
- Ladder entrance trap

X: decoy bird

Results



The caught species, occurrence.

The number of recaptures is given in brackets.

Species

Hooded Crow	<i>Corvus cornix</i>	105 (77)
Rook	<i>Corvus frugilegus</i>	267 (26)
Magpie	<i>Pica pica</i>	2
Jackdawn	<i>Corvus monedula</i>	2
Blackbird	<i>Turdus merula</i>	5
Black Redstart	<i>Phoenicurus ochruros</i>	3
Great Tit	<i>Parus major</i>	2
Blue Tit	<i>Parus caeruleus</i>	1
Common Buzzard	<i>Buteo buteo</i>	1
Red Squirrel	<i>Sciurus vulgaris</i>	1



Success of the different trap types.

Trap type	Caught bird
Ladder entrance trap	177
Swedish trap	34
Swedish trap with decoy bird	58
Larsen trap (side-door)	25
Larsen trap (side-door) with decoy bird	71
Larsen trap (upper-door)	8
Larsen trap (upper-door) with decoy bird	13

★ 177

★ 92

★ 96

Age distribution of captured HC and Rook

Species	Juvenile	Adult	Unknown	Total
Hooded Crow	28	0	0	28
Rook	129	112	0	241



Number of recaptures and trap type of first capture and recapture of some example individuals

	ID	No. recaptures	First captured by	Recaptured by		
				Ladder	Larsen	Swedish
Hooded Crow	#14	29	Larsen	26	1	2
Hooded Crow	#4	28	Ladder entrance	26	1	1
Hooded Crow	#7	17	Larsen	15	2	0
Rook	#199	9	Swedish	0	7	2
Rook	#30	4	Ladder entrance	0	4	0

Conclusion

- **location selection (food source, safety)**
- **vitality of decoy bird is important (behaviour)**
- **maintenance of traps**
- **timing of trap checking → just in the darkness!**
- **weather condition → temperature: neutral effect**
snow cover: positive influence

Conclusion

Side-opening Larsen, the Swedish and the ladder entrance trap
were the most effective in urban environment.

The trapping could be a useful method to reduce the urban crow population!

Useful to: urban management/planning, nature conservation, wildlife management.

Good method for any research purpose.





Thank you for your attention

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