



Raccoon (*Procyon lotor*) in Hungary: signs of a slowly emerging population

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RACCOON – AN INVASIVE SPECIES

- Nowadays the raccoon (*Procyon lotor*) is distributed across mainland Europe as a result of escaped pets and introductions
- The spread of this invasive species can threaten the native ecosystems
- Invasion should be managed
- The establishment of local populations should be prevented at the first phases

STUDY AIMS

- We aim to provide the basis for future raccoon-related research and management implications
- In this presentation we summarise:
 - ❖ The most important knowledge about the occurrence of the species in Hungary, using:
 - National Game Management Database (NGMD)
 - Information, data and samples from hunters
 - ❖ Temporal changes in the distribution of observations and the number of hunted individuals
 - ❖ Some data derived from the necropsy of the collected animals
 - ❖ Analysis of sex ratio and young/adult ratio in a small stable population

METHODS 1: National Game Management Database

- Every year all game management units in Hungary (1450 units of 5-6000 ha average size) submit their report statistics and plans (including bags and estimated population sizes of hunted species)
- 30-year data series in a comprehensive system
- Raccoon can be hunted during the whole year in Hungary (considered as pest)
- Temporal changes in the raccoon distribution and bag were analysed
- <http://ova.info.hu/index.html>



METHODS 2: Samples collected by hunters

- Photo documentation must be taken on the hunted raccoon,
which must be sent to our university (to the NGMD)
- The carcass must be kept for two working days
after sending the photo documentation
- Opportunity to contact the hunters directly
and asking for the sample and more information
- Necropsy of the collected animals

METHODS 3: Investigating a small established population

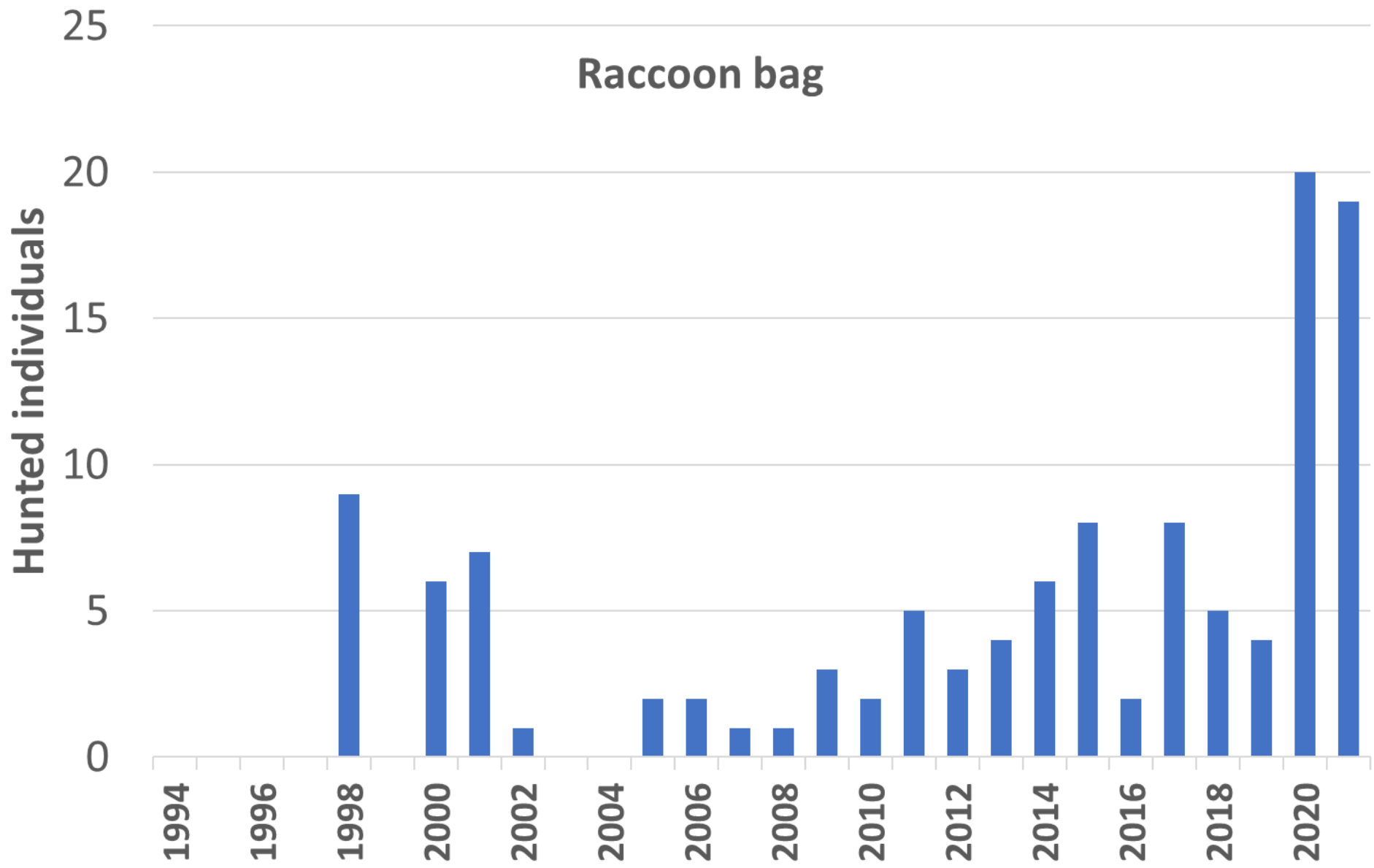
- Near to Gödöllő, in Pest county, there is a hunting unit where in the last decade raccoon was continuously observed and hunted
- Hunting bag data were analysed (sex ratio, age groups, seasonality)
- Cameratraps and video materials were checked

Raccoon habitat

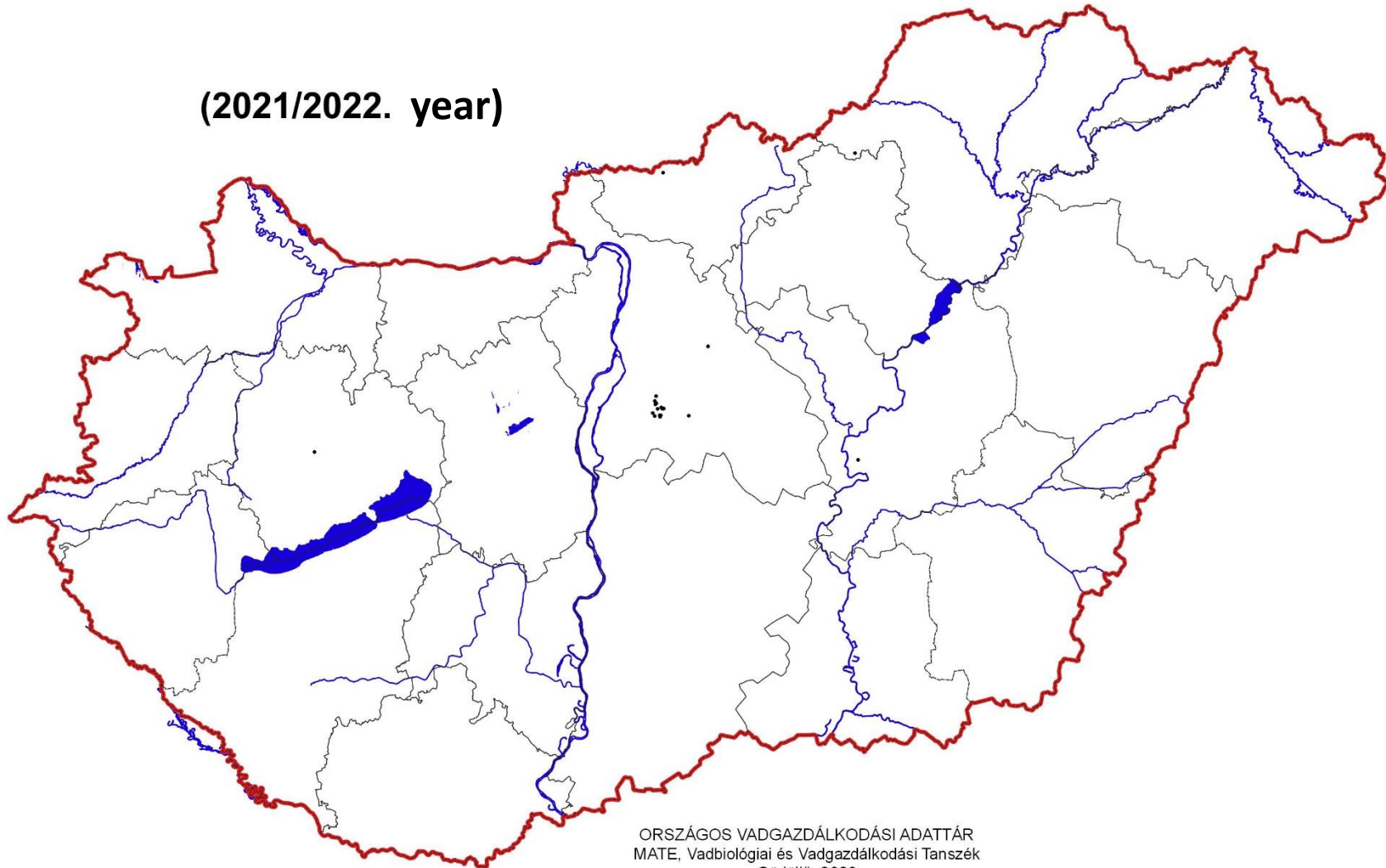


RESULTS 1: Hungarian Game Management Database

- The raccoon appeared in the bag in 1998 with 9 specimens
- Since then it was continuously present with a bag less than 10 specimens
- The latest hunting bag of raccoon was 19 individuals in the 2021/2022 period
- The occurrence of the species is sporadic
- The most of the individuals were shot in the central part of Hungary,
near to Budapest in Pest county



(2021/2022. year)



ORSZÁGOS VADGAZDÁLKODÁSI ADATTÁR
MATE, Vadbiológiai és Vadgazdálkodási Tanszék
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Raccoon bag distribution in Hungary 1998-2022

one point=one shot

RESULTS 2: Samples collected by hunters

- We have received many photos on the hunted animals and obtained several carcasses from the hunters from different regions of the country for further examinations (about 20 individuals).



Examination of carcasses

- 5-6,5 kg for both, males and females
- 8,9 kg for a big male
- 45-55 cm of body length
- 25 cm of tail length
- 43-160 g stomach content (with stomach)
- 28-82% kidney fat indices (less than 100%, not a perfect condition)
- No signs of reproduction in females
- DNA samples were collected



RESULTS 3: Hunting bag analysis of a small population

- 42 individuals have been culled between 2015 and 2022
- 29 adults and 13 juveniles
- The sex ratio of males and females was 1:1 for adults
but 5:1 in case of juveniles
- 55% of the raccoons were hunted between May and July,
including 62% of all juveniles

Raccoons around the baiting site



Conclusions and future directions

- Raccoon slowly settles stably in the central part of the country
- Juveniles are also present, reproducing population
- Intense intervention has to be maintained to reduce the population at this initial phase of its predicted faster spread and population boom
- Within the framework of our ongoing project on invasive species we plan to collect data:
 - on the urbanisation,
 - nest predation,
 - diet composition,
 - genetic origin and relatedness of the species in Hungary

Thank you for your attention!



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