

Using genetics to infer the colonisation histories of the raccoon and its *Baylisascaris procyonis* roundworm parasite in Western and Central Europe



Foto: N. Osten Sacken



Foto: A. Schleimer

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MUSÉE NATIONAL
D'HISTOIRE NATURELLE
LUXEMBOURG

Invasive Species

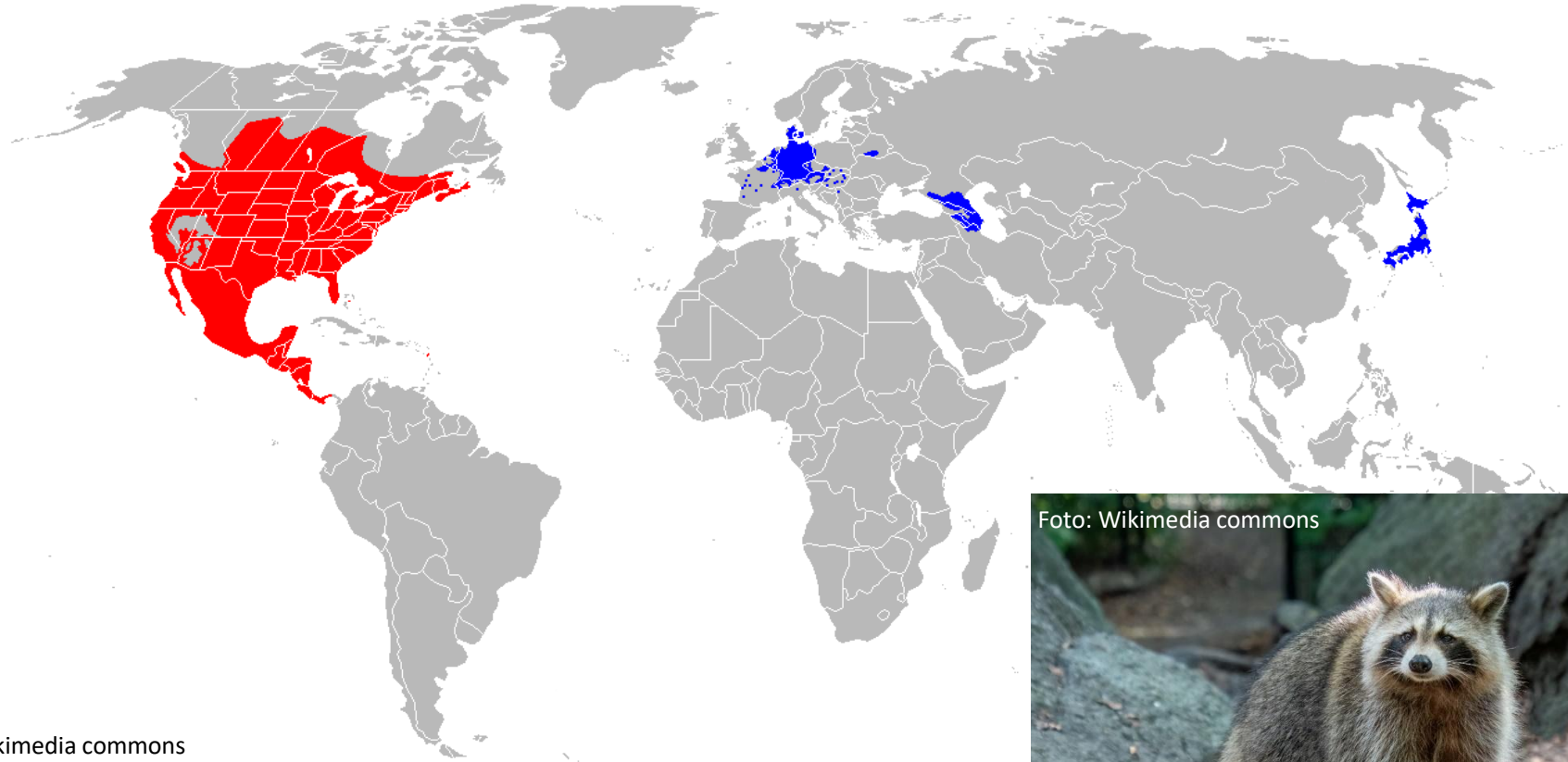
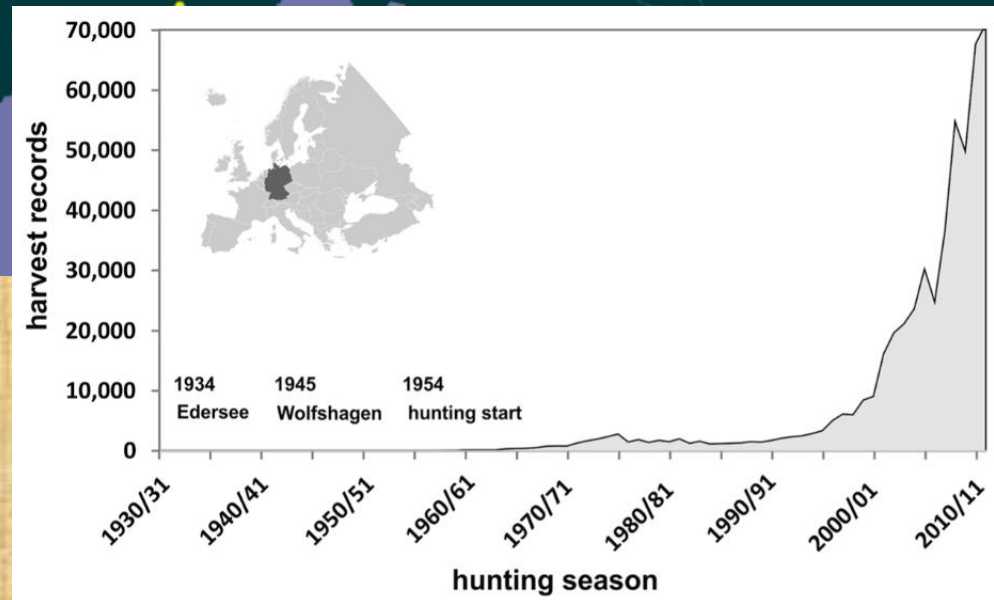
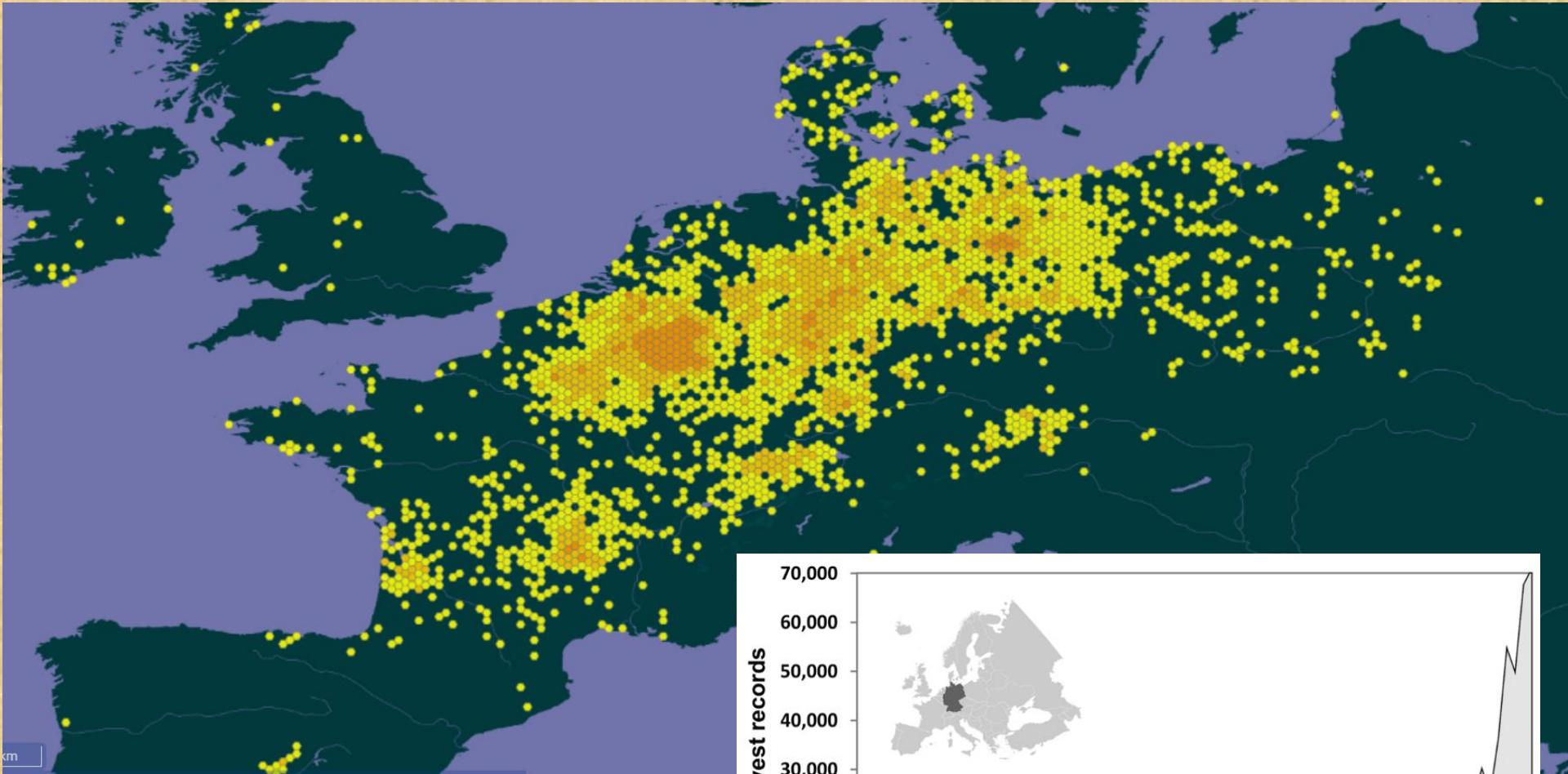
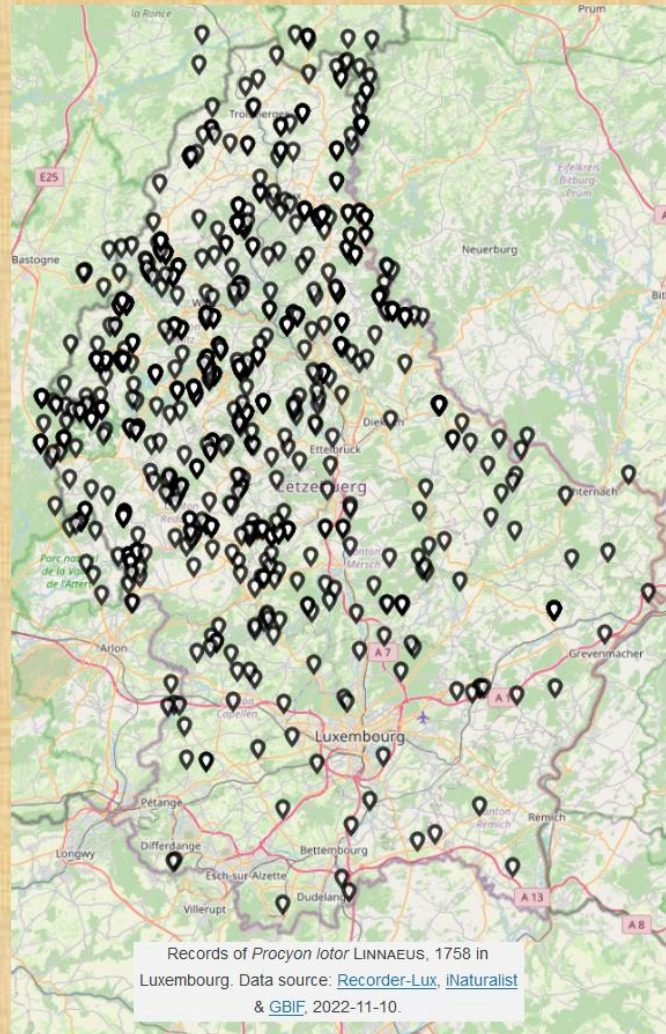


Foto: Wikimedia commons

Invasive Species



Luxembourg



High densities in settlements

- Raccoons are becoming more numerous and are spreading
- Frequent contact between raccoon & humans (& pets)
- Pathogens that can be transmitted to humans (& pets).



Foto: diana/fotolia.com



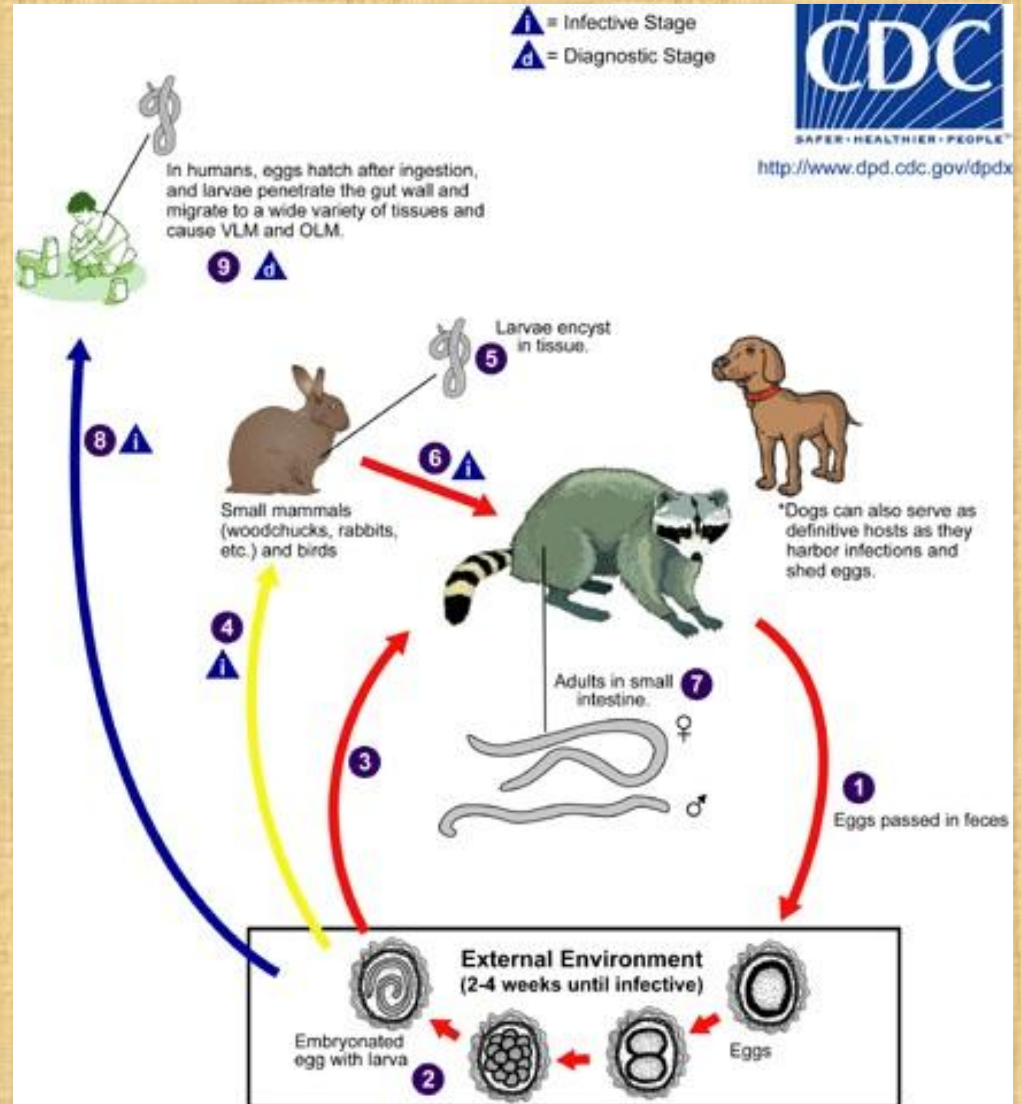
Foto: debster/fotolia.com



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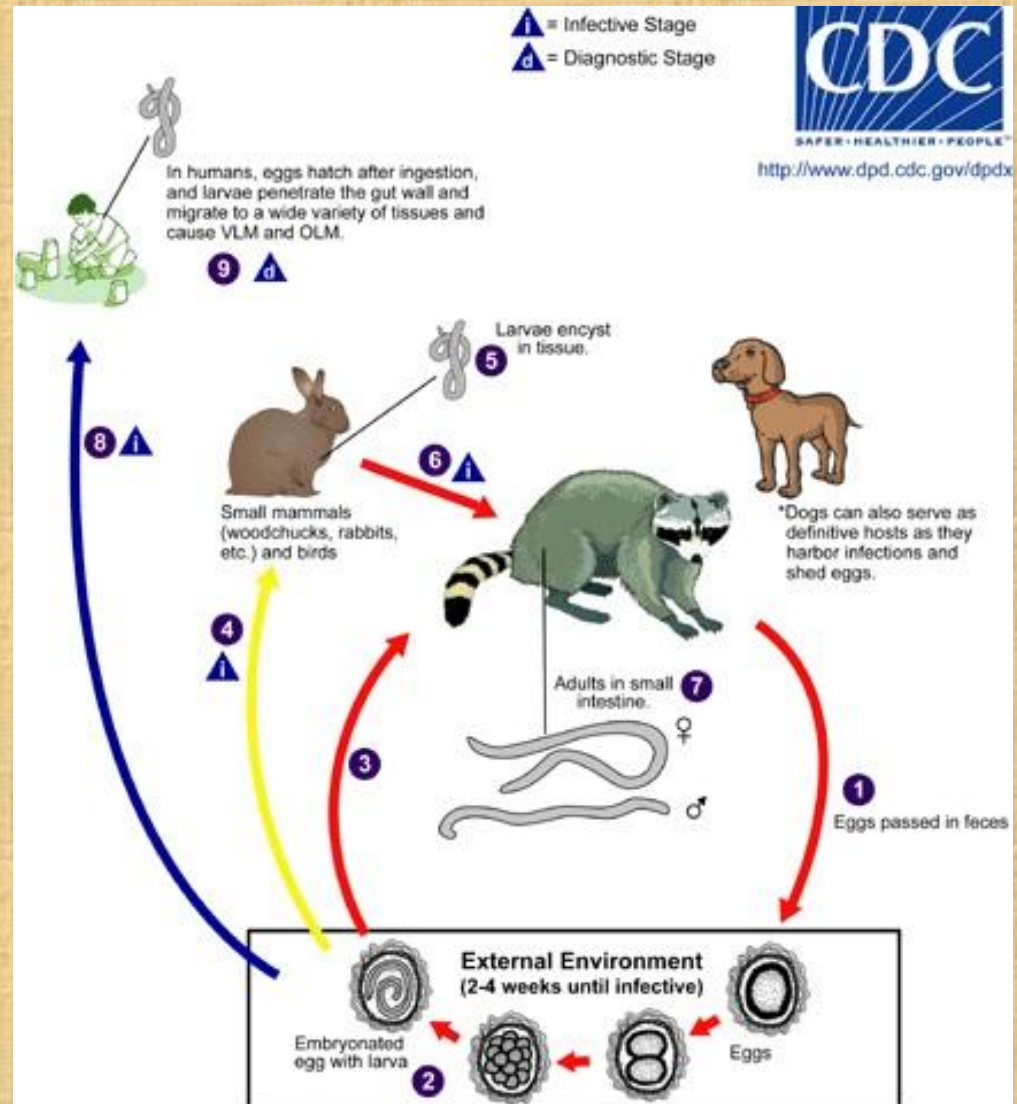
Raccoon roundworm



Raccoon roundworm



USA: <10 lethal cases per decade
Europe: one non-lethal case



Emerg. Infect. Dis. 2020 Apr; 26(4): 821–823. doi: [10.3201/eid2604.191670](https://doi.org/10.3201/eid2604.191670)

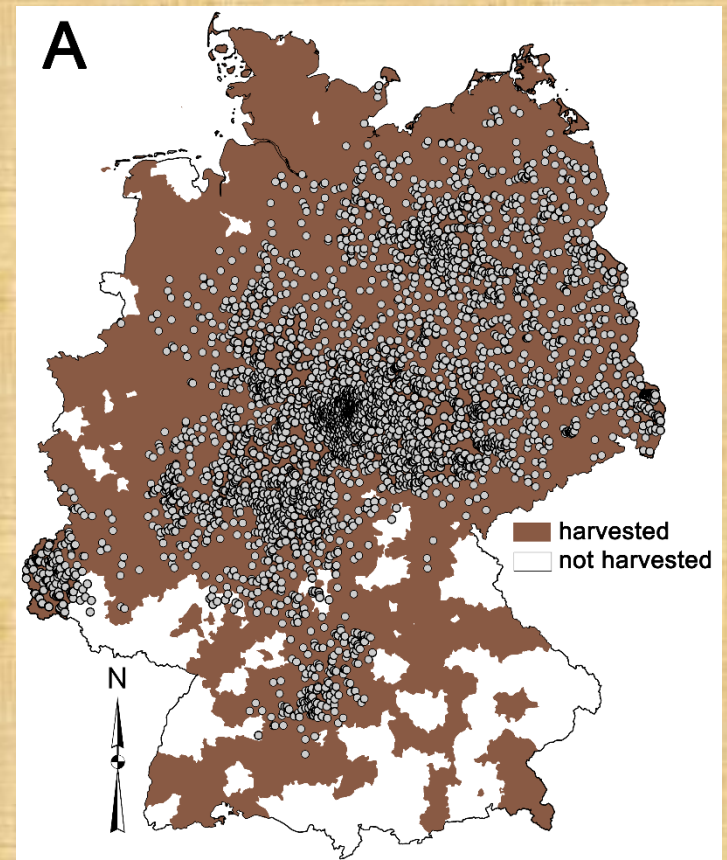
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N=8184 (!)



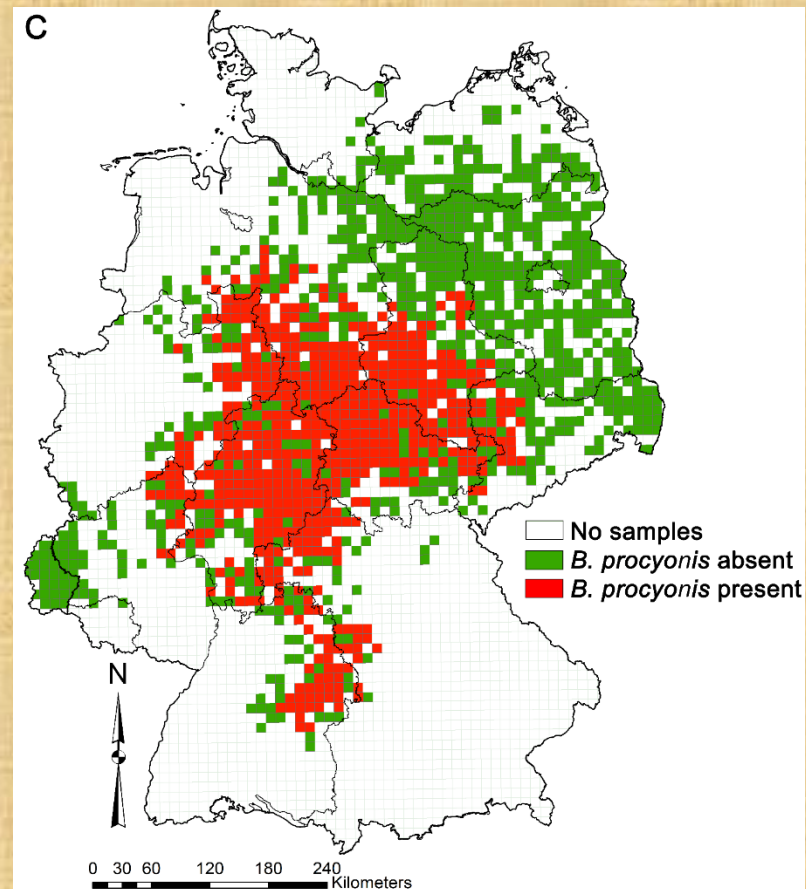
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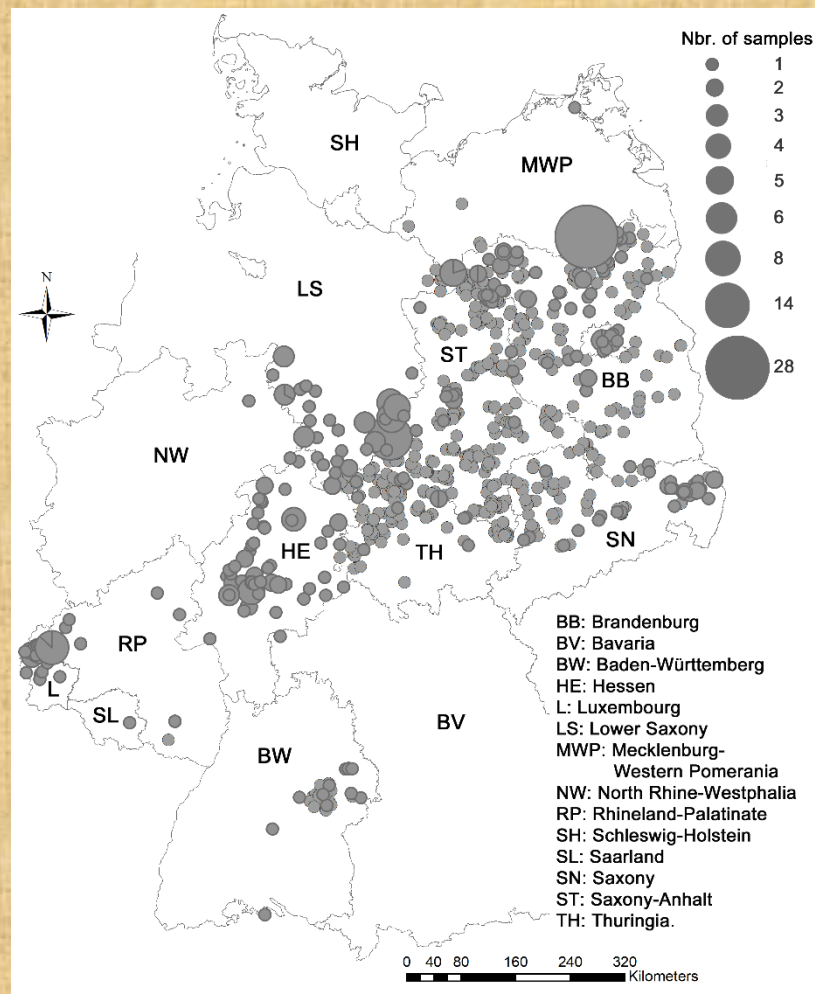


SHORT NOTE

Close spatial overlap between the genetic population boundaries of raccoons and the distribution of the raccoon roundworm in Germany

Alain Frantz, Anna Schleimer, Julian Wittische, Mike Heddergott

DOI: <https://doi.org/10.4404/hystrix-00444-2021>

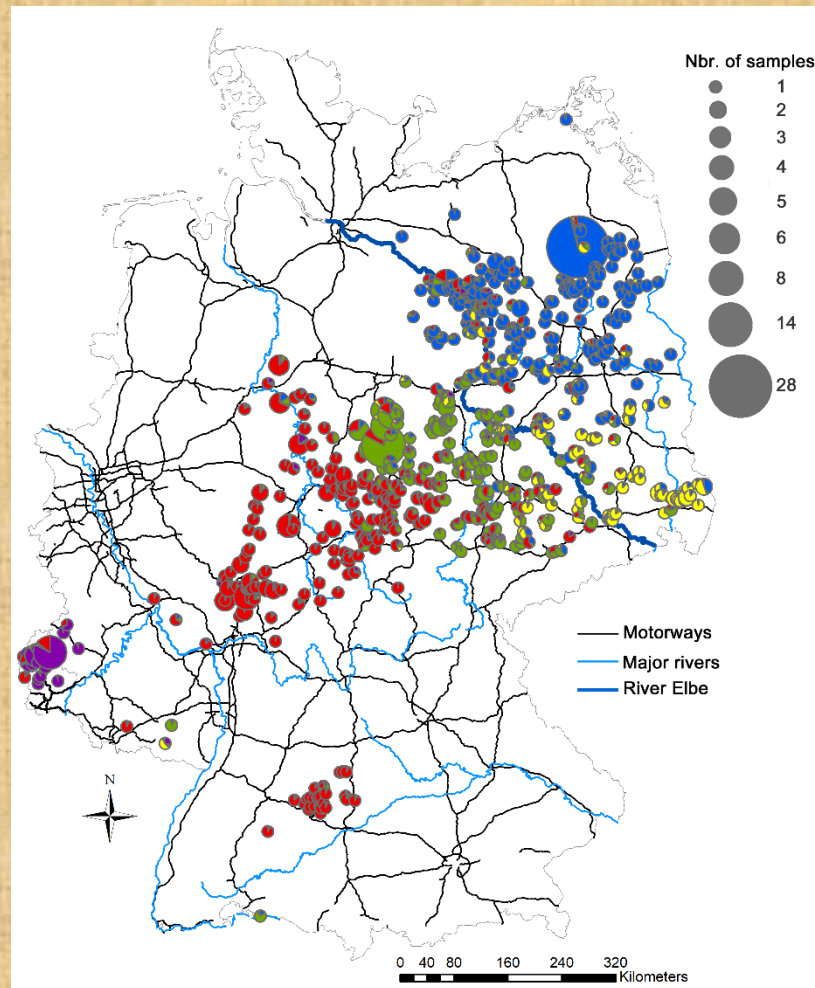


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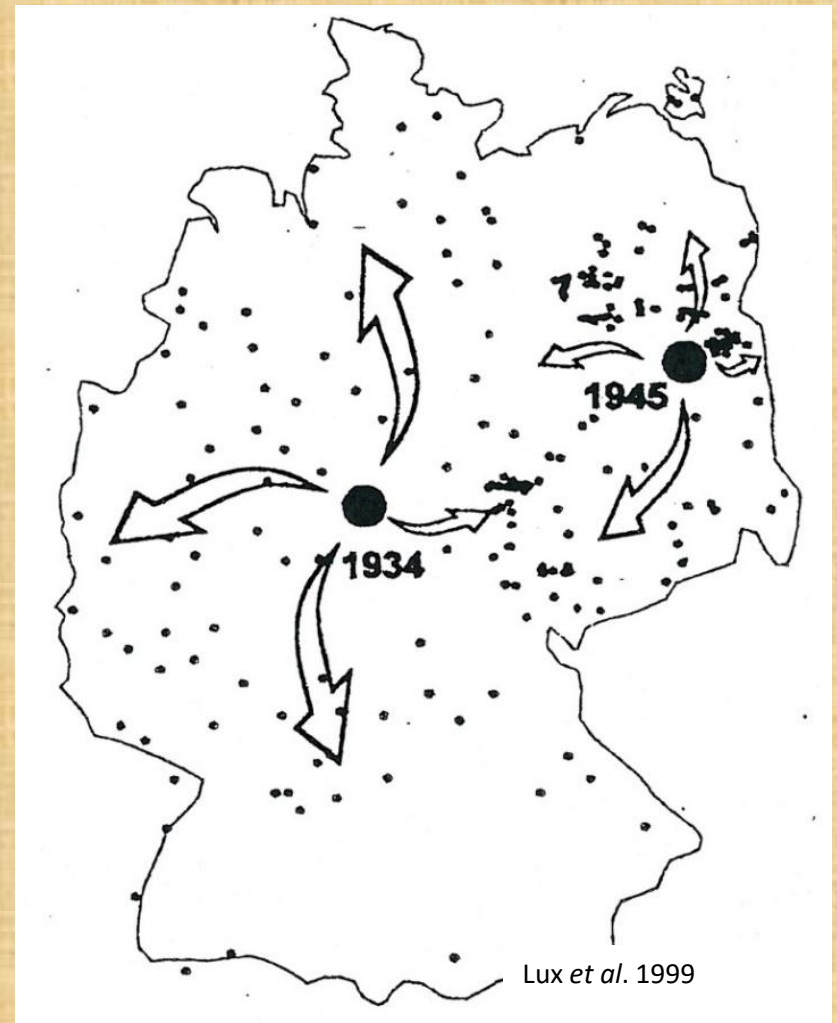
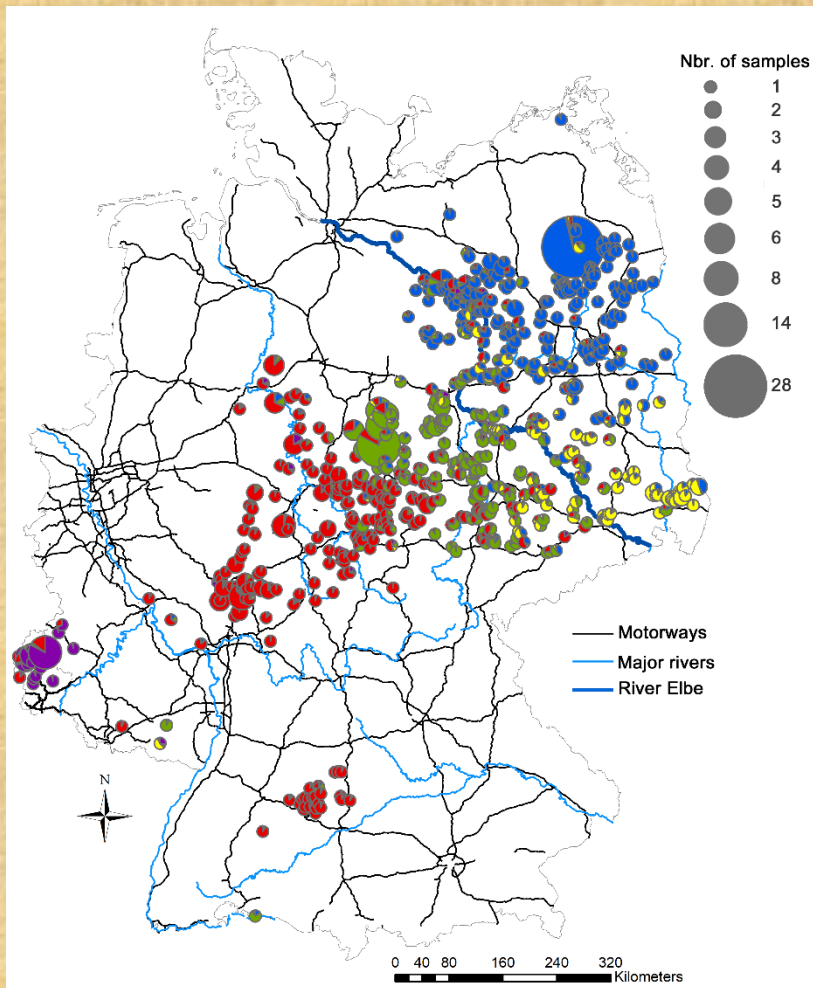


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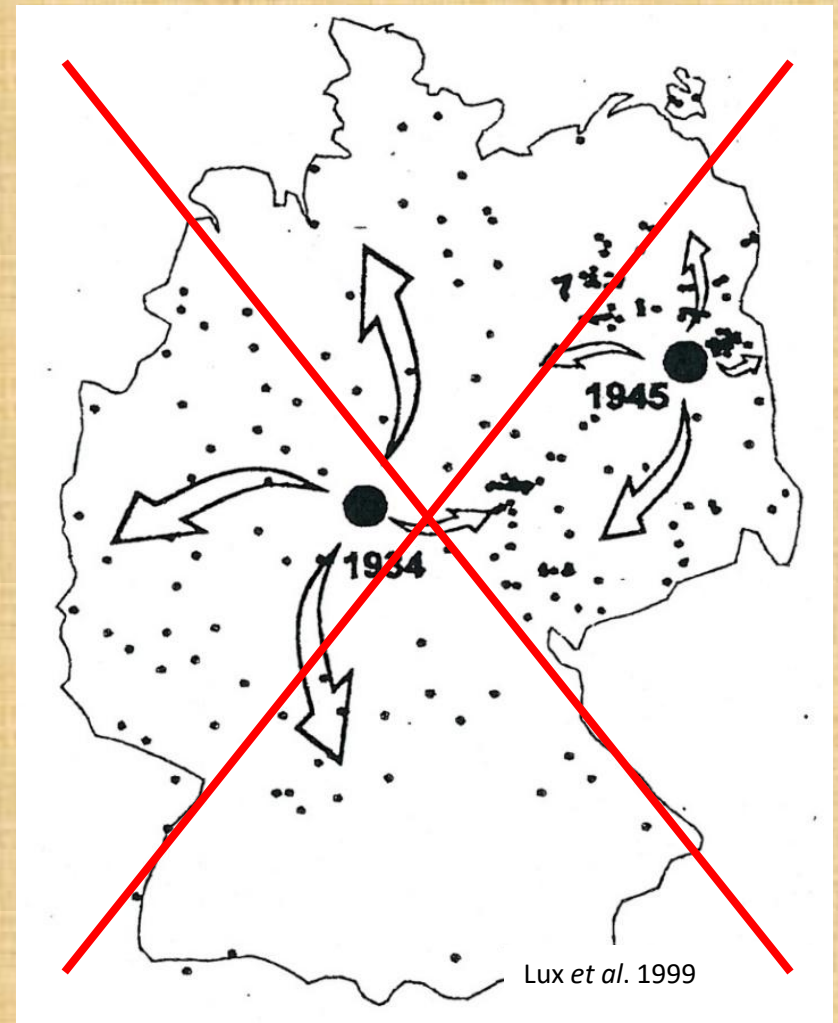
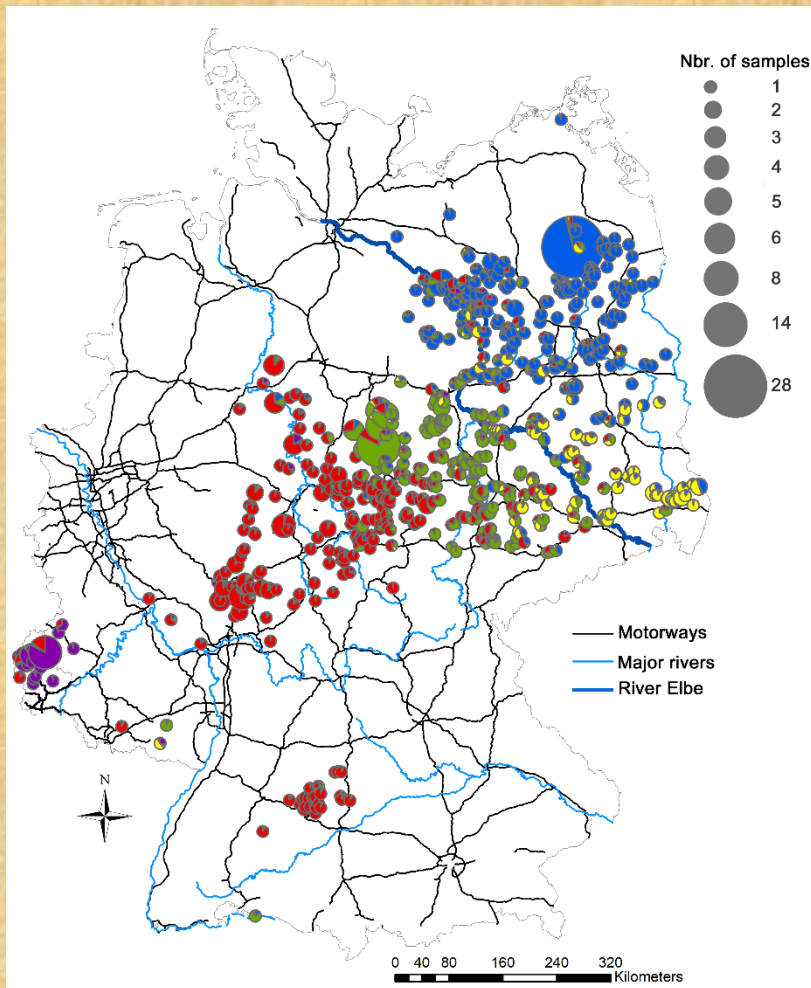


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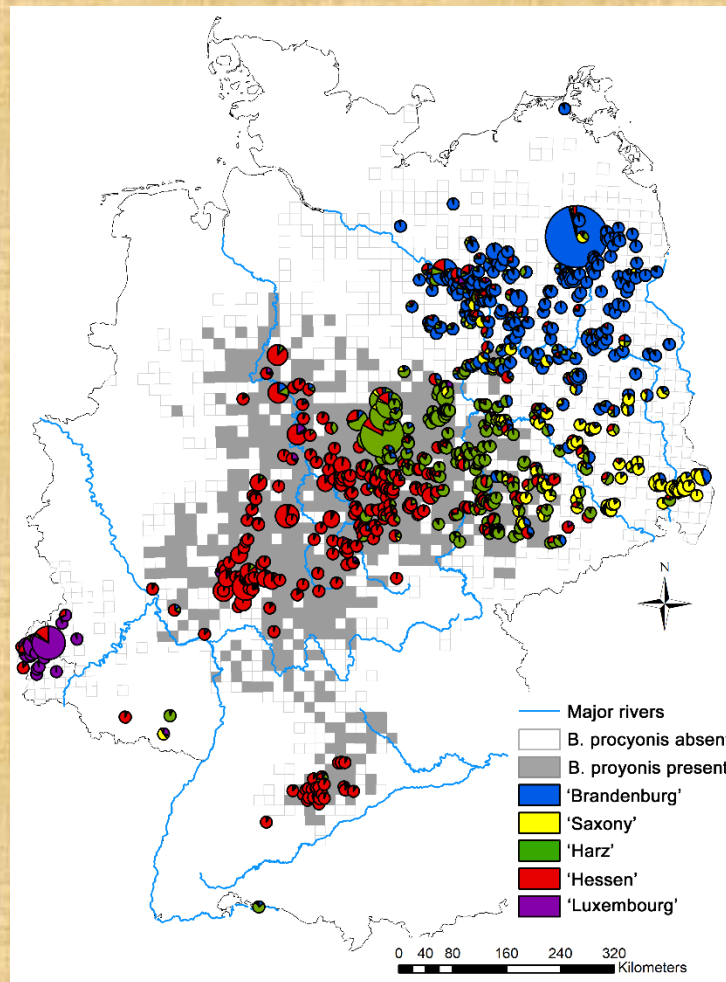


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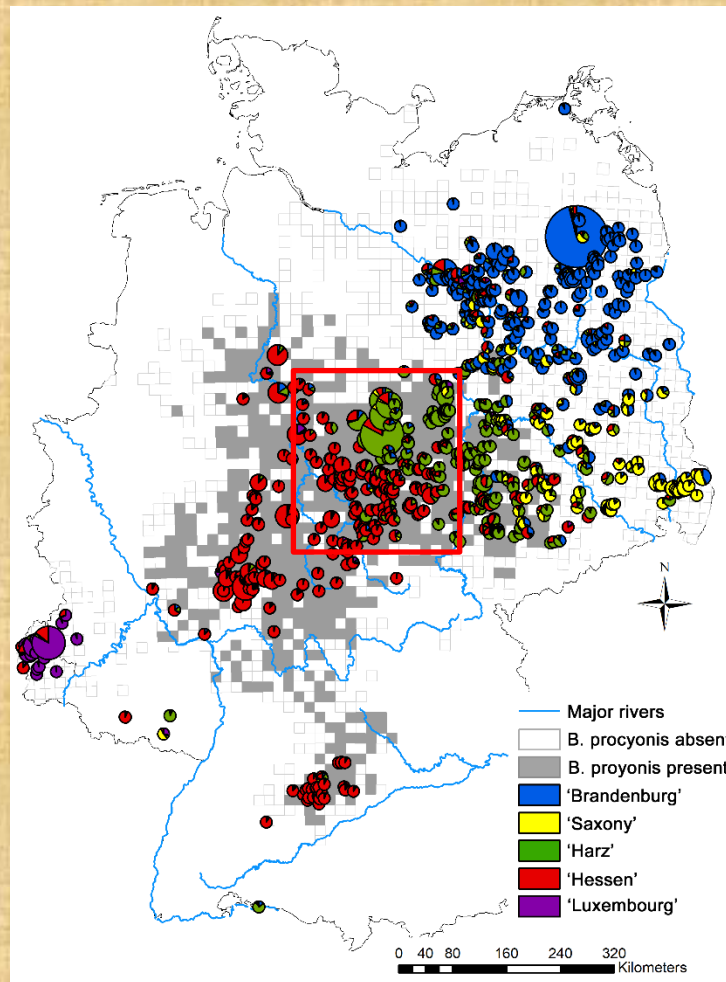


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Similar yet different: co-analysis of the genetic diversity and structure of an invasive nematode parasite and its invasive mammalian host



Natalia Osten-Sacken^{a,b}, Mike Heddergott^a, Anna Schleimer^a, Helena E. Anheyer-Behmenburg^c, Martin Runge^c, Gavin J. Horsburgh^d, Lauren Camp^e, Steven A. Nadler^e, Alain C. Frantz^{a,*}

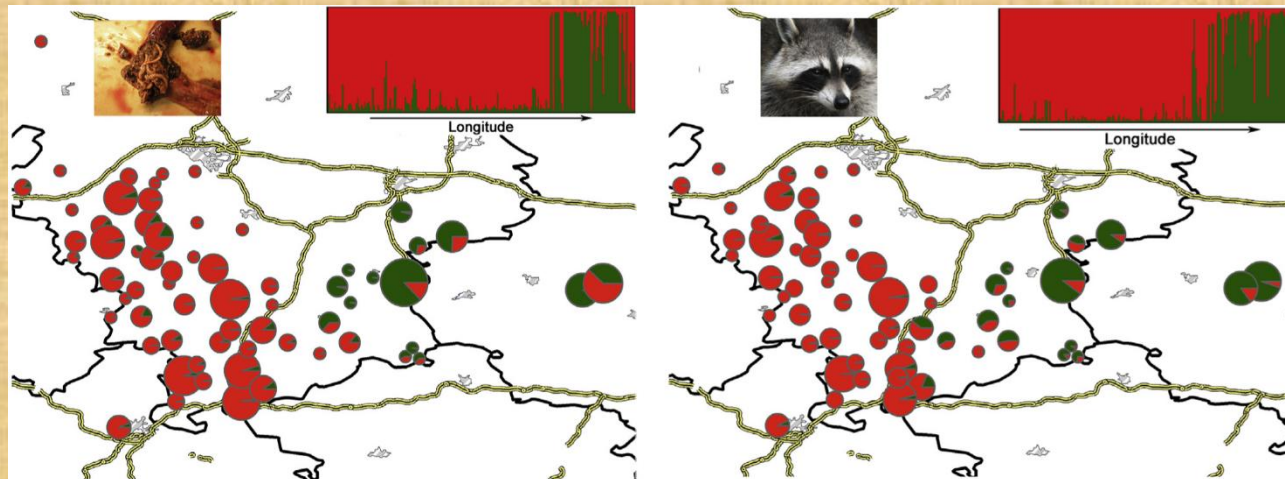
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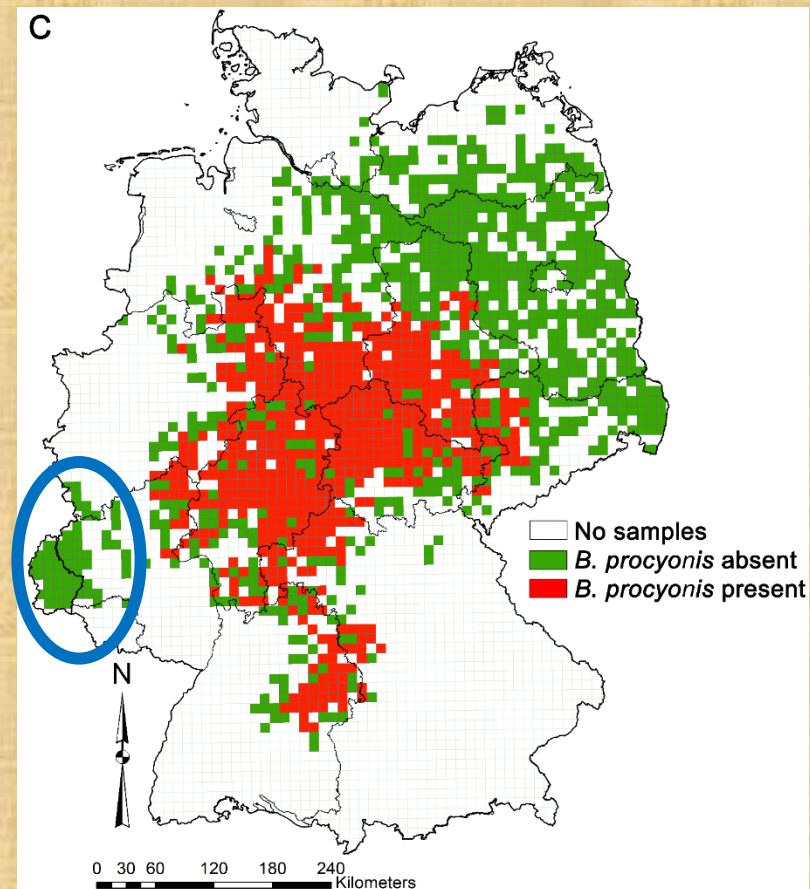
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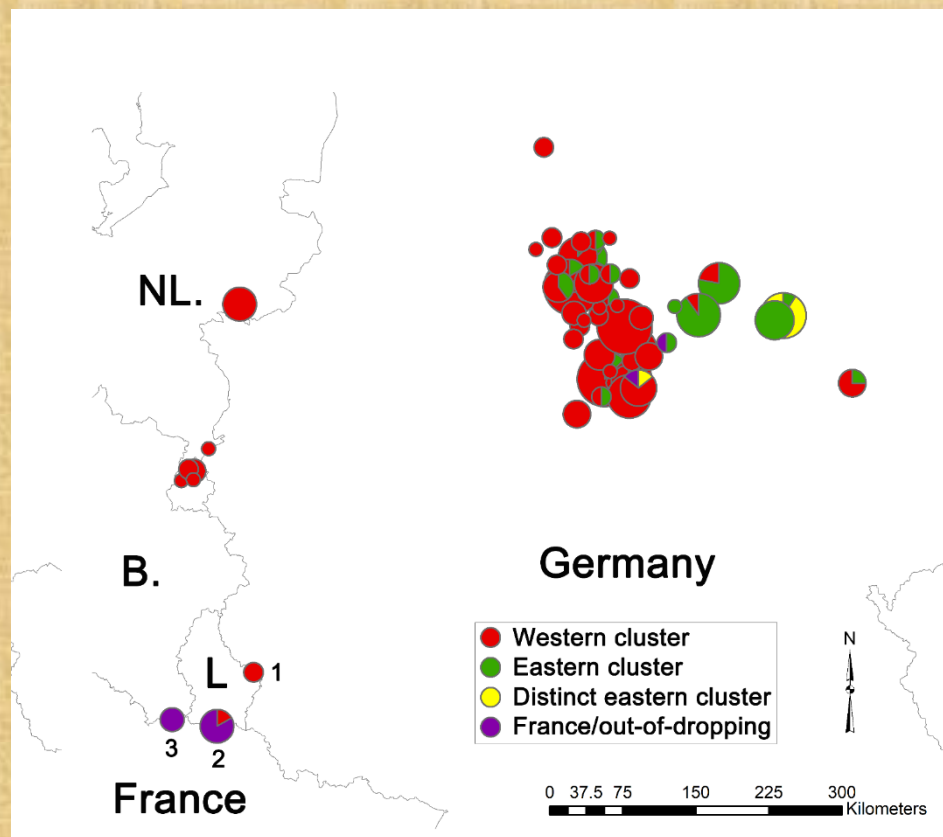




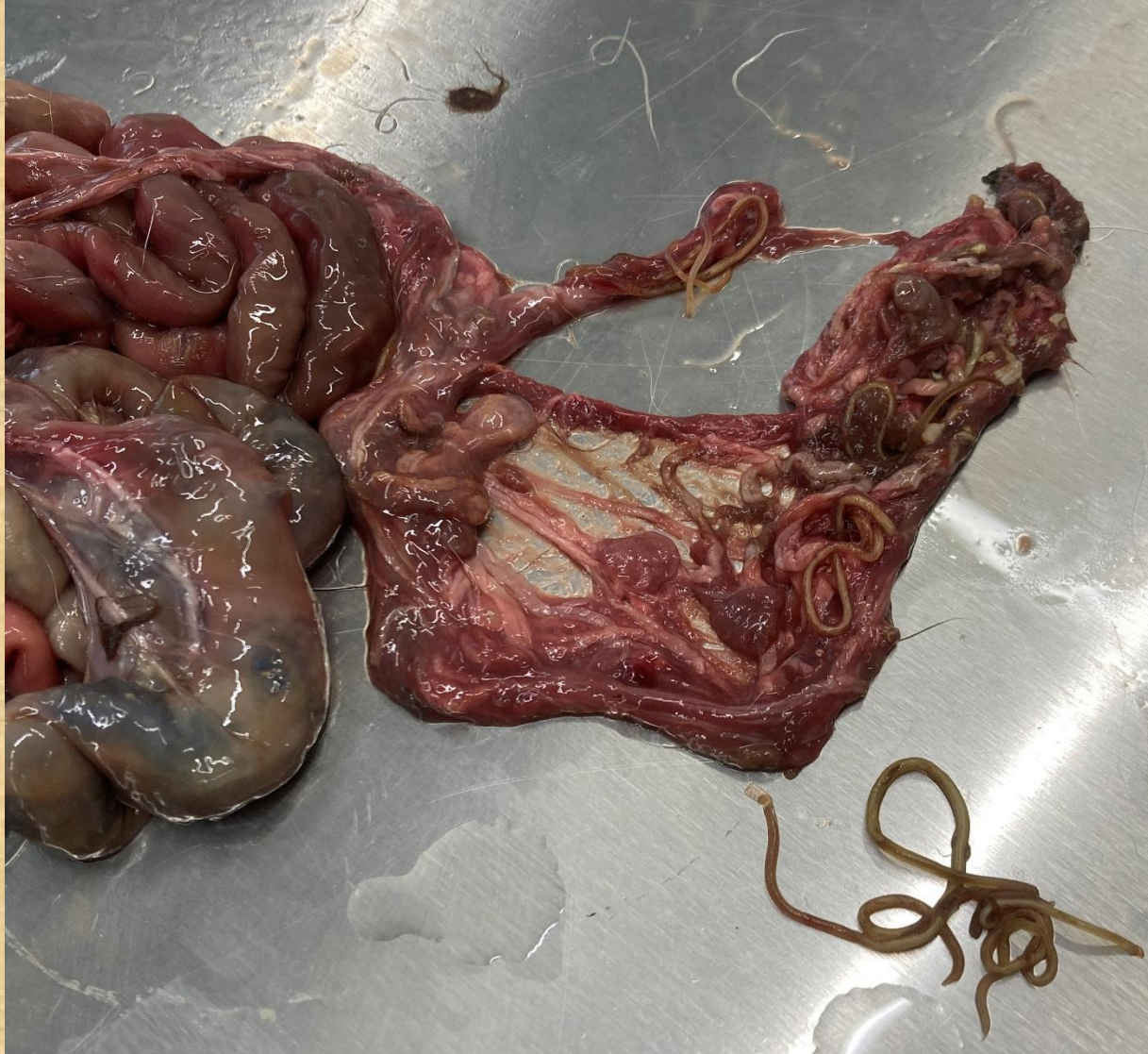
First records of the raccoon roundworm (*Baylisascaris procyonis*) in Luxembourg: evidence for natural spread and a novel introduction

Alain C. Frantz¹ · Stéphanie Lippert^{1,2} · Jill Gaasch^{1,3} · Mike Heddergott¹ · Louis Kox³

2024: Raccoon roundworm in a roadkilled raccoon near Echternach
2024: Roundworms in a latrine in the Centre de soins (7 raccoons)



ALVA samples



ALVA samples 2024

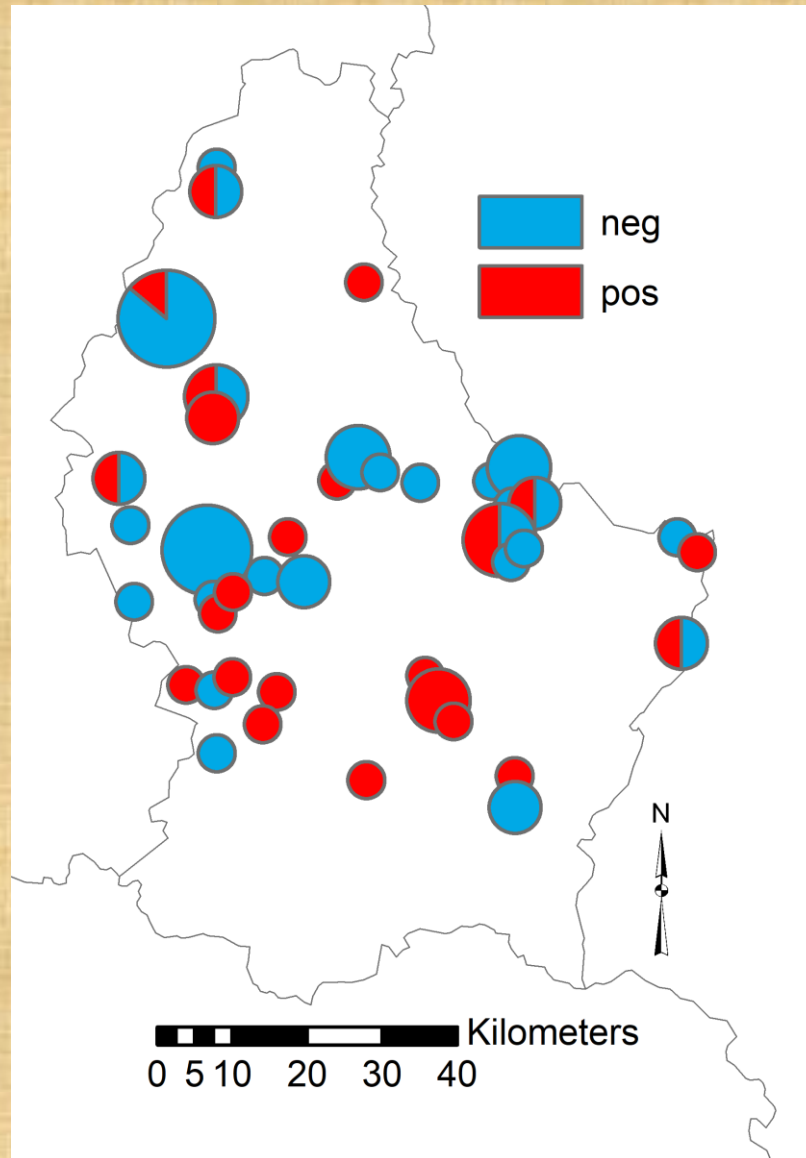
70 raccoon intestines

	Males	Females
Adults	32	18
Juveniles	10	10

ALVA samples

37.5% of all animals

52 % of adults



Raccoons in urban areas: a danger to our health?

Raccoons transmit raccoon roundworm & other zoonoses

Only in very rare cases does this have fatal consequences

Keep raccoons at a distance

Wear gloves and wash hands when handling raccoons
and/or their faeces

A big **thank you** to all the people
that helped with sample collection

