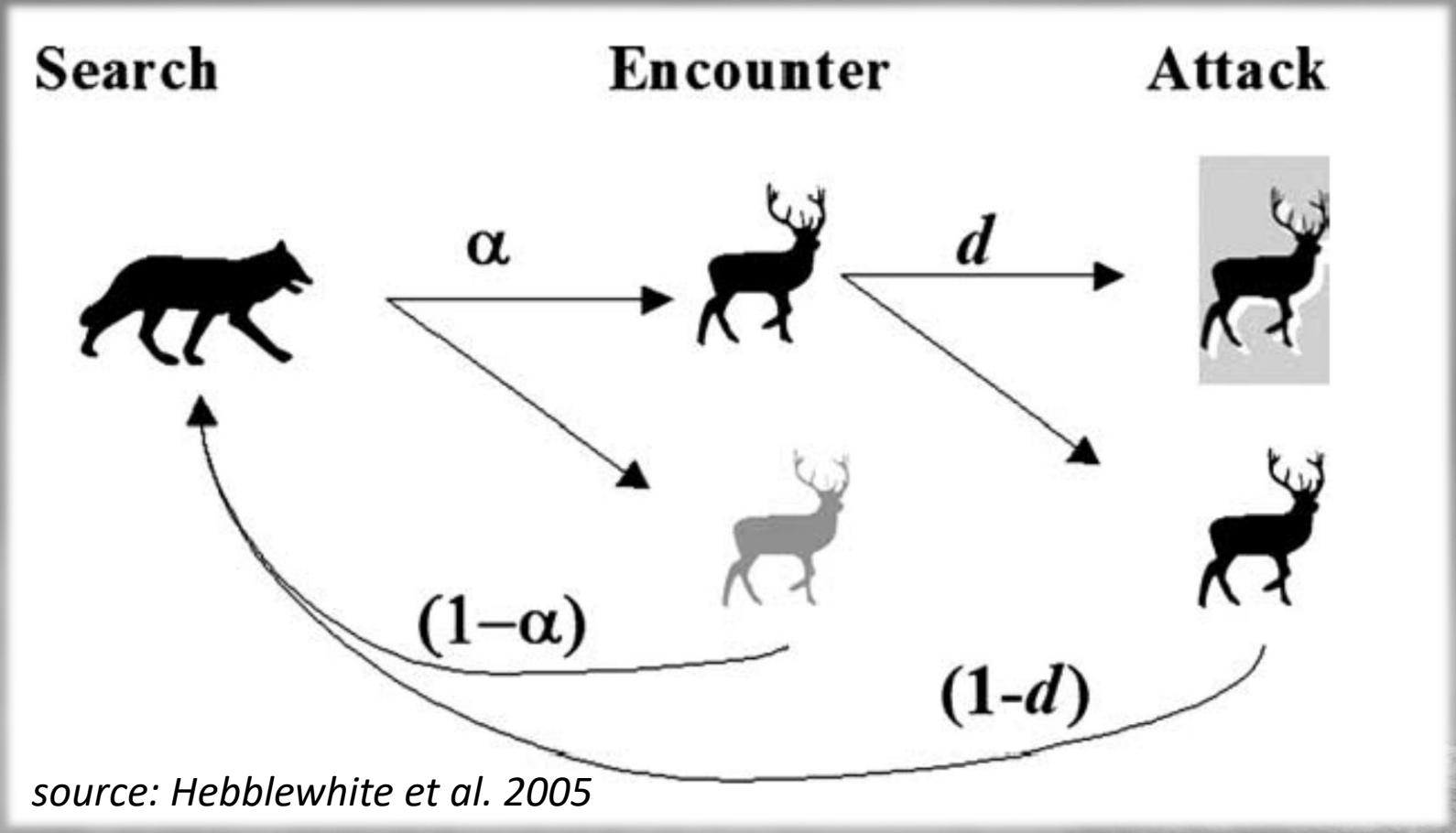
Where do wolves kill their prey?

Wolf kill sites in a commercially exploited forest

Katarzyna Bojarska, Magdalena Kwiatkowska, Roman Gula, Piotr Skórka, Jörn Theuerkauf & Henryk Okarma

Centro de Lobo Ibérico de Castilla y León, 21 April 2017

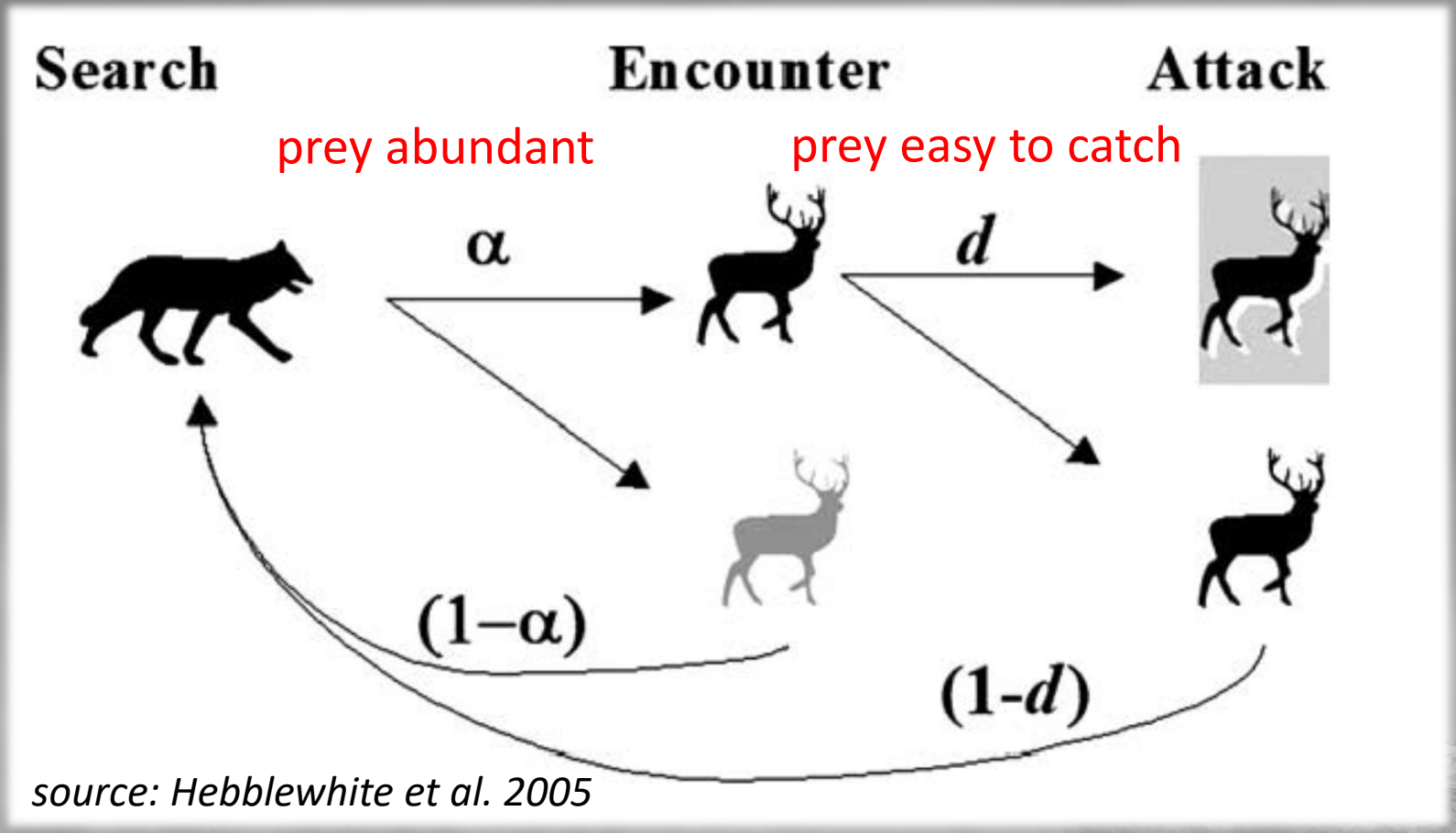
Predation: a multi-scale process



source: Hebblewhite et al. 2005

α - the probability of being encountered
d - conditional probability of being killed given an encounter

Where does predation take place?



source: Hebblewhite et al. 2005

α - the probability of being encountered
d - conditional probability of being killed given an encounter

Catchability factor

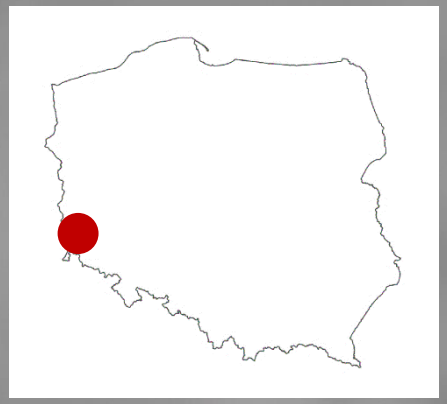
Goals

Where do ungulates fall prey to wolves in a strongly human-modified forest?

What (natural, anthropogenic) habitat elements help wolves to kill prey in such forest?

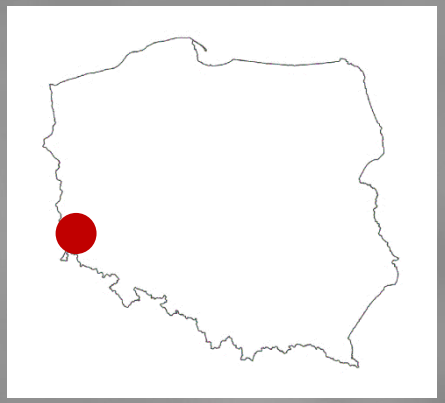
Lower Silesia Forest

Largest forest complex in Polish lowlands



Lower Silesia Forest

Pine monoculture, intensively exploited for wood



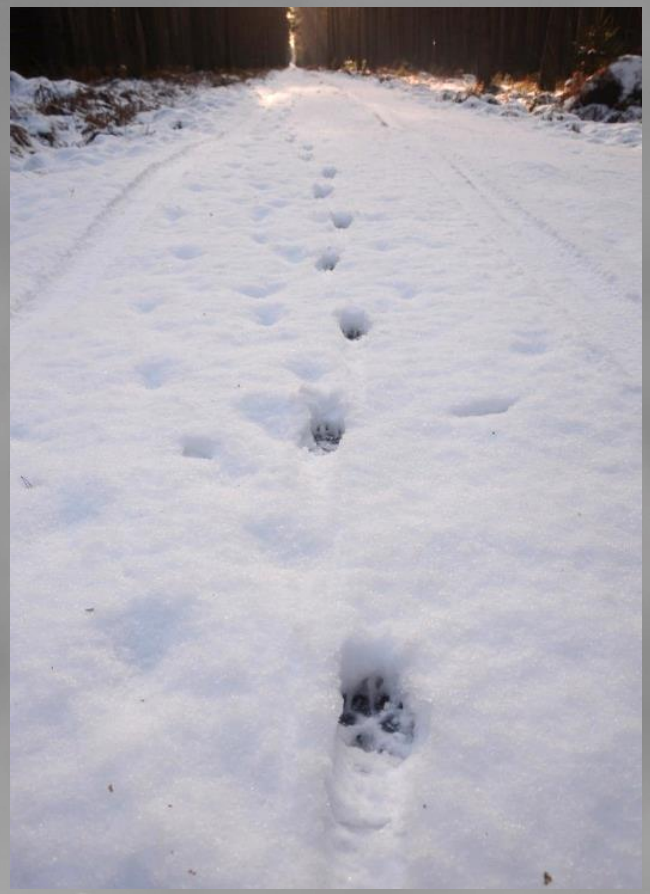
Searching for kill sites

Three wolf packs

Visiting telemetry locations

Snow-tracking (600 km)

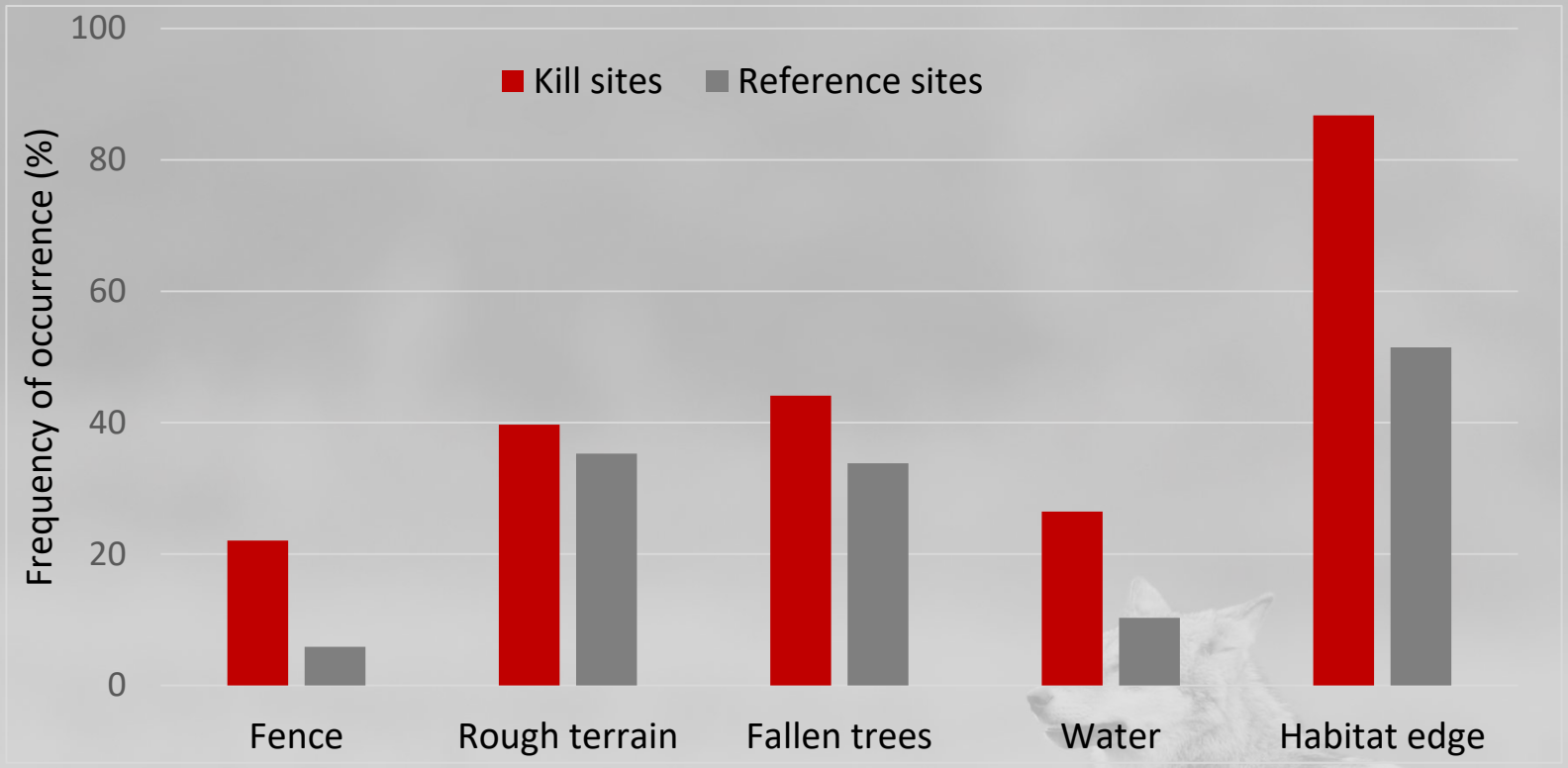
2012 - 2016



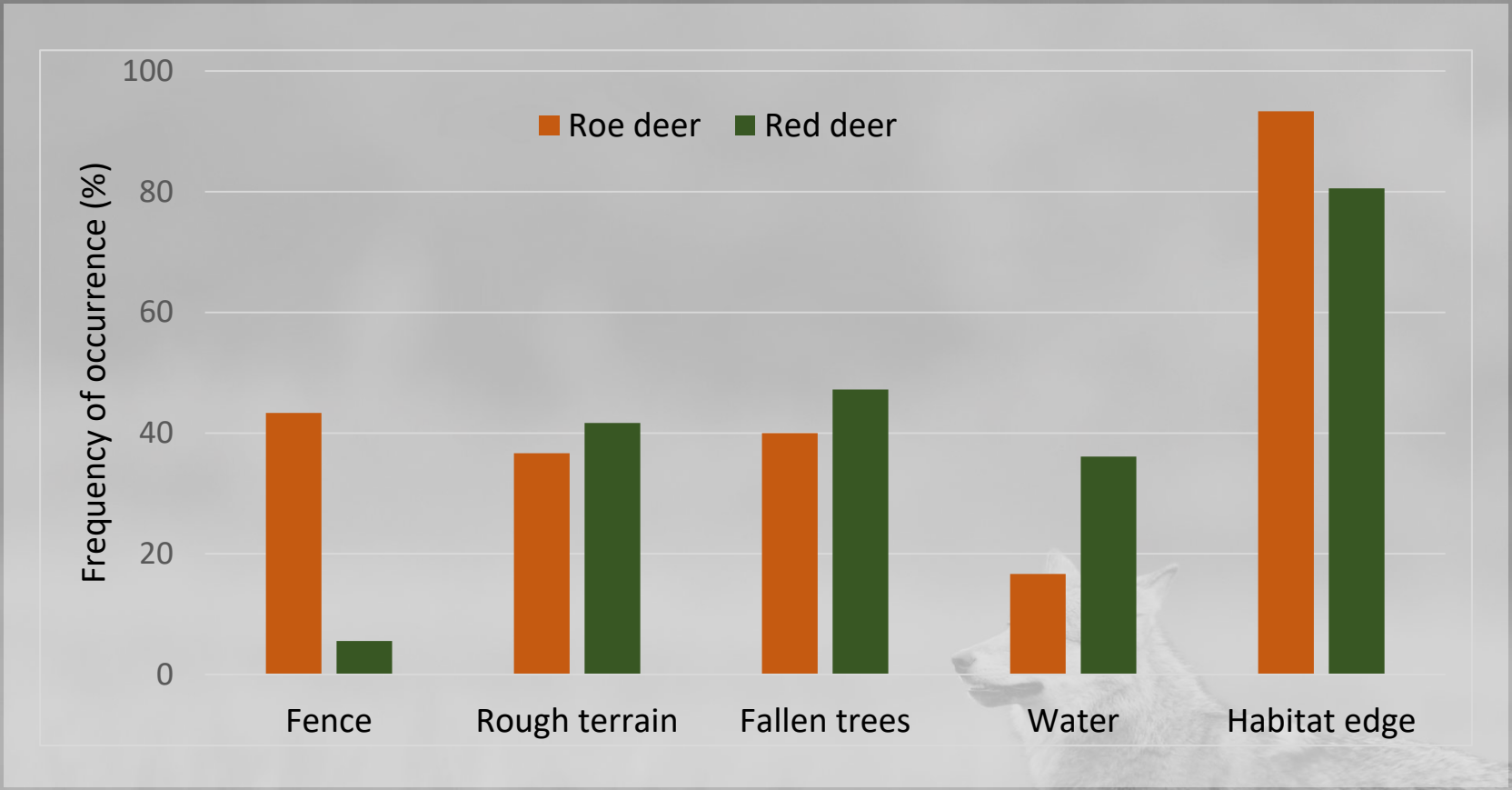
Micro-habitat analyses

- 66 kill sites vs 66 reference sites
- 30-m radius
- Tree density and circumference
- Habitat structures:
  - forestry fences
  - rough terrain
  - water
  - fallen trees
  - habitat edge

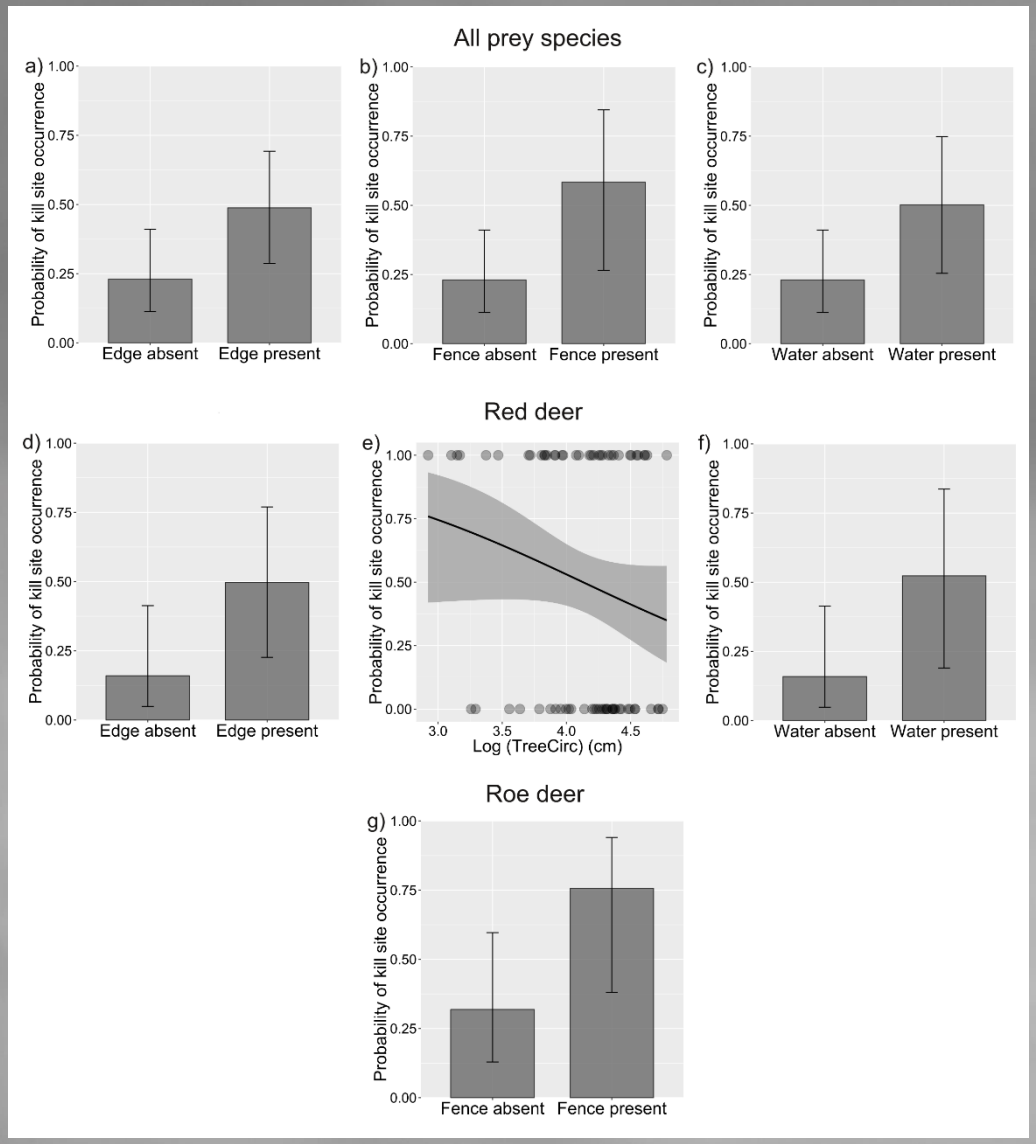
Structures: kill vs reference sites



Structures: red deer vs roe deer



Kill sites vs reference sites



Prey traps in a commercial forest

forestry practices

prey traps

prey selection

spatial patterns in prey vulnerability

Roe deer vs red deer

Roe deer:

- enters enclosures more often
- easier to capture inside

Red deer:

- escapes into water
- more handicapped by dense habitat

Wolves, ungulates & forestry

forestry practices

prey traps

wolf predation

ungulate numbers & behavior

ungulate damage

Conclusions

- wolves and forestry: a win – win scenario
- natural habitat elements recommended
- conflict: competition with hunters

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Anthropogenic environmental traps: Where do wolves kill their prey in a commercial forest?

Katarzyna Bojarska[a,*], Magdalena Kwiatkowska[b], Piotr Skórka[a], Roman Gula[c], Jörn Theuerkauf[c], Henryk Okarma[b]

[a] *Institute of Nature Conservation, Polish Academy of Sciences, Mickiewicza 33, 31-120 Kraków, Poland*
[b] *Institute of Environmental Sciences, Jagiellonian University, Gronostajowa 7, 30-387 Kraków, Poland*
[c] *Museum and Institute of Zoology, Polish Academy of Sciences, Wilcza 64, 00-679 Warszawa, Poland*

Muchas gracias!

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