

# Il leone delle caverne



# Il bisonte della Steppa

A steppe bison on display at the University of Alaska Museum of the North in Fairbanks. The steppe bison is one of several extinct large mammals that roamed interior Alaska during the Wisconsinan glacial period, 100,000 to 10,000 years ago. This specimen died about 36,000 years ago and was found during the summer of 1979. It has a bluish color over the entire carcass, caused by the phosphorus in the animal tissue reacting with the iron in the soil to produce a mineral coating of vivianite - which became a brilliant blue when it was exposed to air. Hence the name Blue Babe.



## Si salvarono le specie più piccole e quelle diffuse anche in Africa e/o in Asia

I daini (gen. *Dama*) sopravvissero in Asia Minore, camosci (gen. *Rupicapra*) e stambecchi (gen. *Capra*) nelle regioni alpine, le antilopi Saiga (*Saiga tatarica*) ed i cavalli di Przewalski (*Equus ferus*) in Asia centrale, i buoi muschiati (*Ovibos moschatus*) nell'estremo Nord (Groenlandia), renne e caribù (*Rangifer tarandus*) rispettivamente nel Nord dell'Eurasia e del Nordamerica, ippopotami (*Hippopotamus amphibius*), bufali d'acqua (*Bubalus murrensis*), leopardi (*Panthera pardus*) e leoni (*Panthera leo*) in Africa e questi ultimi anche in Asia

# Il bue muschiato

- Allevato in Alaska per la lana



# Diametro della fibra di lana in alcuni mammiferi

DIAMETRO DELLA FIBRA ( $\mu\text{m}$ )	RAZZA
4÷30	Bue muschiato
12÷13*	Changthangi (Kashmir Pashmina) cashmere
13,00÷>40,00	Gentile di Puglia
17,70÷19,14	Merino
18÷25	Alpaca
≤ 19	Cashmere
19,15÷20,59	Rambouillet
20,60÷22,04	Targhee, Southdown
22,05÷23,49	Corriedale, Columbia
23,50÷30,99	Panama, Romeldale
25÷45	Angora
26,40÷32,69	Shropshire, Hampshire, Suffolk, Oxford, Dorset, Cheviot
32,70÷38,09	Romney
36,20÷40,20	Costwold
32,70÷40,20	Lincoln
32,00÷50,00	Sambucana

# L'alpaca

L'**alpaca** (*Vicugna pacos*) è un camelide originario del Sudamerica, discendente dalla **vigogna** (*Lama vicugna*), allevato soprattutto per utilizzarne la pregiata lana



# La razza ovina merino

Merino wool is fine and soft. Staples are commonly 65÷100 mm long. A Saxon Merino produces 3÷6 kg of greasy wool a year, while a good quality Peppin Merino ram (ariete) produces up to **18 kg**. Merino wool is generally < 24 µm in diameter.

Basic Merino types include:

- **strong** (broad) wool (23÷24.5 µm)
- **medium** (21÷22.9 µm)
- **fine** (18.6÷20.9 µm)
- **superfine** (15÷18.5 µm)
- **ultra-fine** (11.5÷15 µm)



# La razza ovina gentile di Puglia

The Gentile di Puglia derives from cross-breeding local ewes with Merino rams brought from Spain, first by Alfonso V of Aragon **in the fifteenth century**, and later, repeatedly, by the Bourbon kings of Naples, who had extensive estates near Foggia.

In the nineteenth century, after the Unification of Italy, there was cross-breeding with imported French Rambouillet and German Merinolandschaf animals, with the aim of further improving the quality of the wool.



# La razza ovina gentile di Puglia

The collapse of the wool trade in the later twentieth century caused a sharp fall in number of the breed. Various indiscriminate attempts were made to improve the meat yield by cross-breeding with other types, some of them imported. In the 1980s a study of 10,000 head found 13% to be pure-bred stock. As a result, a controlled cross-breeding and selection programme was started, which led to the creation of the Trimeticcia di Segezia breed.

The Gentile di Puglia is one of the seventeen autochthonous Italian sheep breeds for which a genealogical herdbook is kept by the Associazione Nazionale della Pastorizia, the Italian national association of sheep-breeders. The herdbook was established in 1971. In 1983 total numbers for the breed were estimated at 500,000, of which 31,700 were registered in the herdbook; in 2013 the number recorded in the herdbook was 3532.

# Il cavallo di Przewalski



# L'antilope saiga



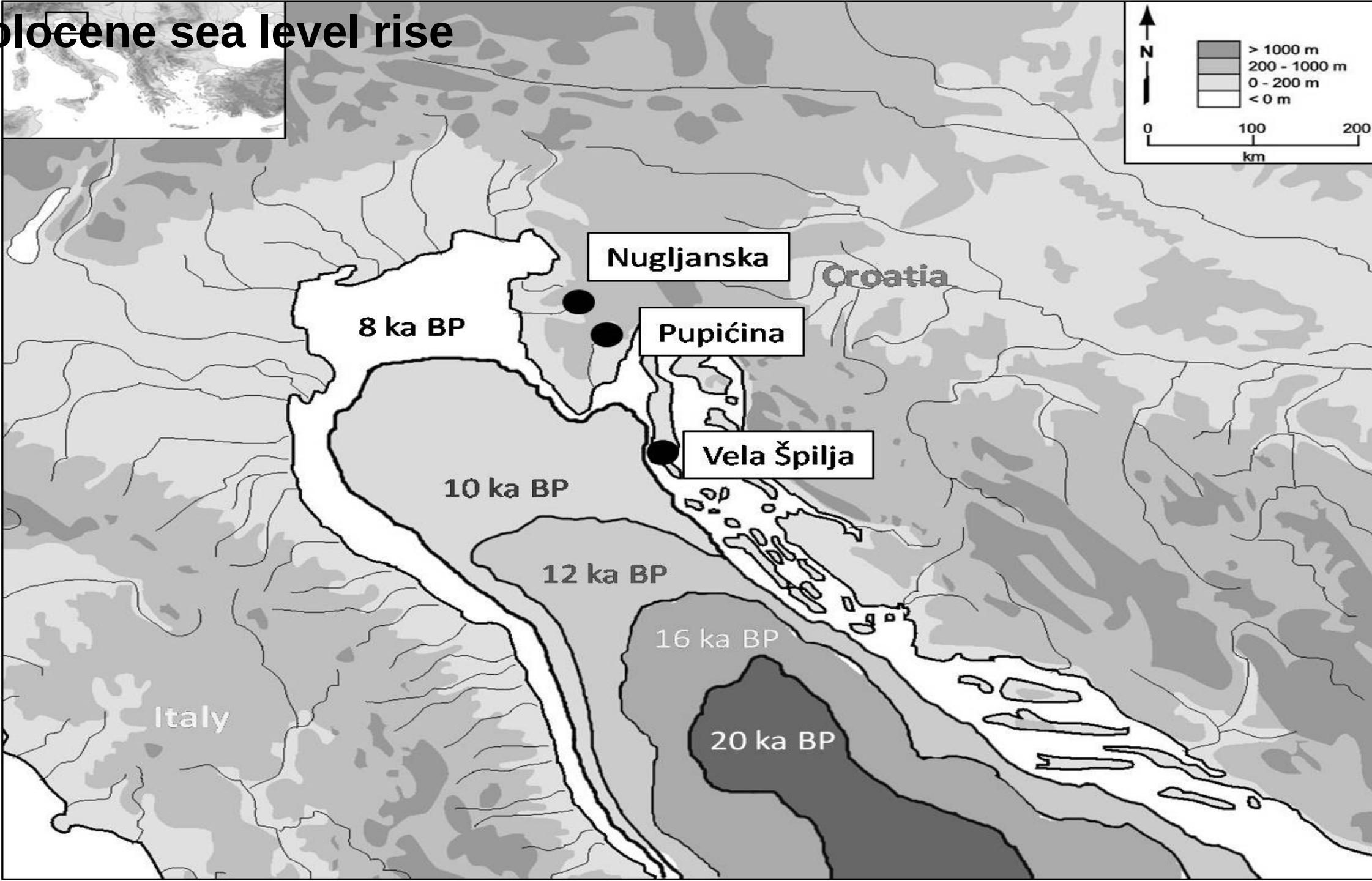
# L'Olocene

The natural (mid- to late-Holocene) guild of large herbivores in Europe comprises **European bison** (*Bison bonasus*); **aurochs** (*Bos primigenius*), now globally extinct as a wild species; **wild horse** (*Equus ferus*), now globally extinct as a wild species; **Eurasian elk** (*Alces alces*), also known as moose; **red deer** (*Cervus elaphus*); **roe deer** (*Capreolus capreolus*); **fallow deer** (*Dama dama*); **reindeer** (*Rangifer tarandus*); **wild boar** (*Sus scrofa*); **muskox** (*Ovibos moschatus*); **chamois** (*Rupicapra rupicapra*); and **ibex** (*Capra sp.*).

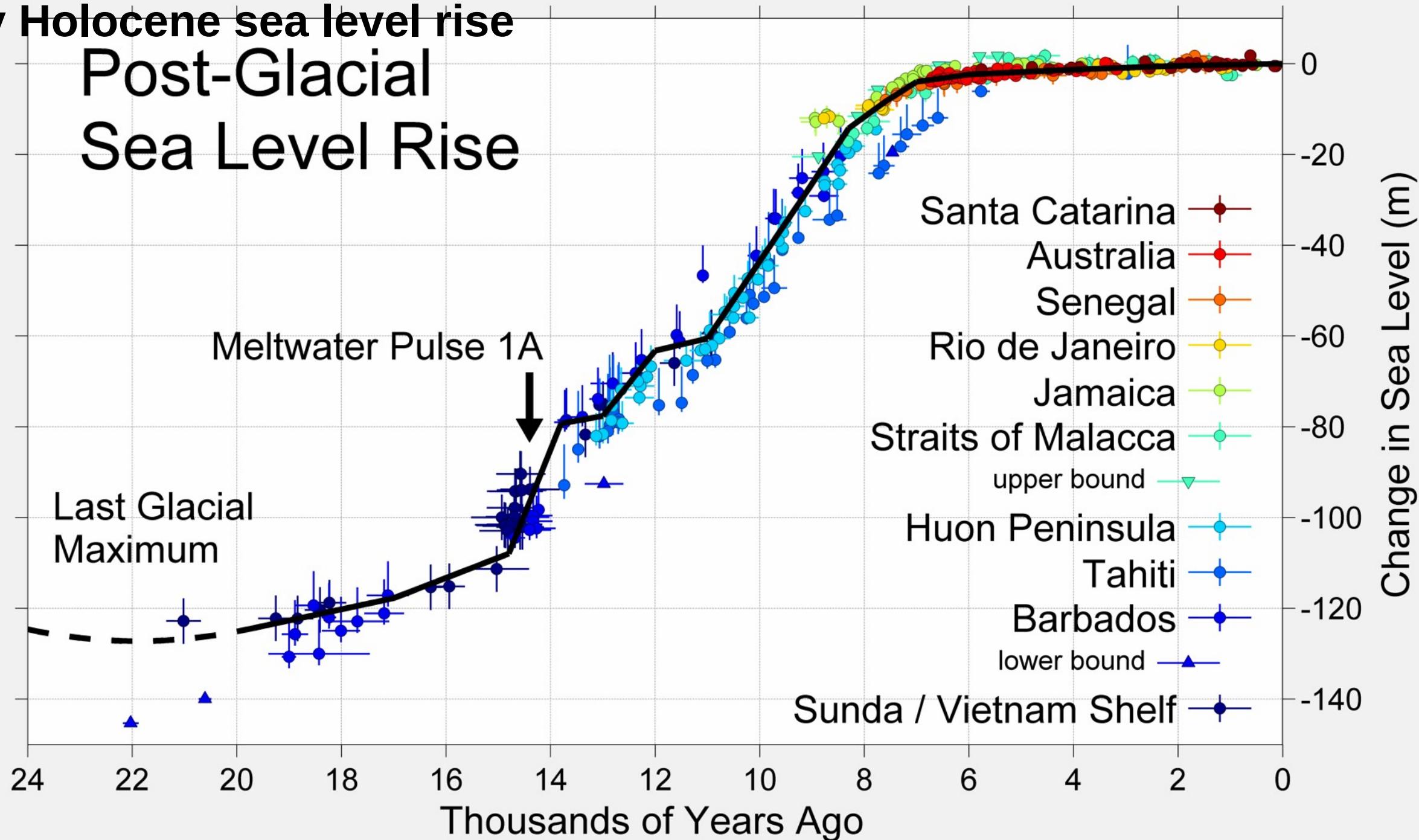
# Early Holocene sea level rise

The early Holocene sea level rise (EHSLR) was a significant jump in sea level by about 60 m during the early Holocene, between about 12,000 and 7,000 years ago, spanning the **Eurasian Mesolithic**.

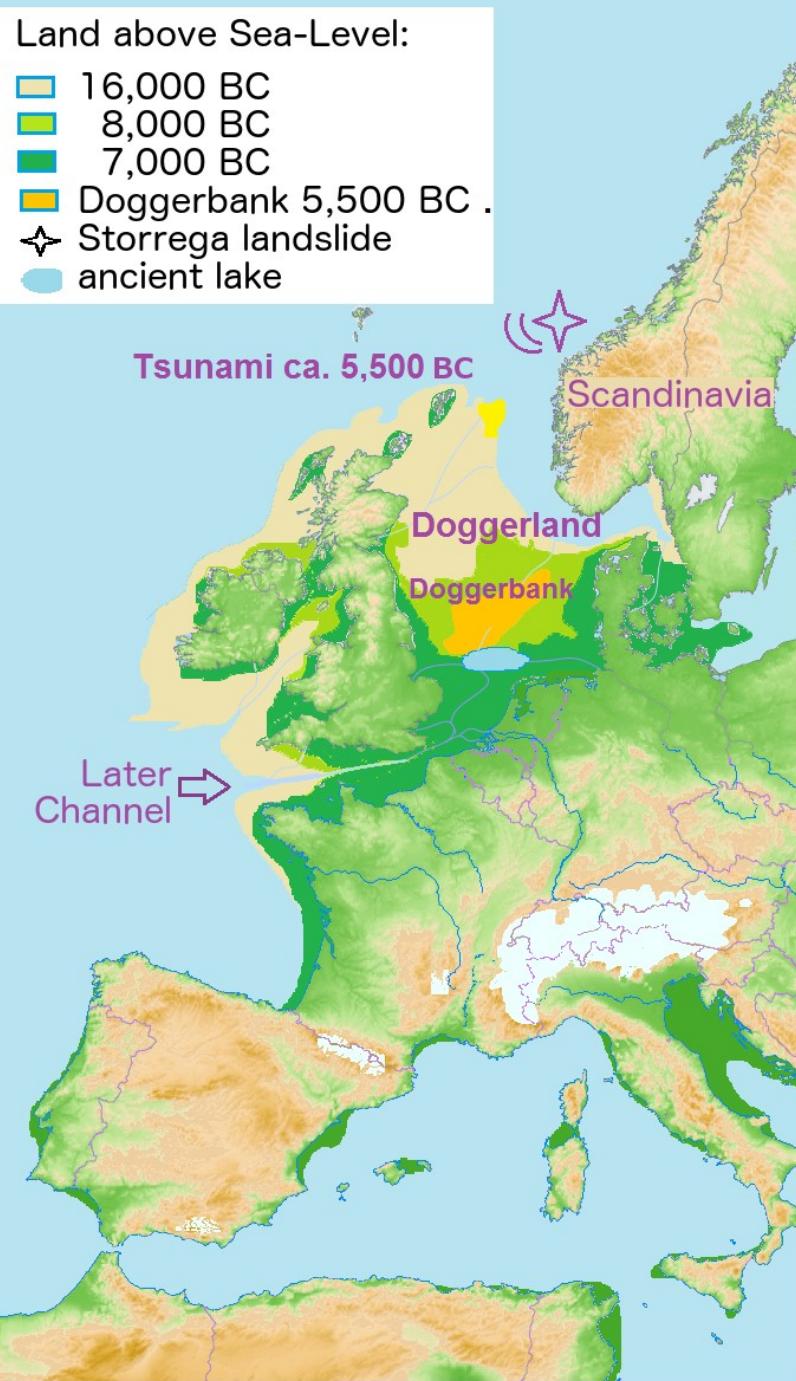
# Early Holocene sea level rise



# Early Holocene sea level rise Post-Glacial Sea Level Rise



## Doggerland and Doggerbank



# Il mondo perduto di Doggerland

## The Europe That Was

At the end of the last ice age, Britain formed the northwestern corner of an icy continent. Warming climate exposed a vast continental shelf for humans to inhabit. Further warming and rising seas gradually flooded low-lying lands. Some 8,200 years ago, a catastrophic release of water from a North American glacial lake and a tsunami from a submarine landslide off Norway inundated whatever remained of Doggerland.

Continental Europe above sea level

- 16,000 b.c.
- 8000 b.c.
- 7000 b.c.
- Land area today



# Il mondo perduto di Doggerland

8000 B.C.: After retreating inland from a storm, a group of hunter-gatherers in Doggerland return to find their camp flooded. Eventually there would be no dry land to come back to.

<https://www.nationalgeographic.com/magazine/article/doggerland>



# Il mondo perduto di Doggerland

Bone and antler arrowheads, recovered from the North Sea off the Dutch coast, pay witness to a way of life now long submerged.



# Cosquer Cave

Cosquer Cave is located in the Calanque de Morgiou in Marseille, France, near Cap Morgiou. The entrance to the cave is located 37 m (121 ft) underwater, due to the Holocene sea level rise, and contains various prehistoric rock art engravings (incisioni). Its submarine entrance was discovered in 1985 by Henri Cosquer, a professional diver. The underwater passage leading to the cave was progressively explored until 1990 by cave divers, without the divers being aware of the archaeological character of the cave.

Only in the last period (1990-91) of the progressive underwater explorations did the cave divers emerge in the non-submerged part of the cave. The prehistoric paintings were not immediately discovered by the divers to first emerge from the other side of the sump. The cave was named after Henri Cosquer when its existence was made public in 1991, after three divers became lost in the cave and died.

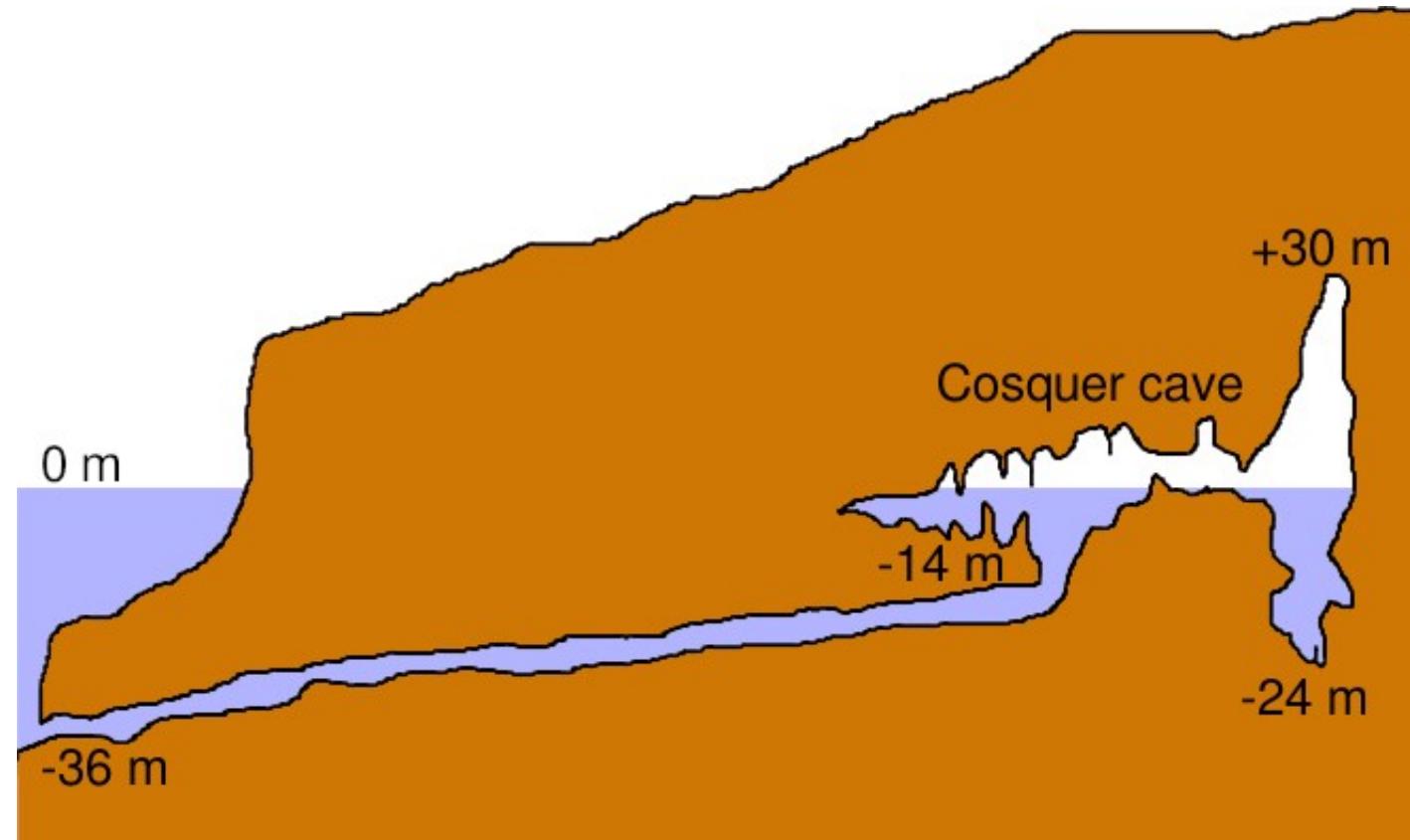
# Cosquer Cave

The cave can now be accessed by divers through a 175 m (574 ft) long tunnel; the entrance is located 37 m (121 ft) below sea level, which has risen since the cave was inhabited. During the glacial periods of the Pleistocene, the shore of the Mediterranean was several kilometers to the south and the sea level up to 100 m (330 ft) below the entrance of the cave.

# Cosquer Cave



# Cosquer Cave



# La transizione dal Paleolitico al Mesolitico

Già in crisi per la progressiva scomparsa dei loro pascoli, i grandi erbivori pleistocenici furono sottoposti ad una persecuzione spietata ed implacabile da parte di sempre più numerose comunità di cacciatori-raccoglitori: l'opera di sterminio fu resa ancora più efficiente dall'affinarsi delle tecniche di lavorazione della pietra e dei palchi dei cervidi (localmente delle zanne di mammut), materiali con cui venivano fabbricate le punte delle lance e delle frecce.

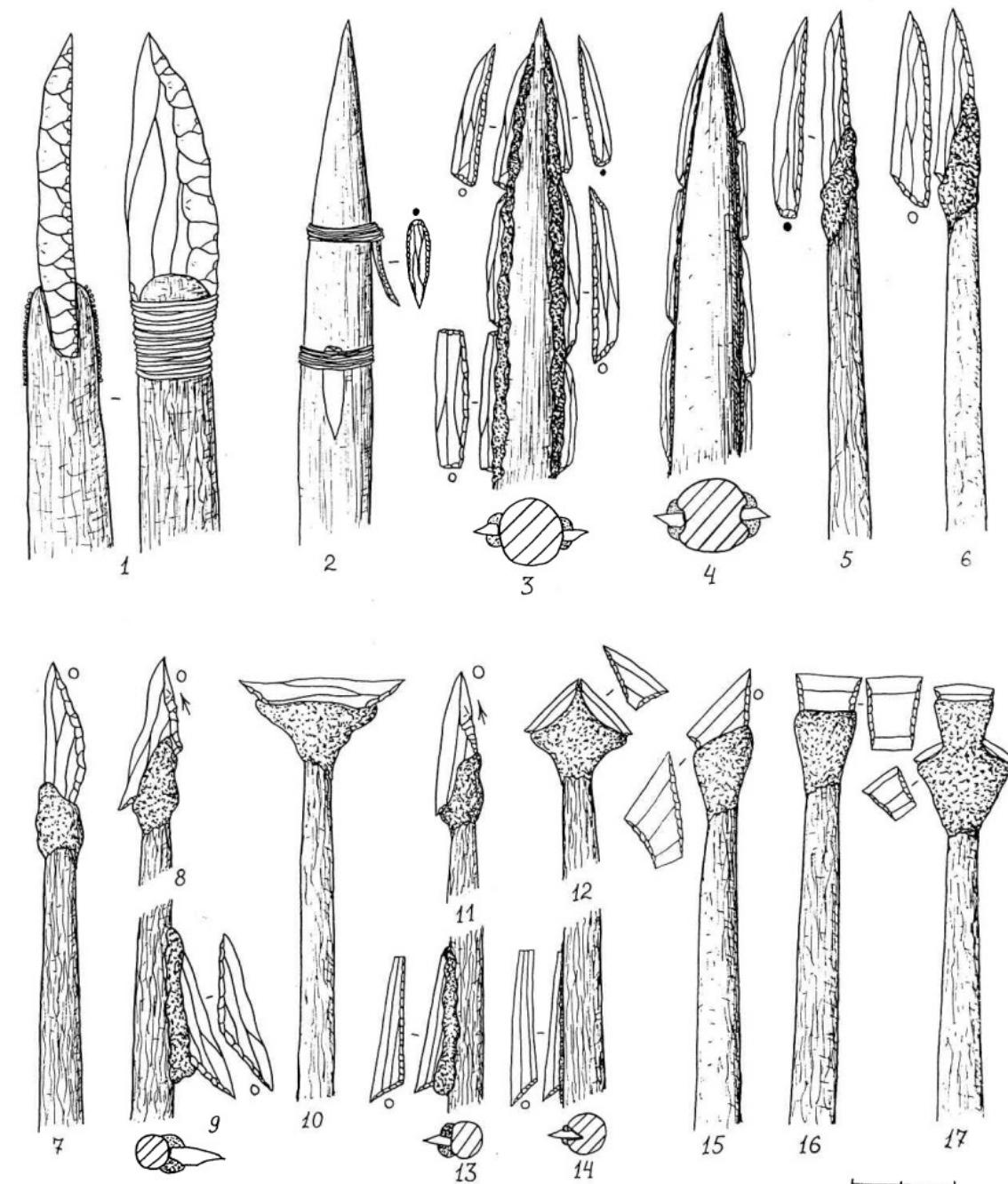


Fig. 1 — Reconstruction of the methods of hafting and using microliths in the projectile weapons. 1: Pushkari Culture; 2: Aurignacian Culture; 3-6: Gravettian Culture; 7-10: Early Mesolithic Shan-Koba Culture; 11-17: Late Mesolithic and Neolithic Cultures of Ukraine.

# La transizione dal Paleolitico al Mesolitico

The bow and arrow were much better adapted to the denser forest cover: This new weapon was precise, rapid and silent



# La transizione dal Paleolitico al Mesolitico

Attività presso  
l'accampamento  
estivo dell'Alpe  
Veglia 8000  
anni fa



# La transizione dal Paleolitico al Mesolitico

- 1) raccolta di vegetali;
- 2) raschiatura della pelle;
- 3) masticazione della pelle per ammorbidirla;
- 4) cucitura indumenti;
- 5) pulitura di un'asta in legno con un lisciatoio in pietra;
- 6) unione di una punta ad un'asta con un tendine;
- 7) scheggiatura di un cristallo con un martello in pietra dura;
- 8) inserimento di punte in pietra (armature) su di un supporto ligneo;
- 9) ritorno dalla caccia;
- 10) pesca con l'arco;
- 11) cottura di liquidi utilizzando uno stomaco di animale come recipiente



# La transizione dal Paleolitico al Mesolitico

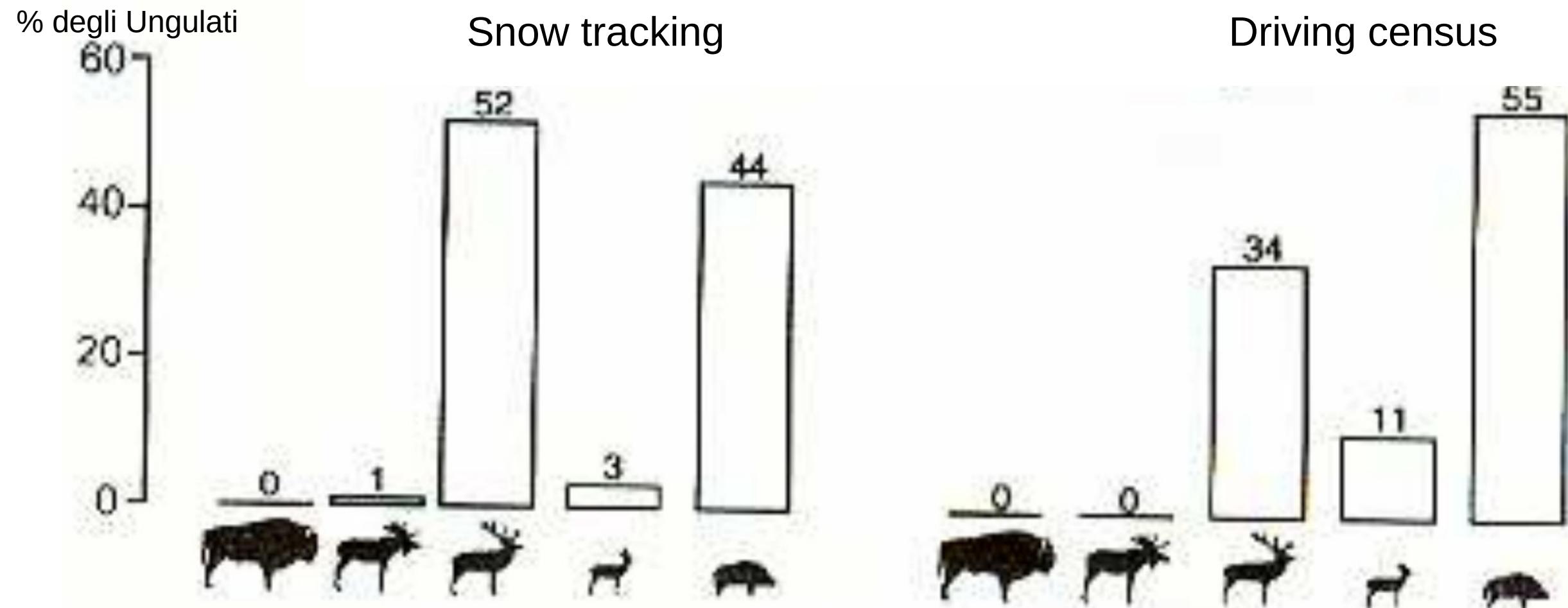
Cacciatori mesolitici seguono le tracce di bovidi (camosci e stambecchi) in una valle alpina

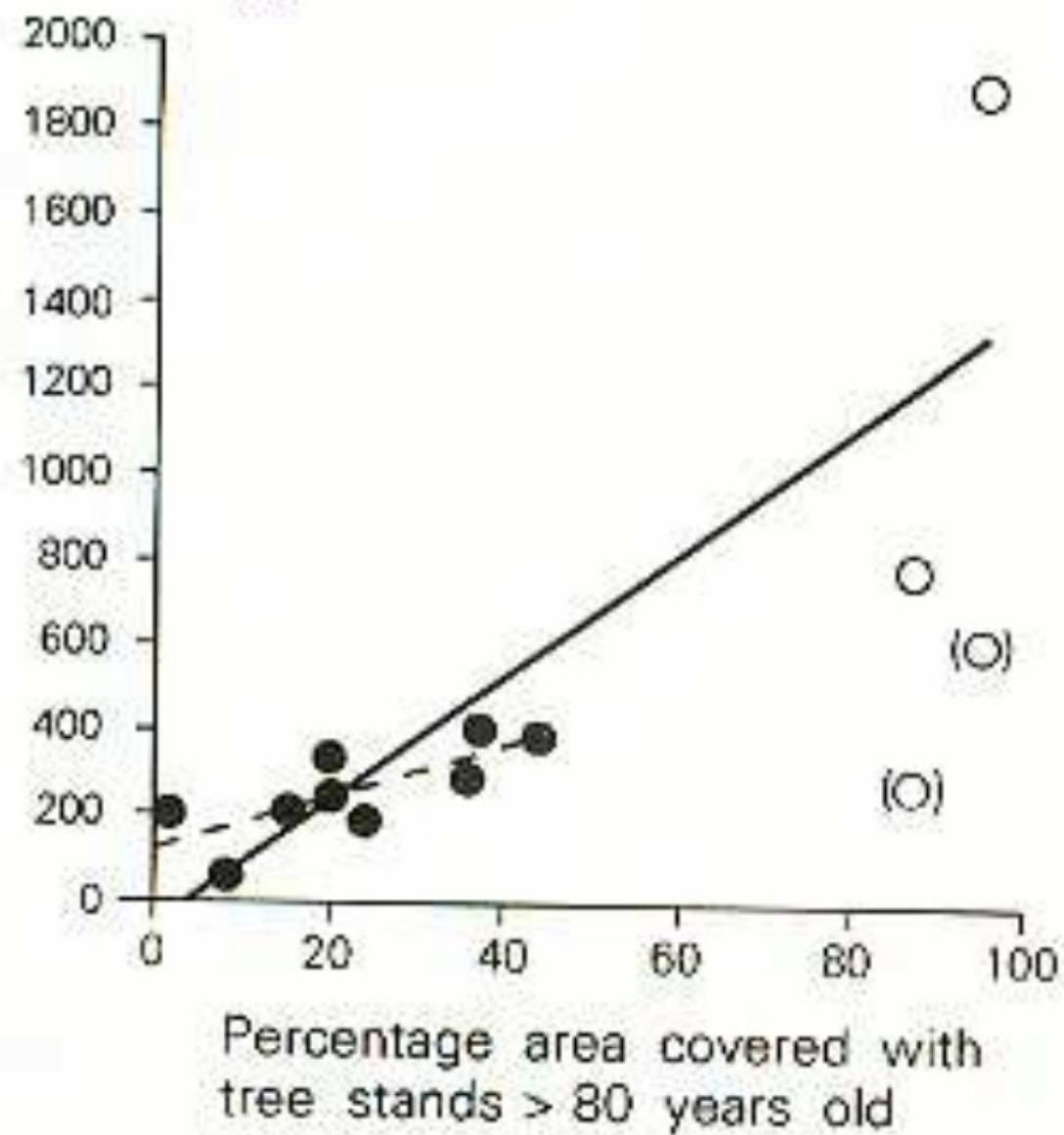
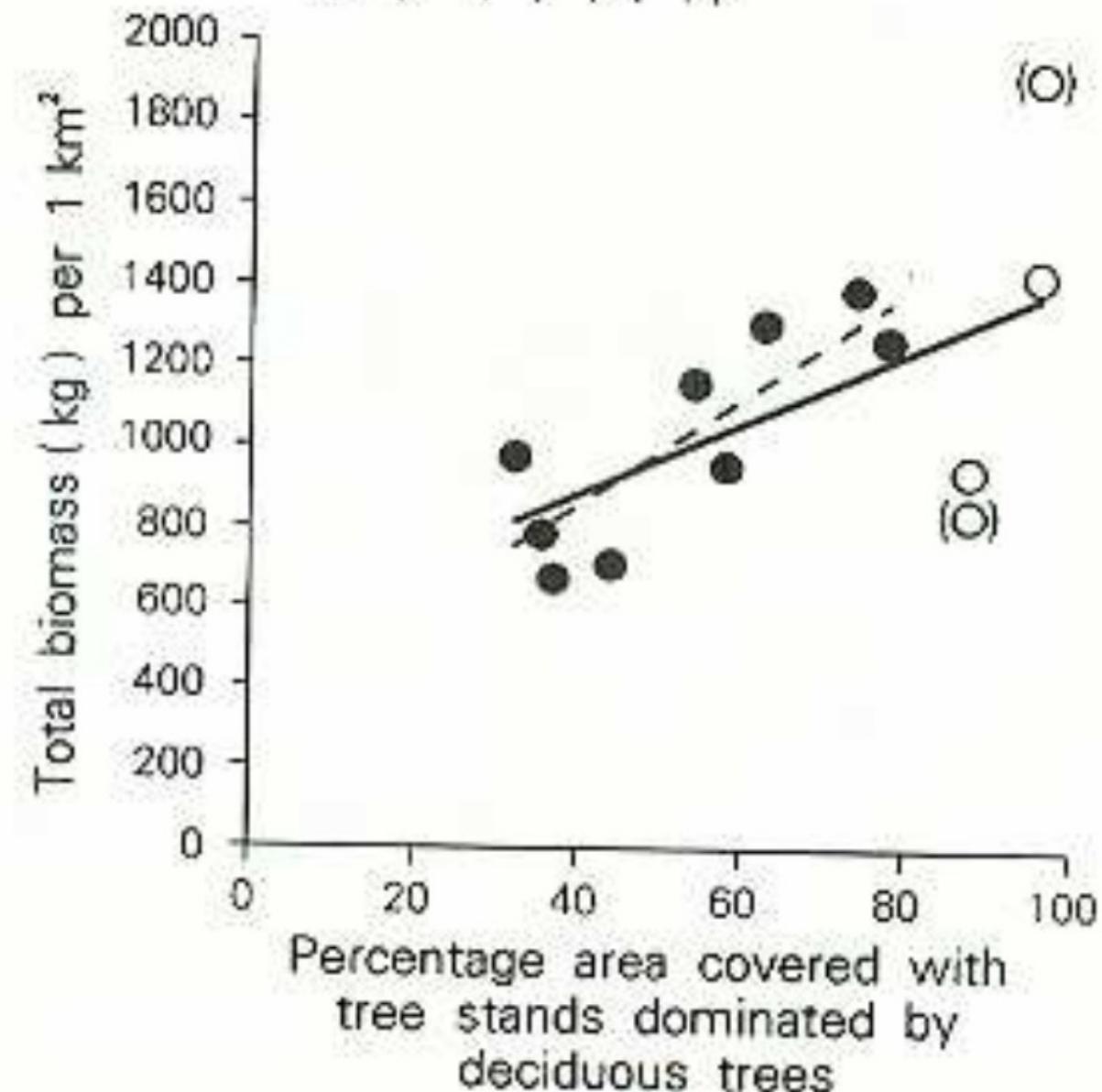




# Cervo e cinghiale specie più comuni di ungulati nelle foreste naturali

## Pristine forests (Białowieża National Park)

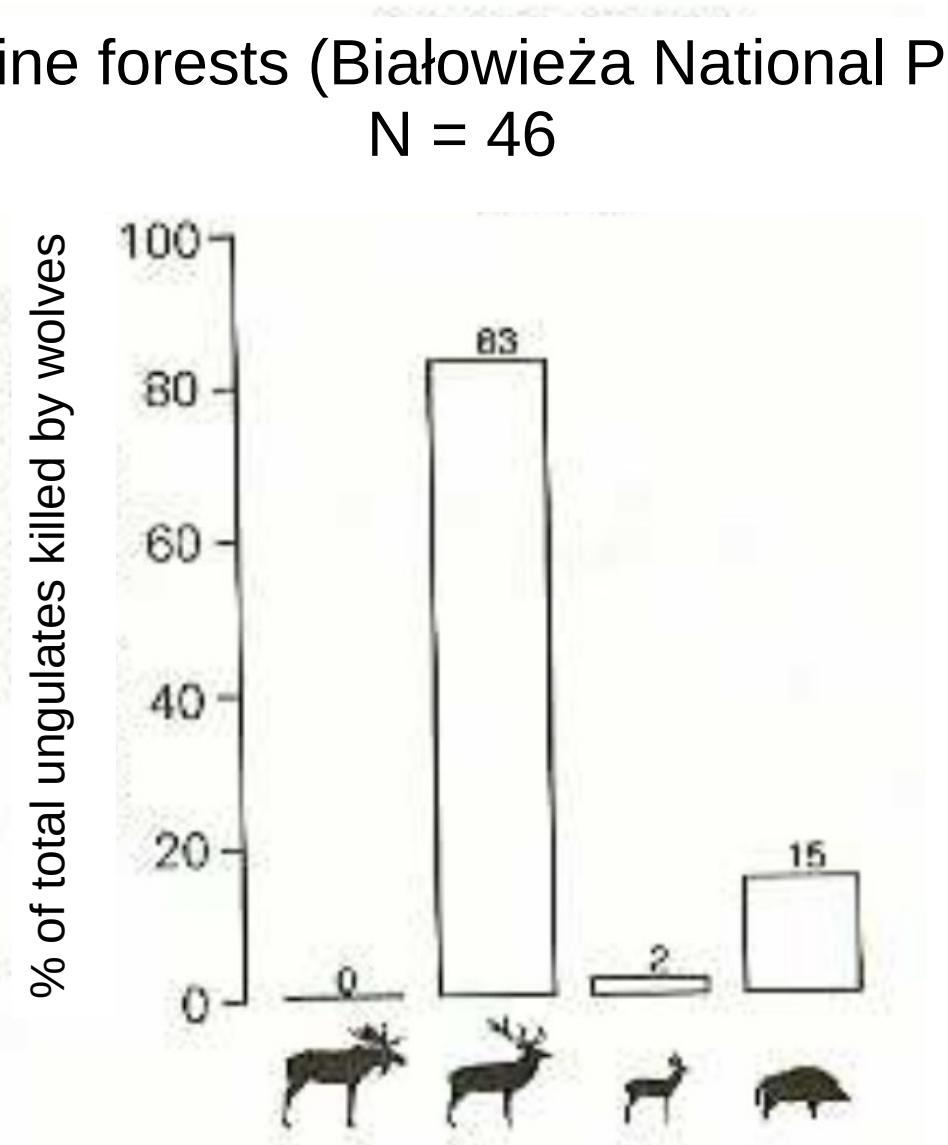




Abbondanza di Erbivori dipende da % di latifoglie, del cinghiale dall'età degli alberi

# Lupi e cinghiali a Białowieża

- La predazione da parte del lupo incide poco sulla dinamica di popolazione del cinghiale, la disponibilità trofica molto di più
- Nelle foreste europee di pianura, il lupo evita il cinghiale, preferendo prede più facili



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## What does the wild boar mean to the wolf?

Short Communication | Published: 09 December 2016

Volume 63, article number 9, (2017) [Cite this article](#)



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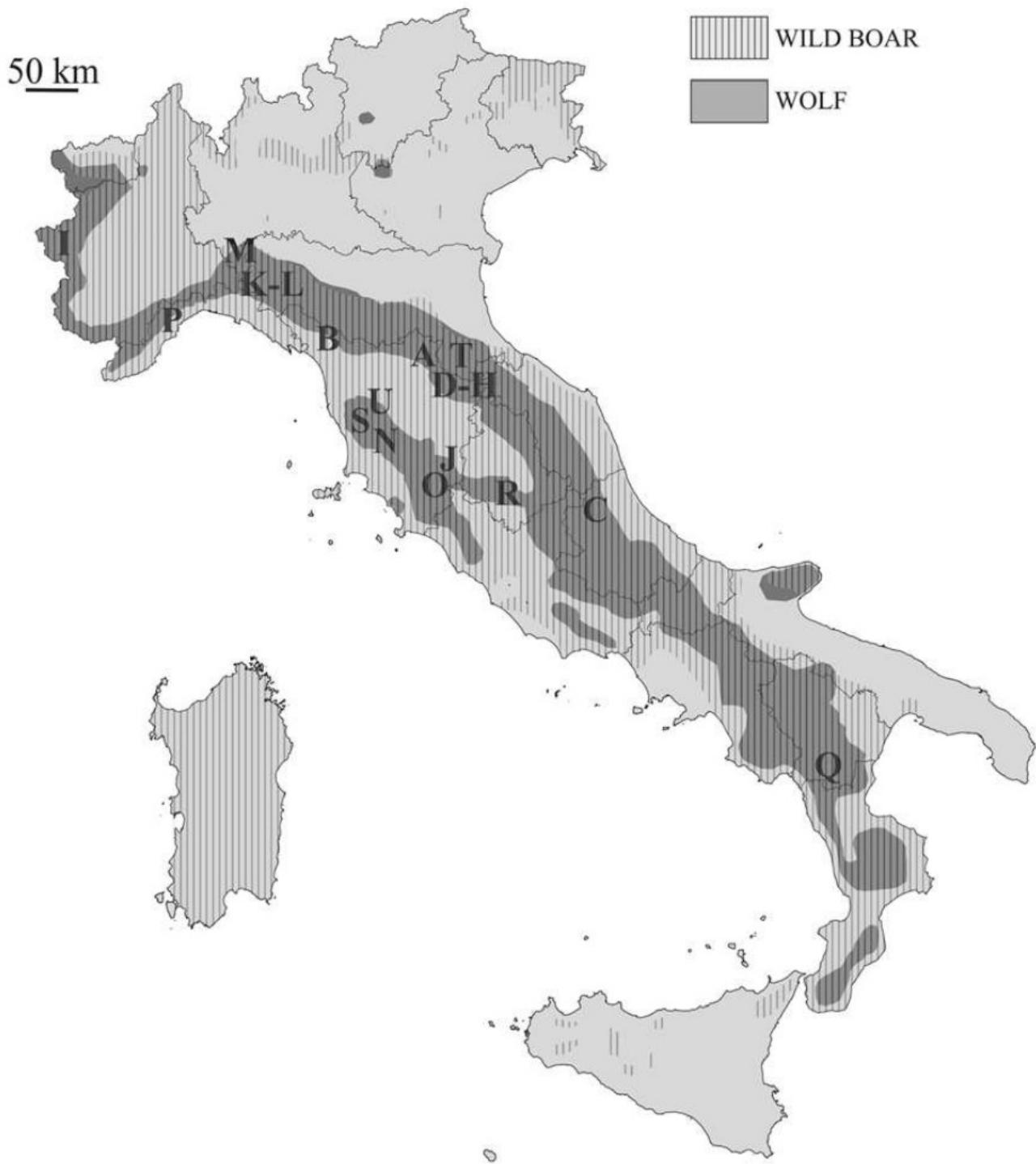
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### Abstract

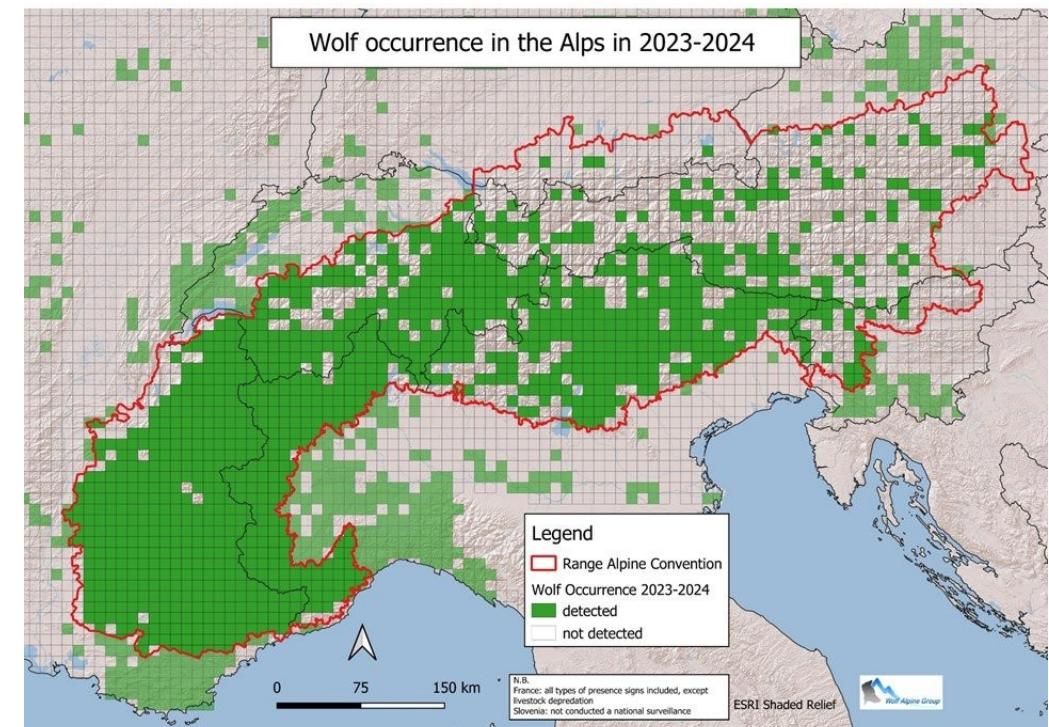
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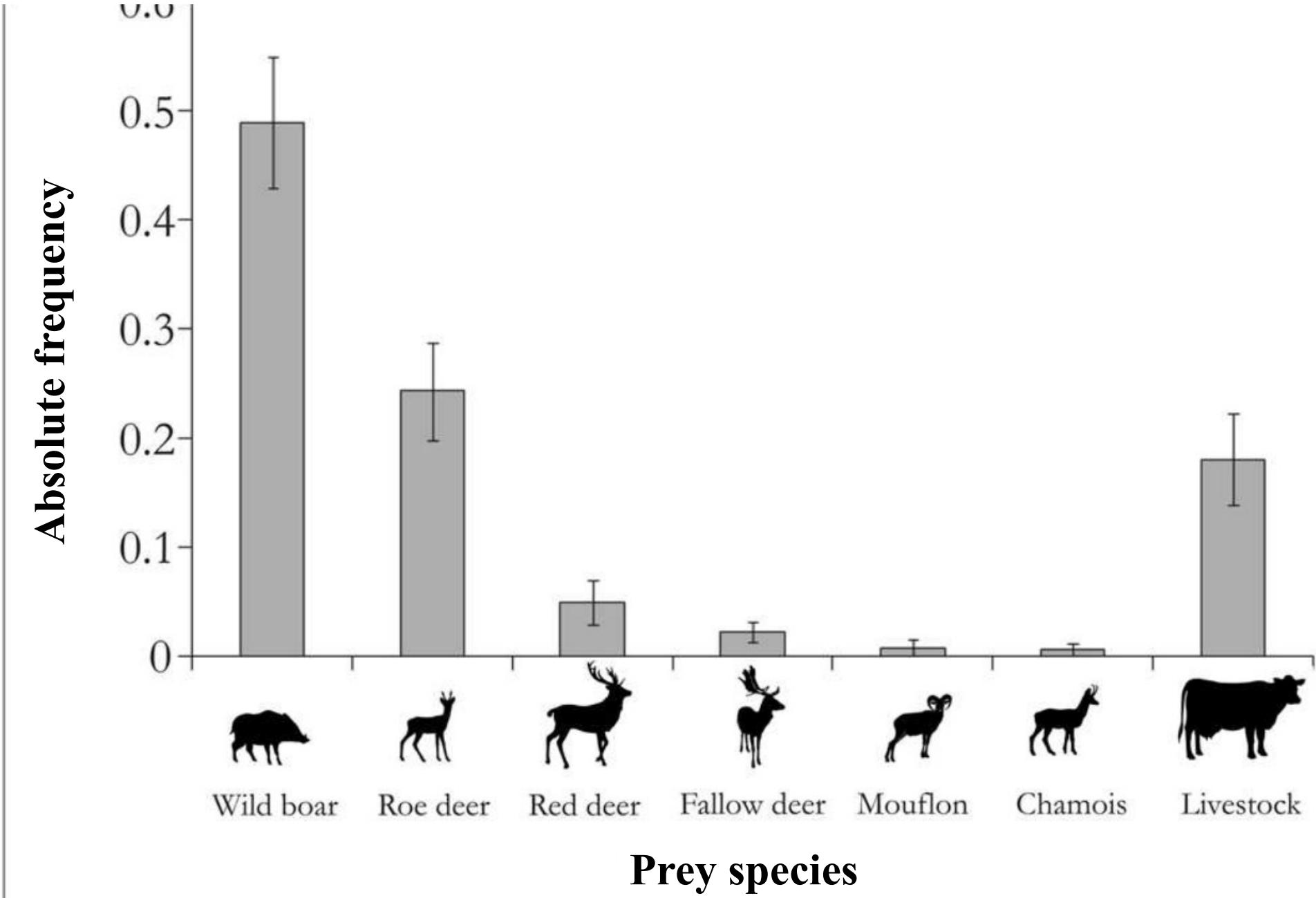
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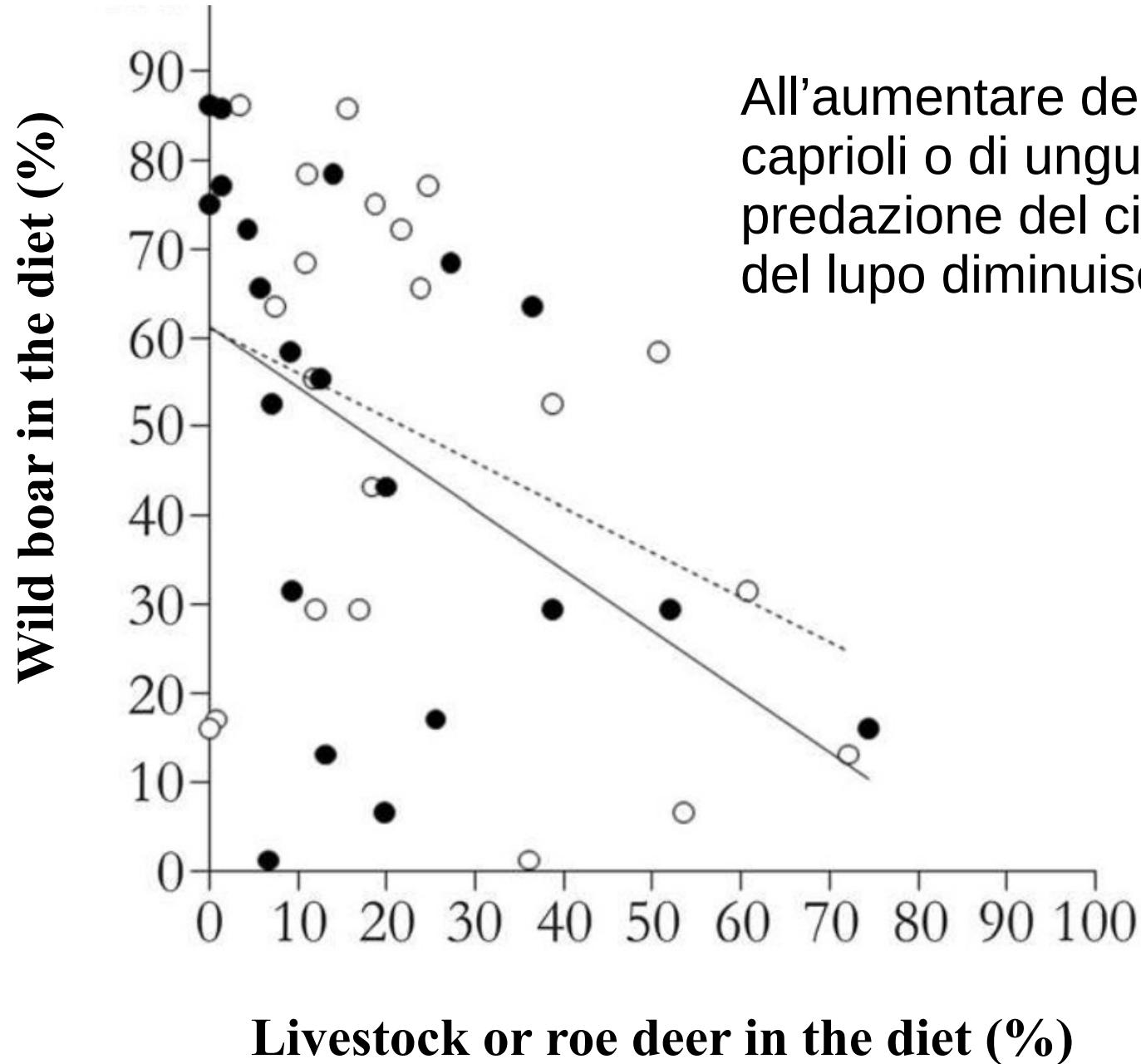
# Lupi e cinghiali in Italia (2016 -> 2024)



# Lupi e cinghiali in Italia



# Lupi e cinghiali in Italia



All'aumentare della disponibilità di caprioli o di ungulati domestici, la predazione del cinghiale da parte del lupo diminuisce. Perché?

# Perchè è importante conservare intatti i boschi maturi di latifoglie?

Nelle foreste europee di latifoglie, i cinghiali si nutrono prevalentemente di ghiande, fagioli, radici ed invertebrati del suolo. Per secoli, infatti, nelle comunità rurali i suini domestici furono fatti pascolare nei querceti maturi, che possono produrre ~ 16 ton \* km<sup>-2</sup> di ghiande.

Gli invertebrati, invece, possono superare i 20 g m<sup>-2</sup>.

# Perchè è importante conservare intatti i boschi maturi di latifoglie?

Nelle foreste europee di latifoglie, i cervi si nutrono prevalentemente di ramoscelli di alberi ed arbusti, soprattutto di carpino, quercia, betulla, nocciolo, pino ed acero.

«*The preferred foraging height of red deer, the most common cervid in the BPF and on our study plots, is 50–150 cm*».

		Vegetali (ton SS / km <sup>2</sup> )	Densità dei cervi (N/km <sup>2</sup> )
Augustów		< 15	0÷5
Białowieża	inverno	> 50	4
	estate	100	

# Perchè è importante conservare intatti i boschi maturi di latifoglie?

Nella foresta di Białowieża ci sono ~ 3000 alberelli per ettaro, in particolare carpini



162. *Carpinus Betulus* L. Weißbuche.

# Qual è l'impatto del pascolo sulla rinnovazione forestale in un bosco di latifoglie?

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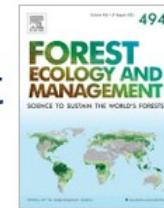
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Forest Ecology and Management



Volume 494, 15 August 2021, 119310

## Do large herbivores maintain open habitats in temperate forests?

Rafał Kowalczyk  , Tomasz Kamiński, Tomasz Borowik

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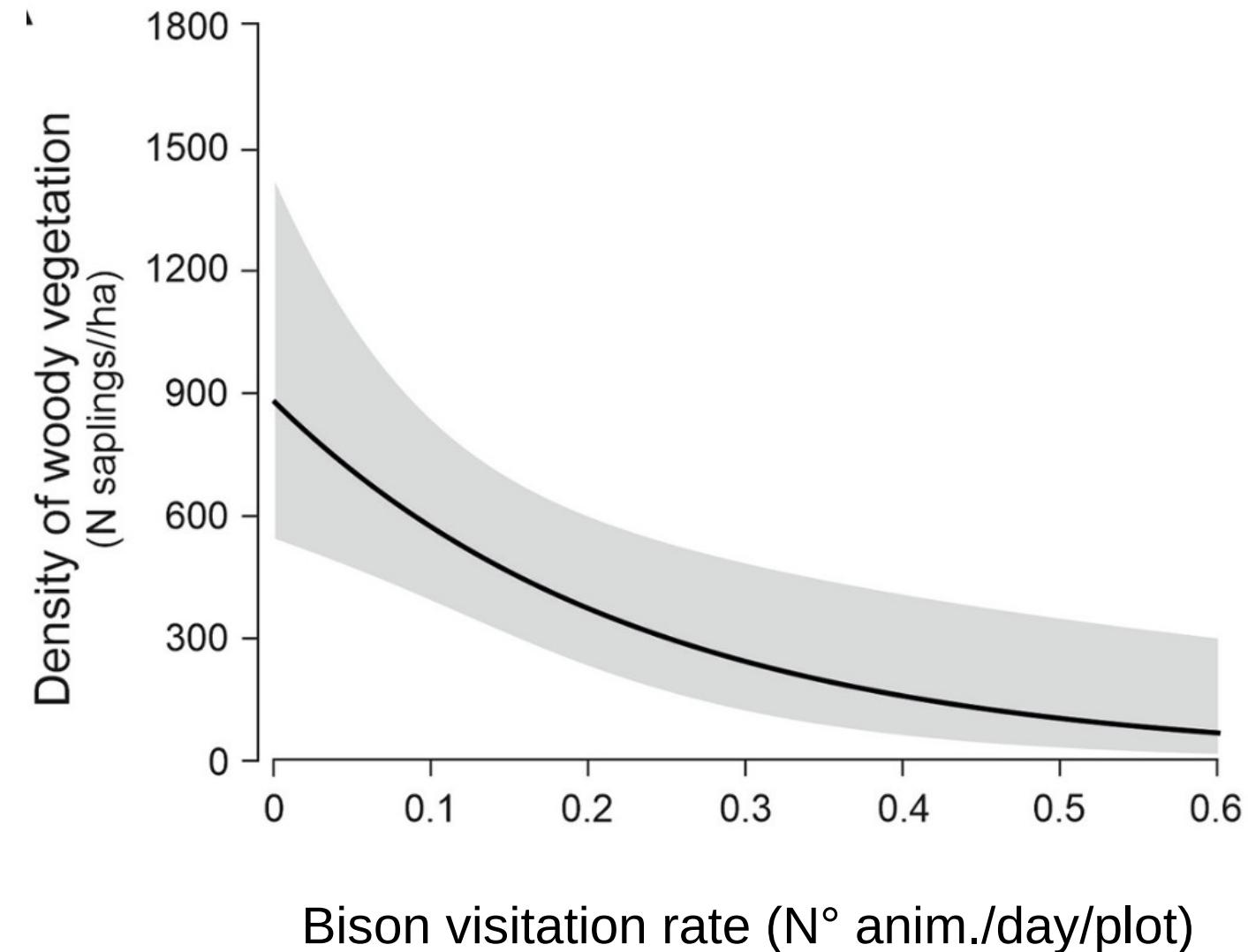
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 FEEDBACK

# Qual è l'impatto del pascolo sulla rinnovazione forestale in un bosco di latifoglie?

Both tree and shrub numbers and their crown volume decreased significantly with an increasing bison visitation rate. With the bison visitation rate increasing from 0 to 0.5/day/plot the woody vegetation density decreased from 879 to 101 saplings/ha.







# Qual è l'impatto del pascolo sulla rinnovazione forestale in un bosco di latifoglie?

European bison, but not the cervids, reduced both the density and volume of woody vegetation on meadows: woody vegetation constitutes 60÷80% of plant biomass consumed during the growing season.



# Qual è l'impatto del pascolo sulla rinnovazione forestale in un bosco di latifoglie?

They forage more frequently on leaves than twigs. When foraging on the ground they are not selective and also take woody seedlings, limiting their growth and reducing their numbers and related volume.

During summer, the bison increases foraging on protein-rich plants such as *Rubus ideaus* or *Urtica dioica*.

**The majority of bovid species, including European bison, are morphologically adapted to open habitats.** Their wide muzzle makes them less selective when grazing or browsing on the ground. They usually take large bites of food and their selection is limited more to food patches than individual plants.

