



BIOLOGY OF EUROPEAN BISON

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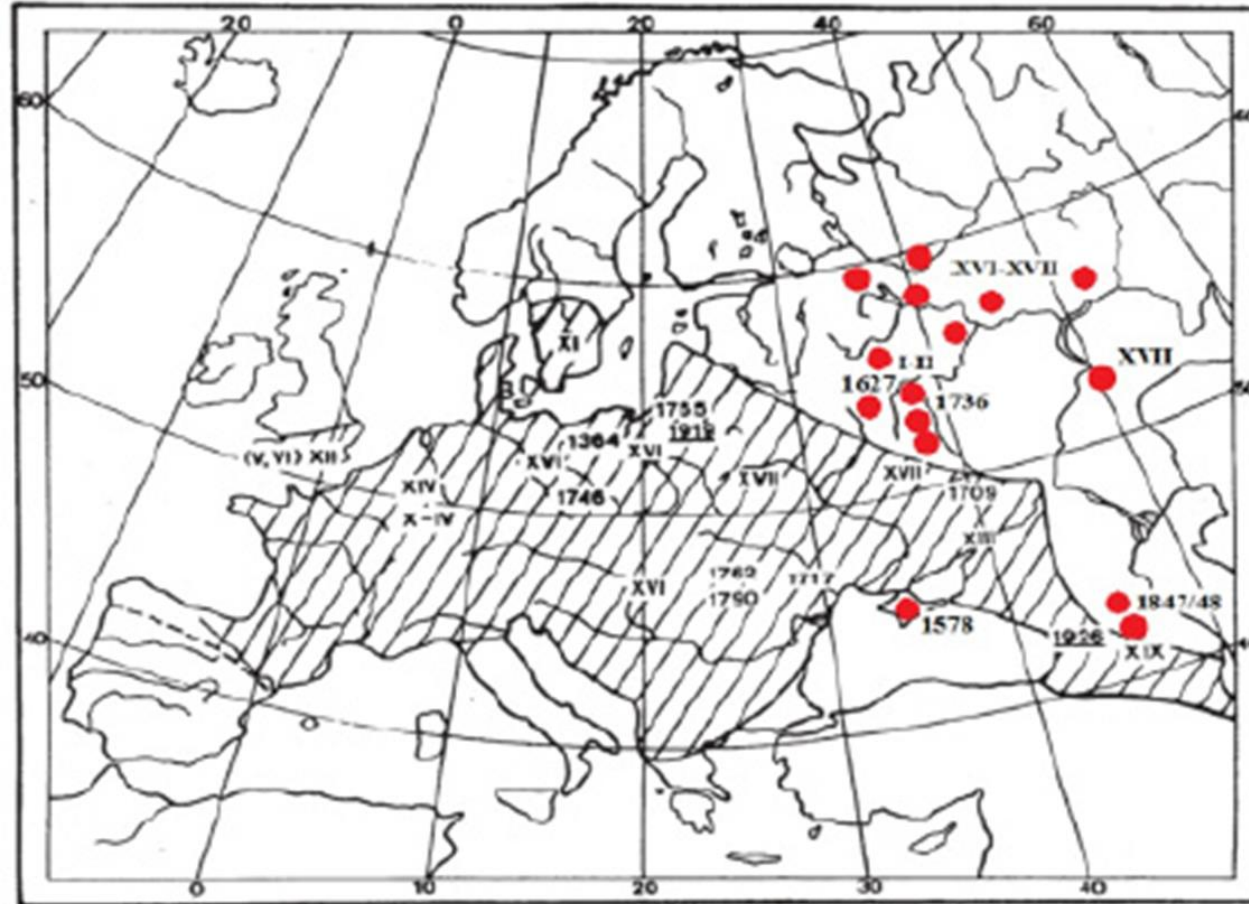


History of the disappearance of European bison



“European bison” by T. Govorun

History of the disappearance of European bison





Comeback of European bison (1923–1948)

- 1923: the Society for the Protection of the European Bison is founded
- 1926: international census of European bison. Only 52 species survive in various zoos of the world
- Poland starts publishing an international herd book
- 1939: the European bison population exceeds 100 species



Comeback of European bison (1923–1948)



Comeback of European bison (1948–present)





Comeback of European bison (1948–present)

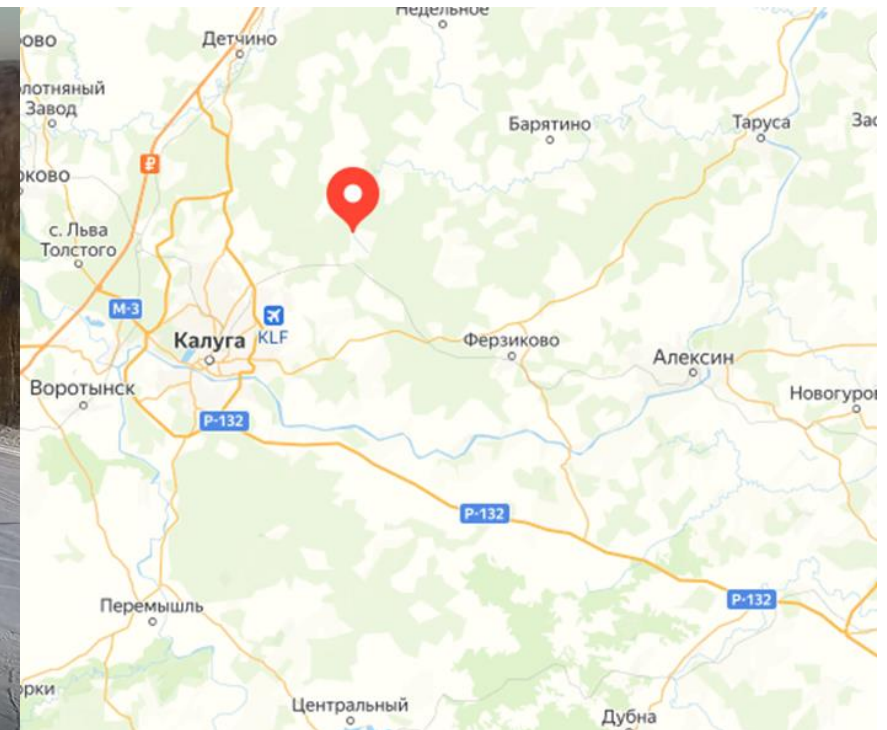
PRIOKSKO-TERRASNY NATURE RESERVE

SIZE: 2,140 TIMES THE SIZE OF RED SQUARE

ACTIVITIES

- VISIT THE FOREST SPIRIT'S CABIN
- TAKE A BALLOON FLIGHT
- EXPLORE THE NATURE TRAIL
- RIDE A PONY
- TAKE PART IN WRITING AND ART COMPETITIONS
- ADOPT A EUROPEAN BISON

Comeback of European bison (1948–present)



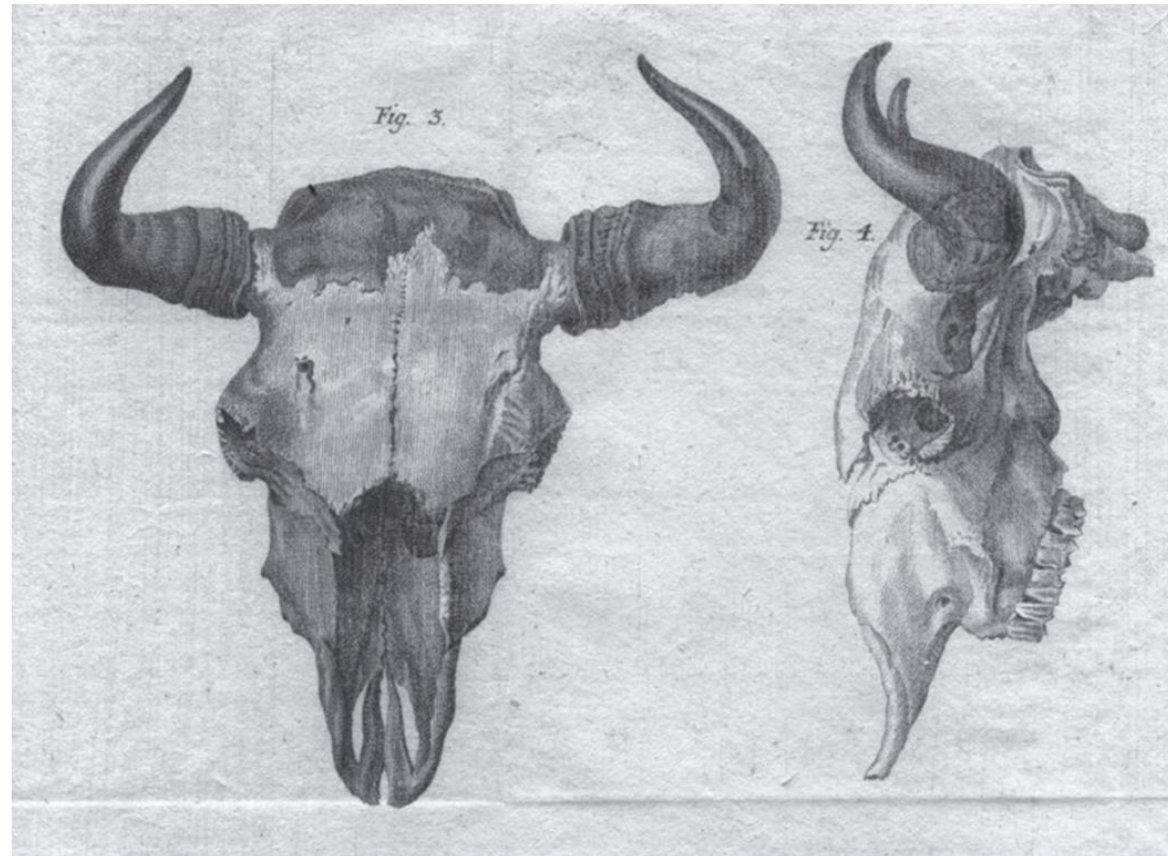
Species biology



European bison
↓
Genus: *Bison*
↓
Subfamily: Bovinae
↓
Family: Bovidae
↓
Order: Artiodactyla



Description of European bison

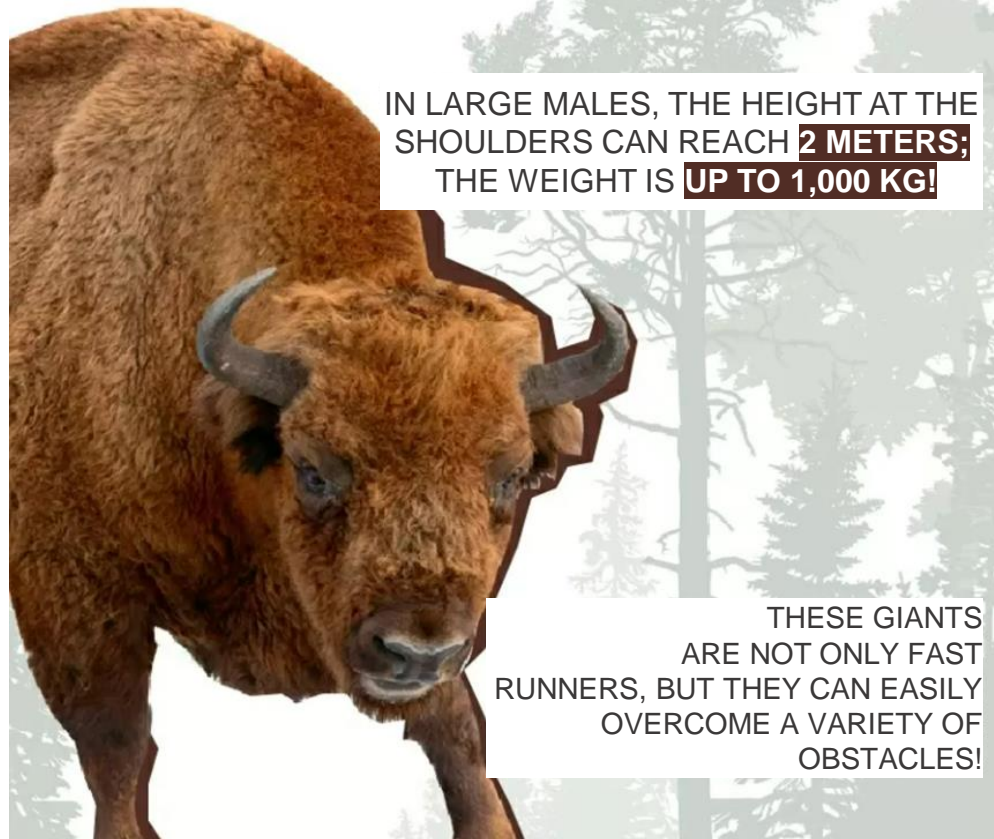


The European bison skull obtained by the Kunstkamera of the Academy of Sciences in 1739.



Description of European bison

European bison is the largest terrestrial mammal in Europe



IN LARGE MALES, THE HEIGHT AT THE SHOULDERS CAN REACH **2 METERS;** THE WEIGHT IS **UP TO 1,000 KG!**

THESE GIANTS ARE NOT ONLY FAST RUNNERS, BUT THEY CAN EASILY OVERCOME A VARIETY OF OBSTACLES!

EUROPEAN BISON IS UNIQUE

EUROPEAN BISON **HAS NEVER BEEN DOMESTICATED** THROUGHOUT ITS EXISTENCE.

EUROPEAN BISON IS THE ONLY SPECIES IN THE WORLD THAT HAS BEEN SUCCESSFULLY REINTRODUCED TO NATURE **AFTER NEARLY COMPLETE EXTINCTION.**





Description of European bison

- 32 teeth, as in humans
- The tongue and lips are violet
- The eyes are round, always black
- The tail grows up to 85 cm; there is a fluffy wisp of hair on the end
- A thick beard from the chin to the chest; a large hump on the back



Diet of European bison

- Various plants (about 400 species).
- In the summer, European bison feed on grass, shrub shoots, and tree bark.
- In the autumn, it grazes in oak woods and feeds on acorns.
- In the winter, it digs green plant parts out of the snow.
- An adult European bison needs 40–60 kg of green matter and about 50 liters of water per day.



Habitat





Subspecies of European bison

1. *Bison bonasus bonasus* Linnaeus.

1757. *Bos bonasus* Linnaeus. Syst. Nat. ed. 10, p. 71, 1757.
1788. *Bos urus* Boddaert. Elenchus Anim., p. 150, 1788.
1827. *Bos bison* H. Smith, Griffith's Animal Kingd., Vol. IV, p. 398, 1827.
1827. *Urus nostras* Bojanus. Nova Acta Acad. Caes. Leop. Car., Vol. XIII, p. 413, 1827.
1827. *Bos (Bison) bison* H. Smith, Griffith's Anim. Kingdom, Vol. V, p. 373, 1827.
1848. *Bison europaeus* Owen, Proc. Zool. Soc., p. 126, 1848.
1850. *Bison bonasus* Gray, Knowsley Menagerie, p. 48, 1850.
1884. *Bison bonasus* Flower and Garson. Cat. Osteol. Mus. R. Coll. Surg., pt. II, p. 232, 1884.
1898. *Bos (Bison) bonasus* Lydekker. Wild Oxen, Sheep and Goats, p. 64, pl. V, 1898.
1904. *Bos bonasus typicus*. Сатунин. Звери России, стр. 755, 1904.
1906. *Bonasmus europaeus* Yermoloff. Smithsonian Inst. Rep., p. 345, 1906.
1913. *Bos (Bison) bonasus bonasus* Lydekker. Cat. Ung. Mamm. Vol. I, p. 35, 1913.
1923. *Bison bonasus bonasus* Flerow, Rep. Amer. Bison Soc., p. 38, 1923.

Type: Unknown.

Habitat: Białowieża Forest.

Distribution: Currently not found in the wild. Until 1918, could be found in the Białowieża Forest.

Species of European bison



2. *Bison bonasus caucasicus* Satunin.

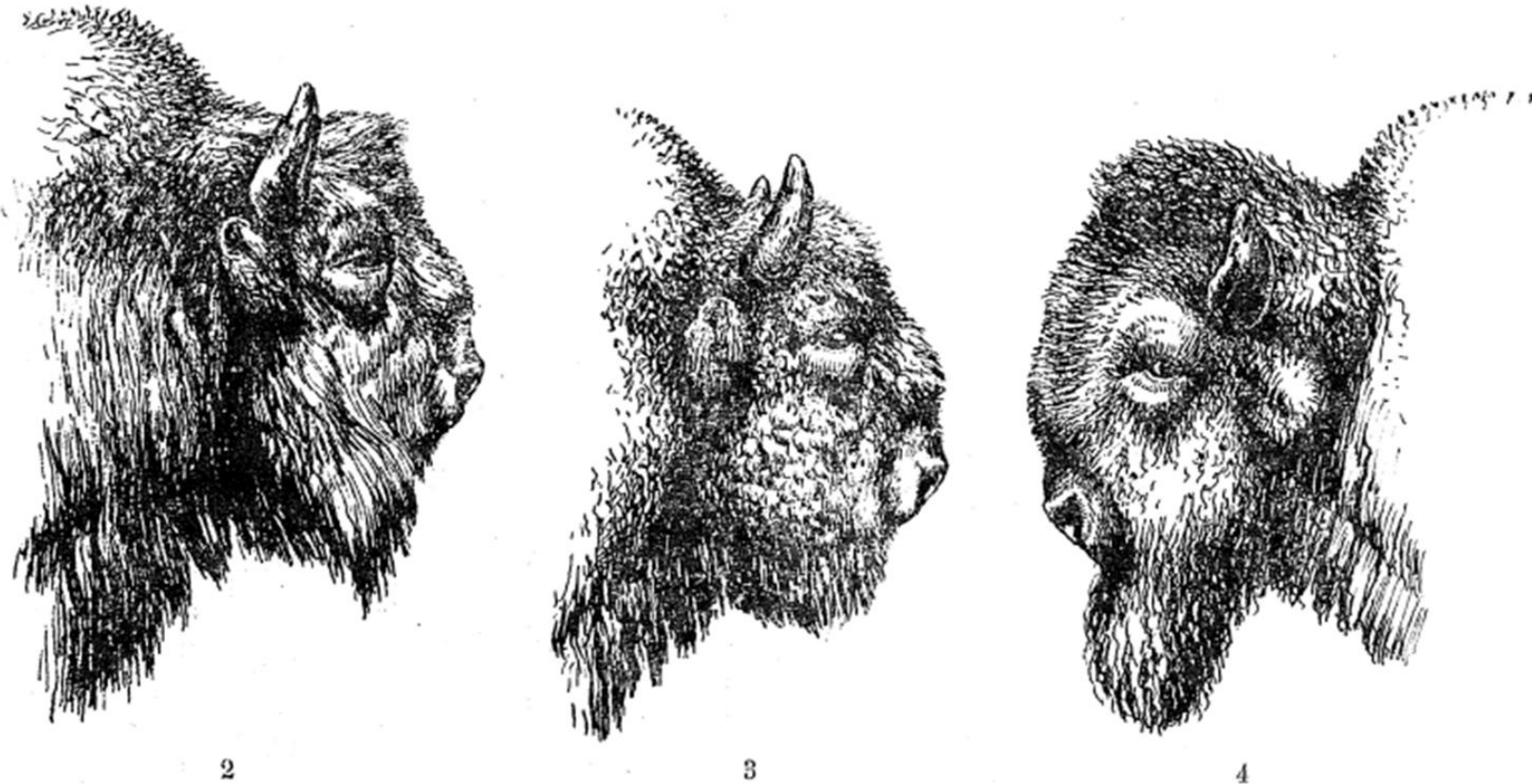
1904. *Bos bonasus caucasicus*. Сатунин. Зверя Россия, стр. 754, 1904.
1906. *Bison bonasus* var. *caucasia* Grevé. Zool. Beob. XLVII, Jahrg. № 9, p. 269, 1906.
1909. *Bison caucasicus* Hilzheimer. Mitt. K. Nat. Kab. Stuttgart, p. 252. 1909; Jahresh. Ver. Vaterl. Naturk. Württ. 1909.
1910. *Bos bonasus caucasicus* Ward. Record of Big Game, ed. 6, p. 433, 1910.
1913. *Bos (Bison) bonasus caucasius* Lydekker. Cat. Ung. Mammals, Vol. I, p. 36, 1913.
1923. *Bison bonasus caucasicus* Flerow. Rep. Amer. Bison Soc., p. 38, 1923.

Type: ♀ skin. 1836, baron Rosen's collection. No. 22087, collection of the Zoological Academy. When describing the subspecies, Satunin referred to the specimen described by Baer (3), so this skin should be considered a type.

Habitat: Northwest Caucasus.

Distribution: Currently extinct. Until 1926, could be found in the Northwest Caucasus, in the catchment of the Laba and Belaya rivers.

Differences in European bison species



Figures 2–4. 2. Head of the *Bison bonasus bonasus* Linnaeus; 3. *Bison bonasus caucasicus* Satunin; 4. *Bison bison bison* Linnaeus

Differences between species

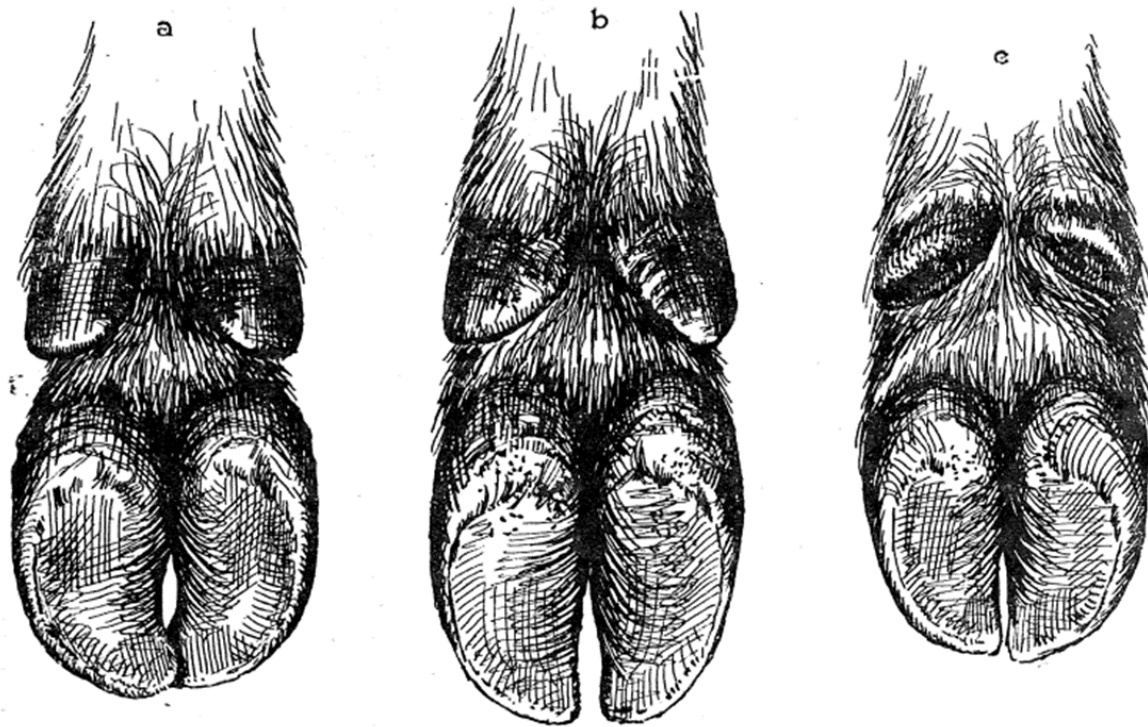


Fig. 7. Hooves of the right front leg: a. *Bison bison bison* Linnaeus; b. *Bison bonasus bonasus* Linnaeus; c. *Bison bonasus caucasicus* Satunin

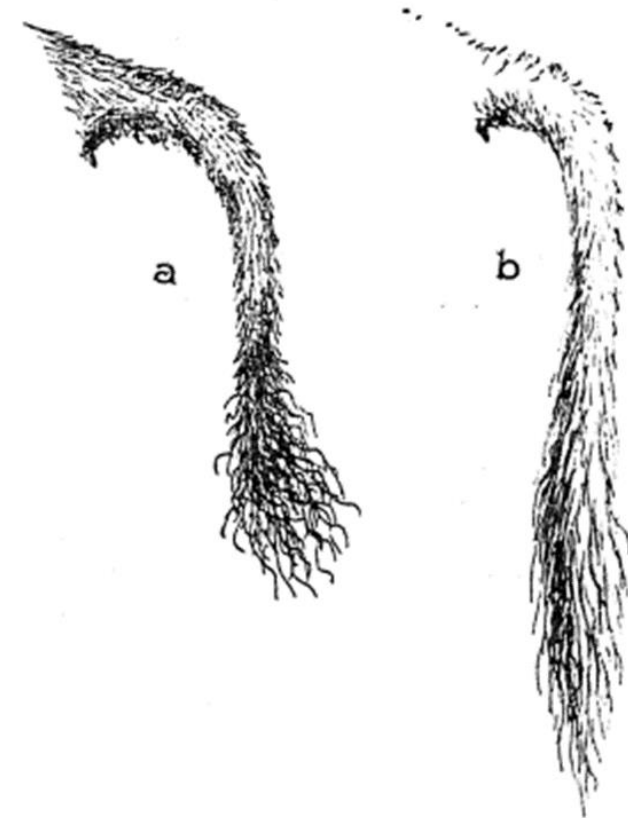


Fig. 1. Tail of the *Bison bison* Linnaeus (a) and *Bison bonasus* Linnaeus (b).



Species of European bison



- Białowieża (lowland European) bison (*Bison bonasus bonasus*) could be found from the Pyrenees to the West of Siberia. It is larger than other subspecies, and also has longer legs.

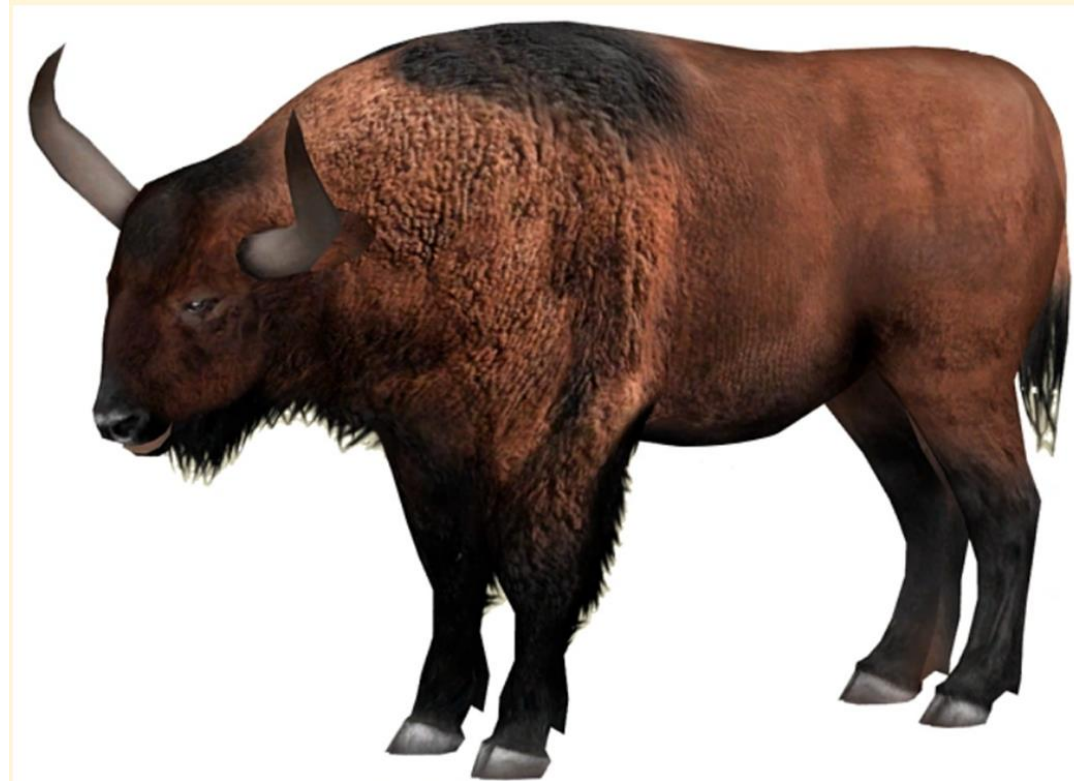


Species of European bison



- Caucasian wisent (*Bison bonasus caucasicus*) was common in the mountain woods of the Caucasus. Smaller than the Białowieża bison, with dark, curly hair and curved horns.

Species of European bison



- Carpathian (Hungarian) wisent (*Bison bonasus hungarorum*) could be found in Transylvania and the Carpathian Mountains.



Comparison

Białowieża bison

- Very large (the largest living representative of the genus *Bison*). The height at the shoulders of an adult male is about 1.85 m
- The hooves are elongated. The length of front hooves in an adult male varies between 90 and 105 mm; the dew claws are 40–55 mm long. The hind hooves are 100–115 mm long; the dew claws are 40–55 mm long.
- The hair on the entire body is nearly straight or slightly curved on the sides of the pelvis.
- The hair on the front of the body is quite long; in adult males, it can reach 370–400 mm in the beard and 180–250 mm on the underside of the neck. The color is relatively light, grayish-brown with an ochre-brown tint.

Caucasian wisent

- It is smaller; the height at the shoulders is about 1.6 m.
- The hooves are short, high, and rounded. The length of front hooves in an adult male is 70–85 mm; the dew claws are 25–35 mm long. The hind hooves are 75–90 mm long; the dew claws are 25–35 mm long.
- The hair on the entire body is very curly (like that of a domestic ram); the entire body is covered with small, tight curls, with large curls on the head and neck.
- The hair on the front of the body is much shorter. In adult males, the hair length does not exceed 250 mm in the beard and is about 150 mm on the underside of the neck.
- The color is darker, brownish with a chocolate shade (between Warm Sepia, pl. XXIX, and Hay's Brown, pl. XXXIX)



Temper and behavior

- Are not aggressive
- Lead an ordered life
- Looks for feed in the morning and in the evening, and prefers to rest during the day



Temper and behavior



EUROPEAN BISON ARE A MATRIARCHAL SOCIETY.

EACH FAMILY GROUP IS LED BY AN OLDER
FEMALE.

MALES USUALLY LIVE ON THEIR OWN AND ONLY VISIT
FAMILY GROUPS DURING THE BREEDING SEASON.





Breeding of European bison

- The breeding season of European bison begins in July and ends in October
- Pregnancy in European bison lasts for 9 months
- Typically, one calf at a time is born, but occasionally two
- Immediately after giving birth, the mother licks the calf to help it adapt to its surroundings
- Calves eat milk for the first year of their lives, although they can start eating plant food after a month.
- Young males live in a herd for 3–4 years, after which they leave and form separate groups

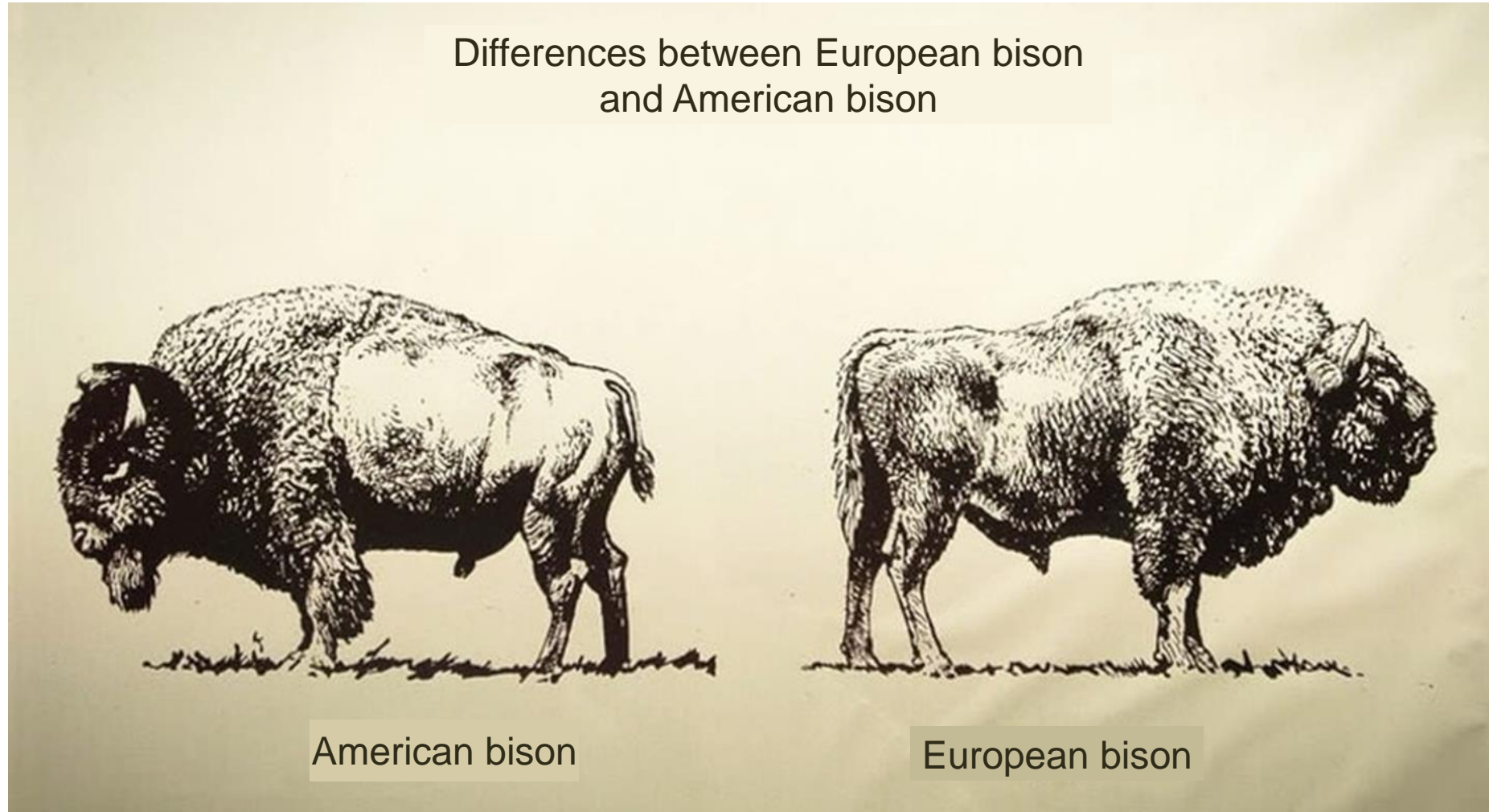


Life period of European bison



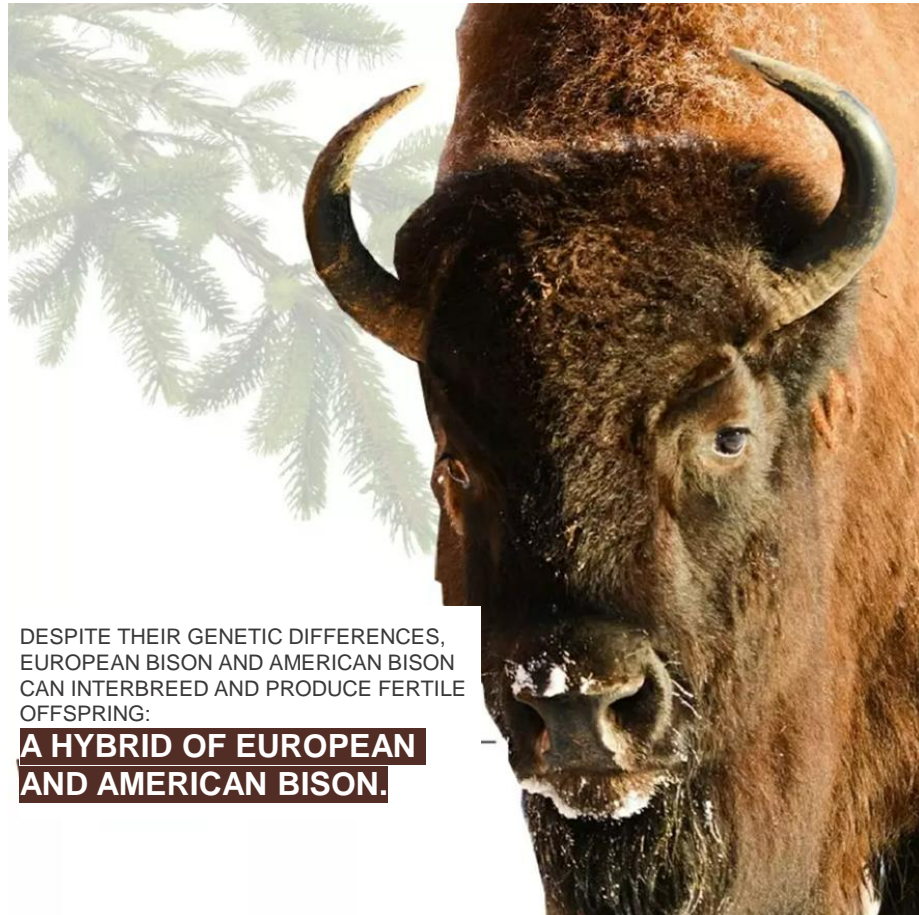


Differences between European bison and American bison





Differences between European bison and American bison



DESPITE THEIR GENETIC DIFFERENCES, EUROPEAN BISON AND AMERICAN BISON CAN INTERBREED AND PRODUCE FERTILE OFFSPRING:

A HYBRID OF EUROPEAN AND AMERICAN BISON.



EUROPEAN BISON

MORE BLACKISH COLOR.

EUROPEAN BISON HAS A LARGER HUMP AND A LOWER SET HEAD THAN AMERICAN BISON.

THE HAIR ON THE FRONT OF THE BODY IS STIFF AND LONG.

DIFFERENCES BETWEEN EUROPEAN BISON AND AMERICAN BISON

MORE BROWNISH COLOR.

IN EUROPEAN BISON, THE HAIR ON THE FRONT OF THE BODY IS OF MODERATE LENGTH AND AS SOFT AS FUR.

THE HOOVES ARE WIDER; THE TAIL, HORNS, AND BODY IN GENERAL ARE LONGER.



AMERICAN BISON

Enemies



Enemies



EUROPEAN BISON ARE HUGE,
SO THEY HAVE NEARLY NO ENEMIES IN THE WILD
(WOLVES ARE A DANGER ONLY TO YOUNG ONES)

IT APPEARS THAT EUROPEAN BISON COULD
ROAM FEARLESSLY WHEREVER THEY WANTED.
HOWEVER, THIS IS NOT THE CASE.
THEY ARE VERY EASILY SCARED.
THEY FLEE AS SOON AS THEY SEE A HUMAN.



