

The international contest Young People in European Forests 2016

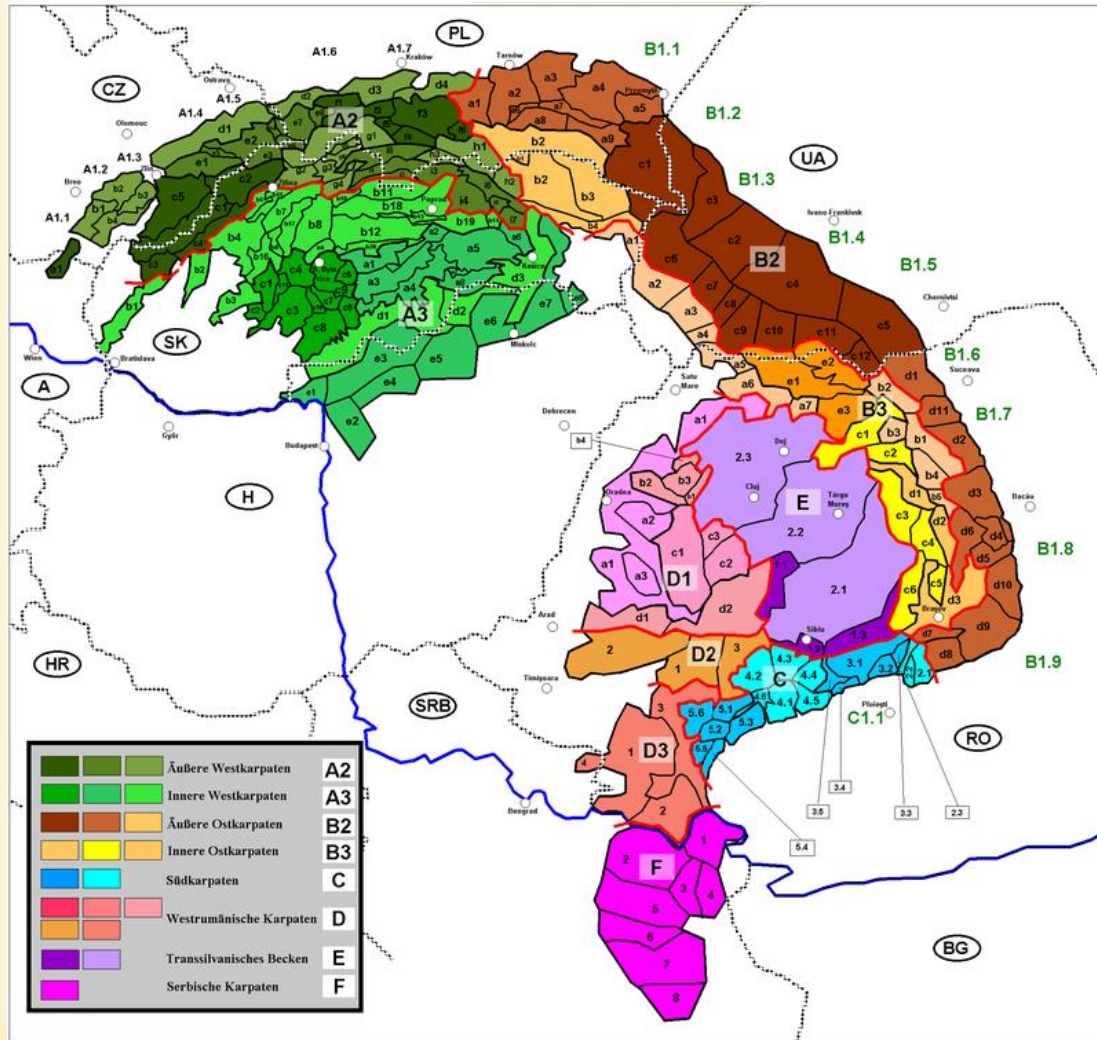
Forests in Poland and Europe. Characteristics and management.
European Bison as a symbol of the Carpatian forests:

The return of the European Bison to the Bieszczady Mountains

SPECIES RESTITUTION OF THE EUROPEAN BISON (*BISON BONASUS*)
TO THE BIESZCZADY MOUNTAINS, POLAND

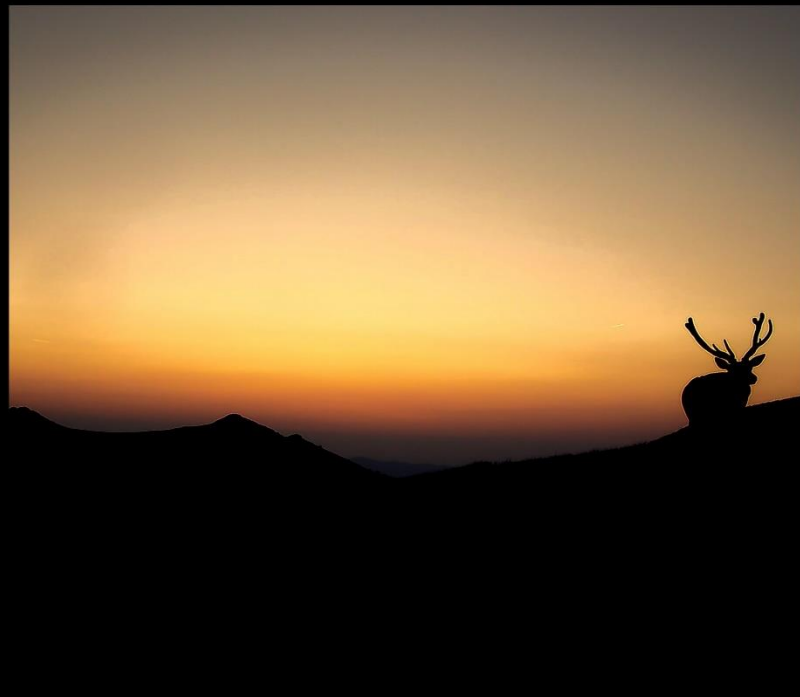
Let's start from the beginning...

Bieszczady Mountains

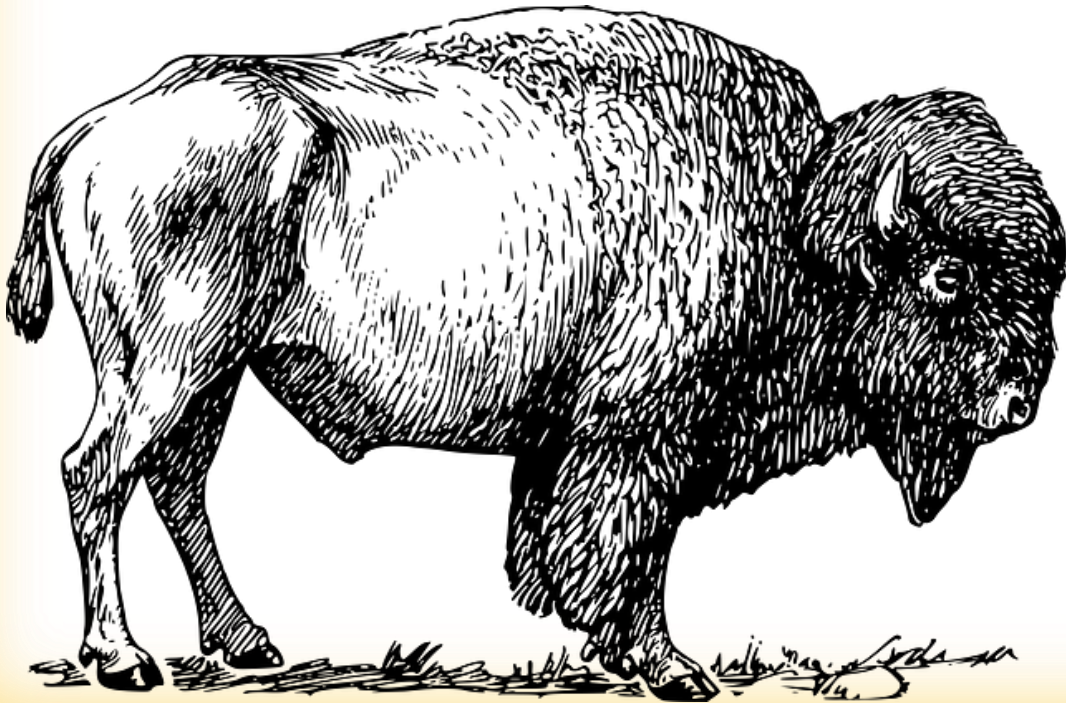


The Bieszczady is a a mountain range of medium height, situated in the south-east of Poland, on it's borders with Slovakia and Ukraine. This is the only part of Eastern Carpathians within the borders of Poland. The natural envirometns of the mountains has many features such as: vast Carpathian forest with abundant animal life, „poloninas” (mountain pastures) stretching above the upper forest line with Alpine plant species.

*The highest peak of the Bieszczady is **Mt.Pikuy** (1405 m) in Ukraine. The highest peak of the Polish part is **Tarnica** (1346 m).*



What is going on with the wisent?



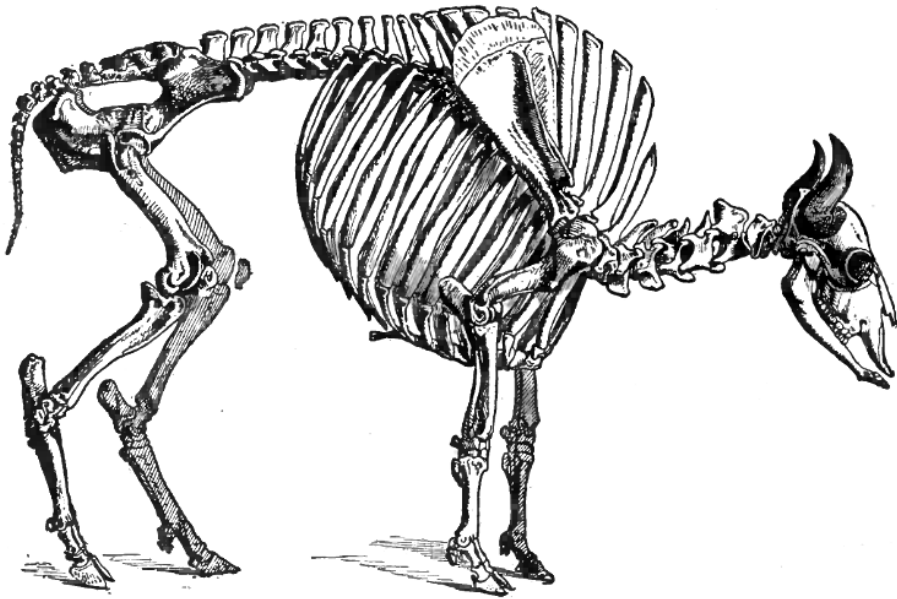
- Wisents are the largest living mammals in Europe, since the extinction of mammoths.
- In countries of eastern Europe, where for more than 50 years a successful restitution of this species has been carried out, wisent is the symbol of nature conservation.
- The reason for this is that saving the animal from extinction is considered to be the most important achievement of man in the field of protection of endangered species.
- Today, wisent is a unique and the most characteristic species of the Bieszczady fauna.

HISTORY OF THE WISENT

'It seems that this animal never will come out of the wild state: because all attempts to appease it and use its strength for the benefit of man failed so far. In Medieval Ages, a hunt for wisents was the main amusement of illustrious men; today, their extirpated generation takes rest after the long persecution. What will be their future destination nobody knows; but probably they do not remain useless because the Creator, who had not thrown even the smallest creature upon the Earth without a purpose, has drawn without any doubts a domain of usefulness also for this animal, granted with such strength and long life.'



FROM THE TEXT 'ABOUT WISENT' TAKEN FROM THE
POLISH JOURNAL 'PATTERNS OF PROSE' FROM 1869



SKELETON OF THE EUROPEAN BISON.

European bison's skeleton
Richard Lydekker - Royal Natural History
Volume 2 (Available on www.archive.org)

- European bison in the **Białowieża Forest** were legally the property of the Polish kings until the third partition of Poland. Wild European bison herds also existed in the forest until the **mid-17th century**.
- Polish kings took measures to protect the bison. King **Sigismund II Augustus** introduced the death penalty for poaching European bison in **Białowieża** in the **mid-16th century**.
- In the early **19th century** Russian czars retained old Polish laws protecting the European bison herds in **Białowieża**. Despite these and other measures, the European bison population continued to decline over the following century, with only **Białowieża** and **Northern Caucasus** populations surviving into the **20th century**.



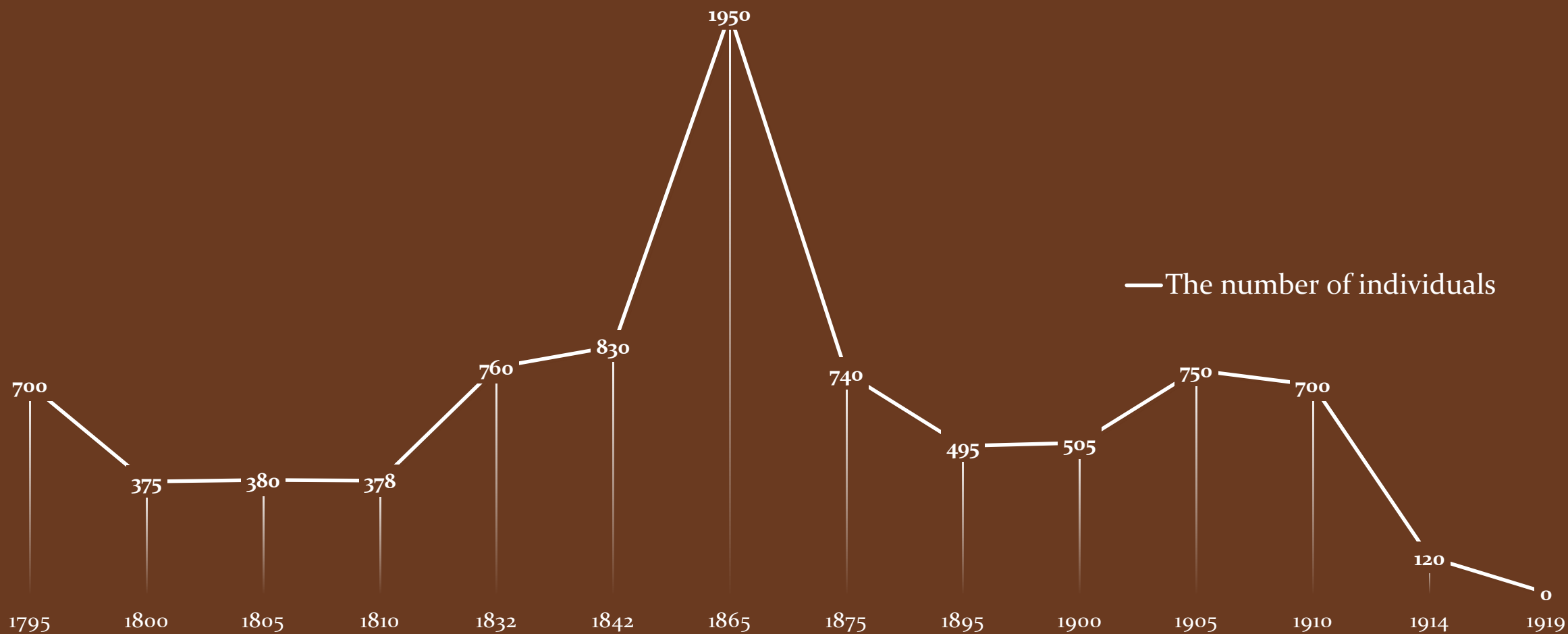
*Bison in the Białowieża Forest, 1955,
fot. Jan Jerzy Karpiński*

- During **World War I**, occupying German troops killed 600 of European bison in the **Białowieża Forest** for sport, meat, hides, and horns. A German scientist informed the army officers that the animal was facing imminent extinction. However, at the very end of the war retreating German soldiers shot all but nine animals.

- The last wild European bison in Poland was killed in **1921**. The last wild European bison in the world was killed by poachers in **1927** in the western Caucasus. By that year, fewer than 50 bison remained, all held in zoos.

The population of European Bison (*Bison bonasus*) in Poland (1795-1919)

(approximate value, based on available statistics)



RESTITUTION

Until the 60's of XXth century, **Białowieża** was the only place in the whole Europe where a free ranging herd of wisents still existed. In the Carpathians, there already had been no wisents for about 150 years. Breeding centres and ZOOs often maintained both genetic lines: lowland (*Białowieża line*) and the mixed one *lowland-Caucasian*.



*First wisent in the show enclosure in Muczne
Fot. Archive of Stuposiany Forest District*

WISENT'S RETURN TO BIESZCZADY

EASTERN BIESZCZADY BISON POPULATION:

1963 – Import of 7 wisents to Stuposiany Forest District.

1964 – Setting free all the bison. They were the beginning of the Eastern Bieszczady bison population

WESTERN BIESZCZADY BISON POPULATION

1976–Import of 6 wisents to Komańcza Forest District.

1980–Setting the bison free after a 4-year-acclimatization. The beginning of the Eastern Bieszczady bison population

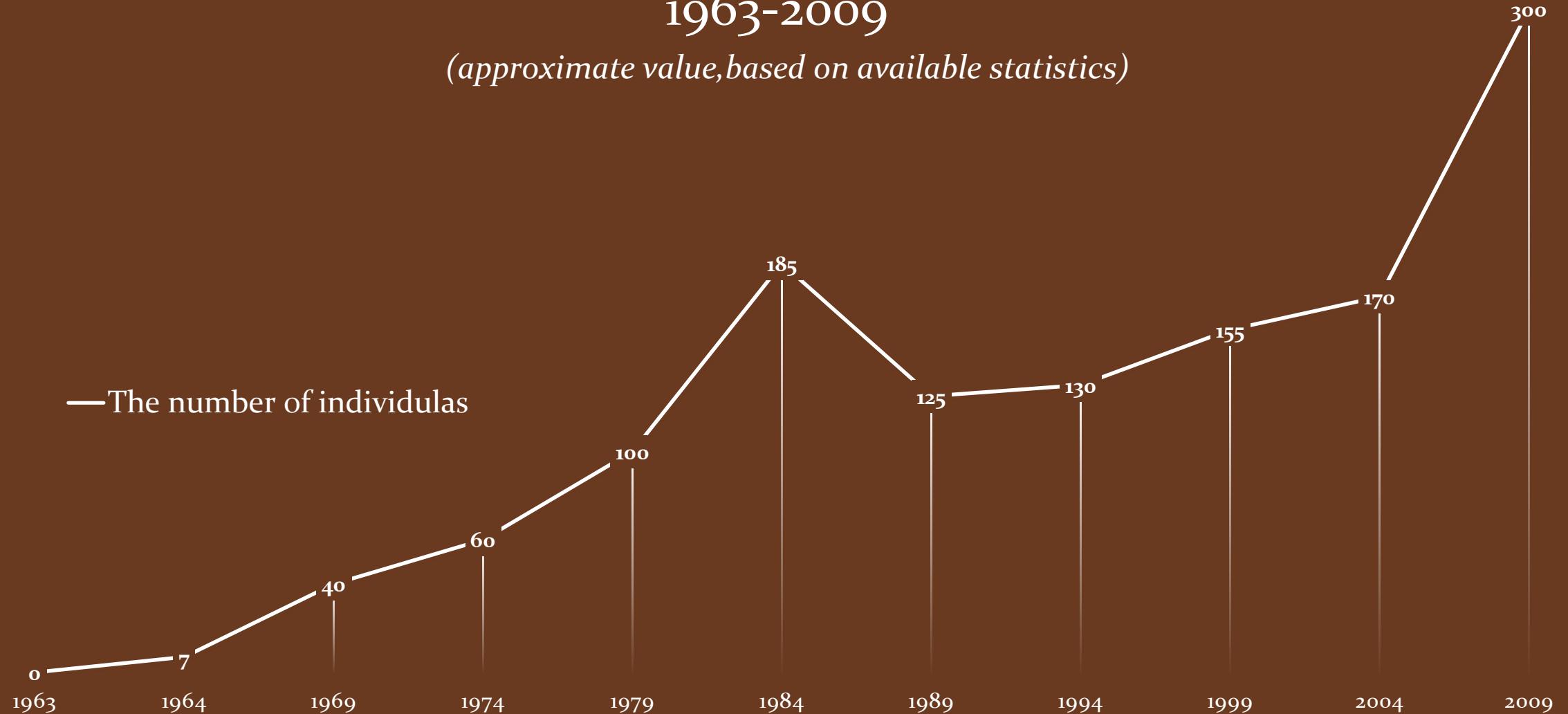


*The release of wisents at Stuposiany in 1964
fot. Archive of M. Hławiczka*

The population of European Bison (*Bison bonasus*) in Bieszczady after the restitution

1963-2009

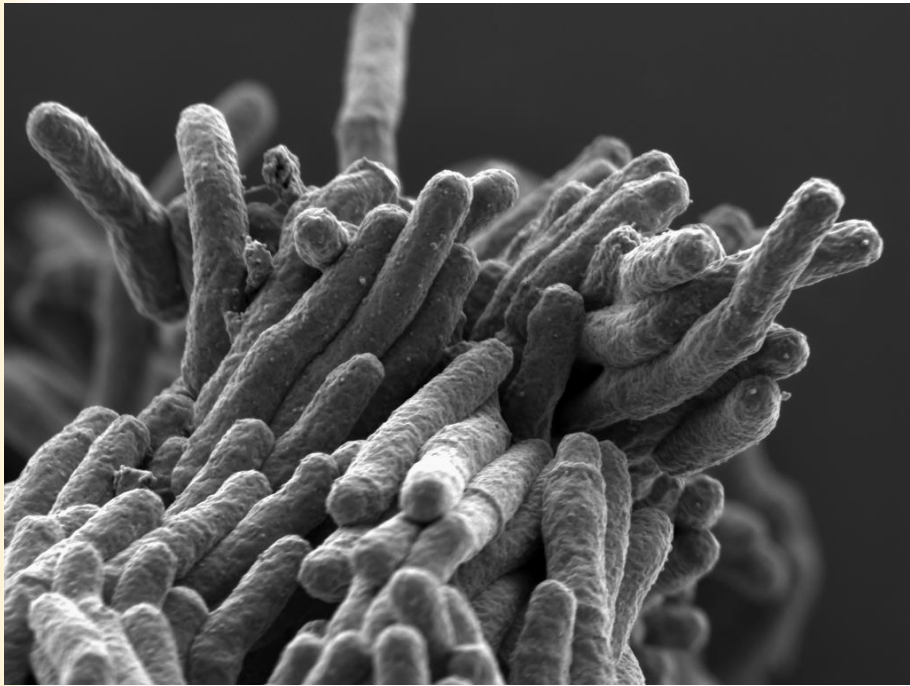
(approximate value, based on available statistics)



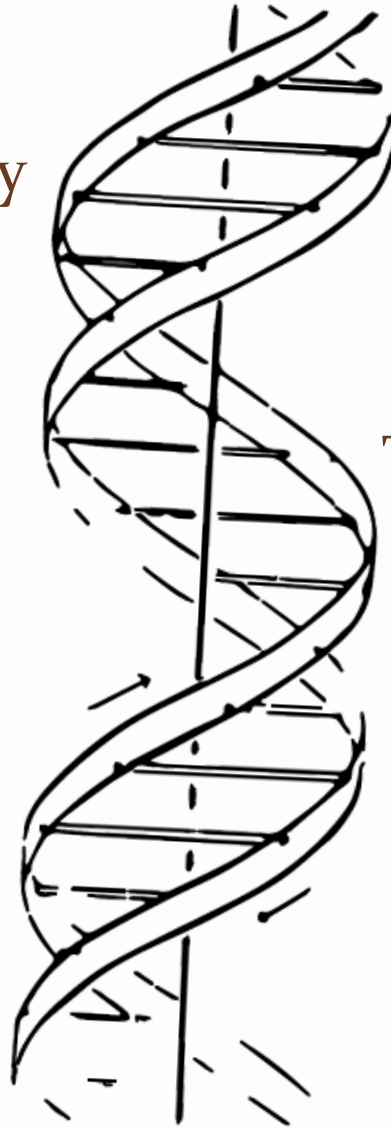
WISENTS' IN BIESZCZADY- MAIN PROBLEMS

TUBERCULOSIS

The biggest threat to the Bieszczady bison is tuberculosis. For the first time it was found in 1996.



Mycobacterium bovis



THE LOW GENETIC VARIABILITY

A serious problem of wisents in the Bieszczady is low genetic variability, which was confirmed by the results of the DNA polymorphism analysis. These examinations confirm the results of pedigree analysis, according to which, the Eastern population is represented by two founders, and in the western population two ancestral genes comprise more than 80%. To increase the genetic variability of the Bieszczady bison, the local population is systematically powered by genetically selected individuals of captive breeding.

SHOW ENCLOSURE IN MUCZNE, STUPOSIANY FOREST DISTRICT



Fot: Jan Mazur

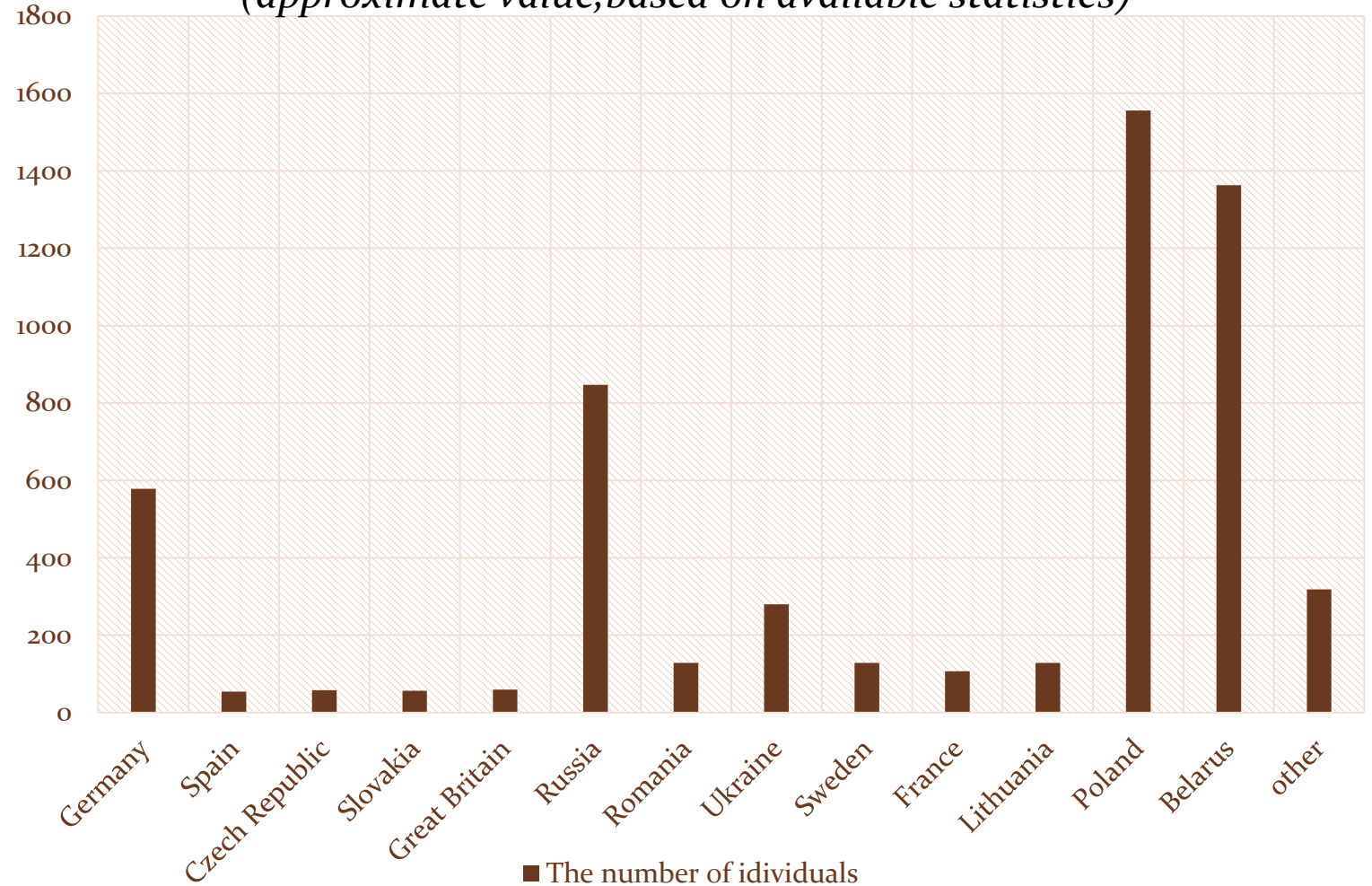


SUMMARY:

- After the First World War, European bison was almost extinct.
- Thanks to the efforts of scientists and a few individuals who survived, it was possible to restore the bison population in Europe.
- Currently, the world population of European bison is 5553, 5536 of which are in Europe and Asia (in Poland-1566).
- Saved by Polish naturalists, the animal is gradually being reintroduced in other countries. In the past, Poland exported bison to France, Germany, the Netherlands, the Czech Republic and Hungary.

European Bison (*Bison bonasus*) in Europe and Asia (2015)

(approximate value, based on available statistics)





SOURCES:

www.zubry.sggw.pl

www.zubry.com

www.wikipedia.org

www.ochronazubra.rdlp-krosno.pl

www.medicalxpress.com

Stewart Cole/EPF

www.twojebieszczady.net

- Perzanowski K., Marszałek E. 2012. *Powrót żubra w Karpaty. The return of the wisent to the Carpathians*. Opracowanie monograficzne. RDLP w Krośnie, 256 pp.
- *HISTORIA, STAN OBECNY I PERSPEKTYWY OCHRONY POPULACJI ŻUBRA W BIESZCZADACH. The history, present status, and perspectives for the conservation of wisent population in the Bieszczady Mountains*; Kajetan Perzanowski Received: 28.01.2014 Muzeum i Instytut Zoologii PAN Reviewed: 15.04.2014 Stacja Badawcza Fauny Karpat

Pictures by **Maciej Skuza** (participant of the contest)

The data presented in charts are approximate and interpreted by the participants / authors on the basis of generally available sources in the above-mentioned publications.

Authors/Autorzy:

- **Barbara Tkacz, II c**
- **Aleksandra Orlef, II c**
- **Maciej Skuza, II c**

Liceum Ogólnokształcące im. Józefa Piłsudskiego w Ustrzykach Dolnych