CMS GIUM

Global Initiative on Ungulate Migration

FACT SHEET

European Bison: Knyszyn, Poland

Migration Description

The European bison is the largest terrestrial mammal in Europe. After going extinct in the wild at the beginning of the 20th century, the species was restored to several management areas using captive animals. The population in the Knyszyn Forest began with the migration of a single male from the Białowieża Forest in 1969, who traveled nearly 50 kilometers north through farmlands, urban areas, and forests to reach a new home range. Wildlife managers then translocated five individuals to Knyszyn in the early 1970s to establish the population. Today, the area is home to approximately 560 bison. Knyszyn Forest consists mainly of coniferous tree stands intersected by river valleys. As most of the understory vegetation disappears in autumn, the forest is not suitable for large herbivores in winter. Because these bison were not given supplementary feed during the initial phase of population establishment, they did not grow accustomed to feeding and most migrate seasonally to farmlands north of the forest. They spend nearly half the year in open habitats, mainly foraging on the area's abundant winter rapeseed crops. In spring, the bison return to the forest to take advantage of the flush of new vegetation. These migrations are therefore strongly influenced by the bison's reintroduction to a forest habitat, which doesn't provide sufficient forage for these large animals through the winter and may not represent their historical range.

Threats to Migration

Even though the state compensates for crop losses from bison, the seasonal migration of European bison from forest to farmland causes conflicts every year. There is an increasing call from managers and farmers to reduce the number of migrating bison through periodic culls. Some landowners regularly haze the bison away from their land, which influences the animals' distribution, energy expenditures in the winter, and range size. During migration and roaming in the winter, bison cross busy roads, and several individuals are killed or injured in road accidents each year. Increasing the fencing around farmland could disrupt migration and prevent them from accessing critical winter range. Climate change, along with changes to habitat structure and food availability, may also affect the distance and direction of their migrations. Tourism poses another challenge for European bison. Bison roaming in open areas in the winter are more easily accessible to visitors and photographers. This public pressure increasingly disturbs bison herds on their winter ranges.

Local Population Facts

Migration

Seasonal

Short *16.2 km (avg.)*

Threats

Climate change

Energy dev.

Urban sprawl

Linear barriers

Agriculture

Livestock

Illegal killing

Other

Species Facts

Common name: European bison

Species name: *Bison bonasus*

Range: Forests and mosaic habitats of Central and Eastern Europe

Diet: Mixed-feeder herbivore

Global population: 9,000

IUCN Conservation Status

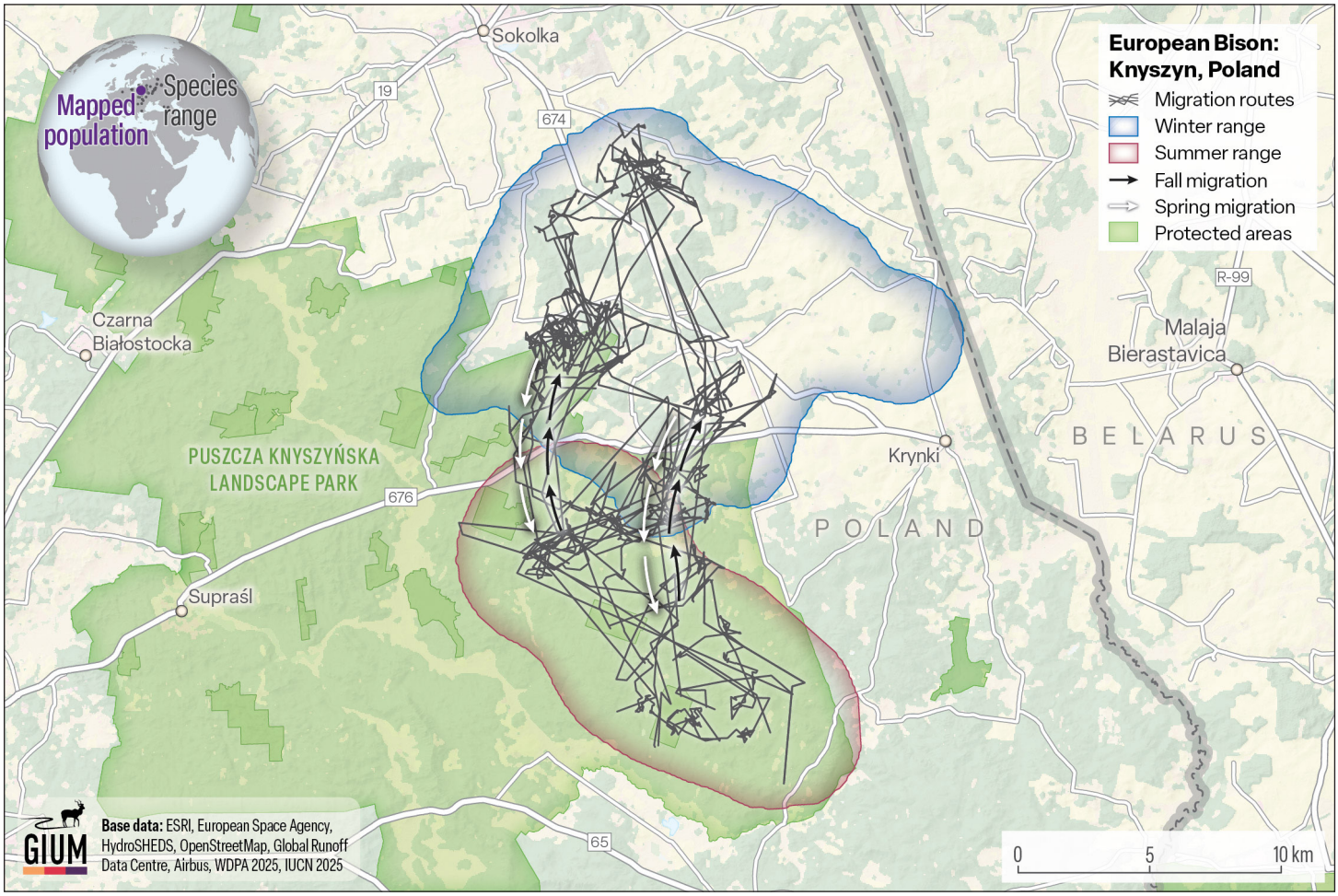
NT Near threatened

CMS Status

Not listed

Published: August 28, 2025

European Bison Migration



Winter range			Spring migration		Summer range					Fall migration		Winter range	
Jan	Feb	March	April	May	June	July	Aug	Sept		Oct		Nov	Dec

Study Information

Sample size
4 individuals

Relocation frequency
1 to 4 hours

Project duration
7 years between 2007–2013

Data Analysis

Delineation of migration periods
Net squared displacement to delineate migration between seasonal ranges

Models derived from
Kernel densities for summer and winter seasonal ranges

Route Summary

Migration start and end date (median)

- Spring: April 13–May 13
- Fall: September 22–November 10

Average number of days migrating

- Spring: 30 days
- Fall: 49 days

Migration route length

- Min: 14.0 km
- Mean: 16.2 km
- Max: 17.9 km

Data Providers

Data was collected by the Mammal Research Institute, Polish Academy of Sciences in Białowieża, Poland through the Polish Ministry of Science and Higher Education grant no NN304 25343 and the LIFE06NAT/PL/000105 project "European bison conservation in the Białowieża Forest – Bison Land" co-financed by European Commission LIFE Program and the Frankfurt Zoological Society.

In partnership with:

Mammal Research Institute
Polish Academy of Sciences
Białowieża

Ministry of Science and Higher Education
Republic of Poland

CMS www.cms.int

The Convention on the Conservation of Migratory Species of Wild Animals (CMS), also known as the Bonn Convention, is an environmental treaty of the United Nations that provides a global platform for the conservation and sustainable use of terrestrial, aquatic and avian migratory animals and their habitats.

GIUM www.cms.int/gium

The Global Initiative on Ungulate Migration (GIUM) was created in 2020 to work collaboratively to: 1) create a Global Atlas of Ungulate Migration using tracking data and expert knowledge; and 2) stimulate research on drivers, mechanisms, threats and conservation solutions common to ungulate migration worldwide.

View and Download Map Data from the GIUM Migration Atlas

Kowalczyk, R., Kamiński, T., and Borowik, T. 2025. European bison: Knyszyn Forest, Poland. Global Initiative on Ungulate Migration, editors. *Atlas of Ungulate Migration*. Convention on the Conservation of Migratory Species of Wild Animals.