

# Opening borders for largest European land animal

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**In 2007, a 5 year pilot with European bison (*Bison bonasus*) in National Park Zuid-Kennemerland, located along the Western coastline of the Netherlands, started in order to gain more insight into the behaviour and ecology of European bison outside the forests of Eastern Europe. Prior to the pilot, information on the (foraging) ecology of the endangered European bison -listed as 'vulnerable' by IUCNs Red List- remained scarce. This is the first project with Europe's largest land animal in the country.**

## Background

The National Park is part of Natura 2000 and includes young, calcareous dunes with rare flora & fauna. Due to a severe decline in the rabbit population, the dune system faced excessive vegetation cover. In order to re-establish a dynamic, more open-like structure, in 2007 European bison were introduced in a fenced area called Kraansvlak. In 2009 they were accompanied by Konik horses (*Equus ferus caballus*). This poster presentation gives an overview of the project so far.

## Implementation

Several aspects make the European bison project unique. First of all, the bison do not receive any additional feeding, also not during wintertime. Furthermore, the area contains a varied landscape in which forest is not dominantly present. Besides bison, other herbivorous species occupy the area and live together with the bison herd: Konik horses, fallow deer, roe deer and rabbits.

Natural grazing is set as a management basis:

- Herbivores in natural densities
- Room for social processes
- Natural (drinking) water
- No unnecessary care or neglect: no feeding, in winter: condition checks

The herd has the opportunity to develop naturally during the project, making a contribution to the preservation of this endangered species.

## Project goals

- ◊ Gain knowledge and practical experience with bison in Dutch nature and under natural conditions (*i.a.* no supplementary feeding) on:
  - management
  - behaviour and (feeding) ecology
  - influence on dune landscape & vegetation
- ◊ Gain experience on interaction with other herbivores & ecological differences
- ◊ Gain experience on interaction with human visitors
- ◊ Bring reintroduction in the Netherlands closer
- ◊ Conservation of European bison as a wild species

RESEARCH

## Ecological research

Research aspects arise from the project goals. When possible, aspects are also studied in relation to other large herbivores present in the National Park (Konik horse, Scottish Highland cattle).

- |   |                                  |
|---|----------------------------------|
| ◦ Foraging behaviour                      | Observations, dung               |
| ◦ Habitat use                             | GPS collar information           |
| ◦ Impact on terrain, vegetation           | Transects, aerial pictures, dung |
| ◦ Social behaviour                        | Observations                     |
| ◦ Interaction bison-human, recreationists | Forms, surveys                   |

## Experiences

Much knowledge about the ecology of European bison has been gained in the past years. To give an idea about obtained data, two aspects are highlighted with figures: diet composition (Figure 1) and habitat use (Figure 2).

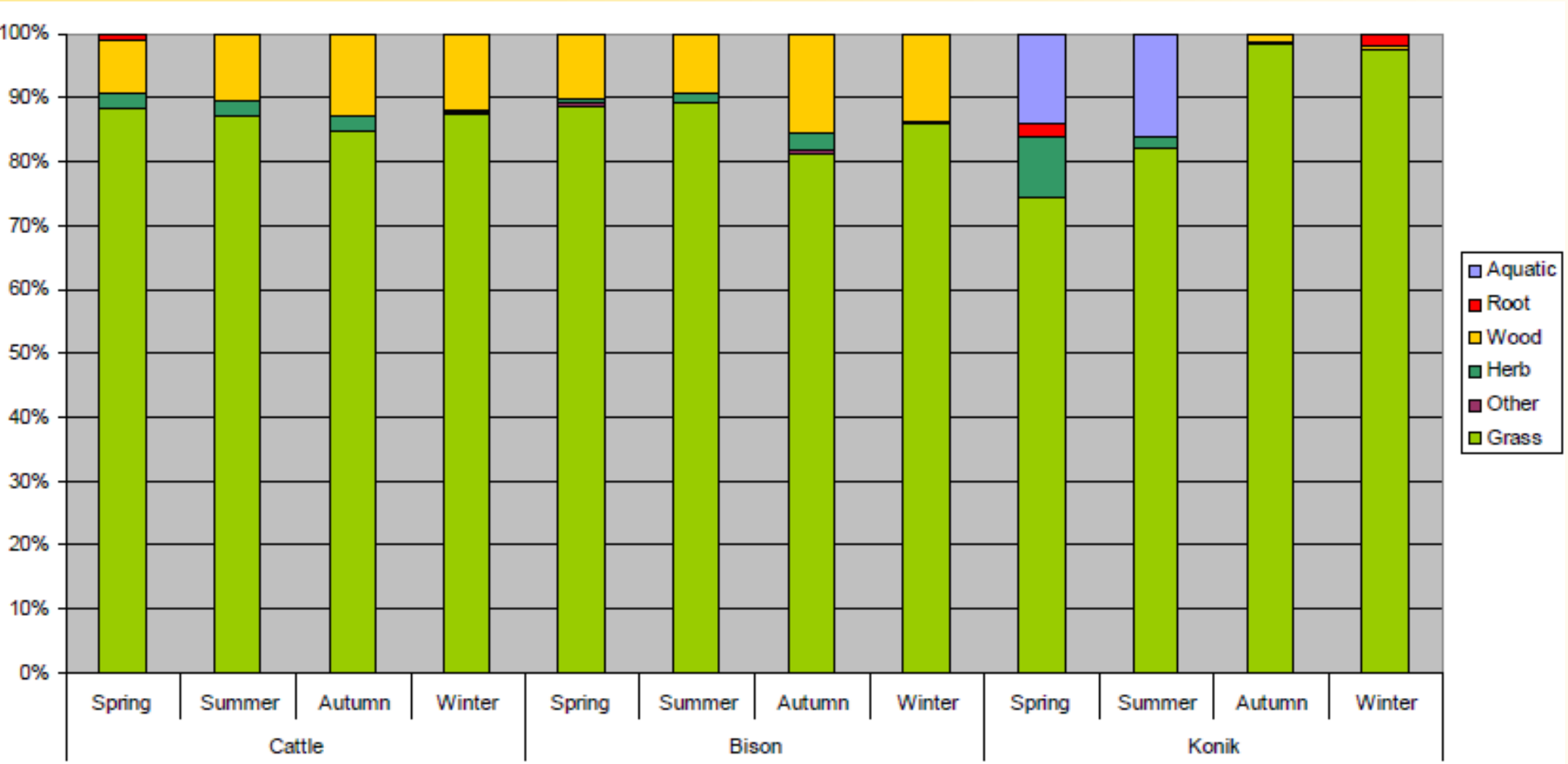


Figure 1. Diet of Scottish Highland cattle, European bison and Konik horse studied in the Dutch bison project. Bars show the proportion per food type eaten by each animal species per season. Source: Van de Heisteeg, 2012.



Pictures: © Ruud Maaskant, PWN.

Although the diet of cattle and bison seem to be very similar, detailed analyses on the intake of woody species show differences in plant species per season, as well as in the part of the plant both ruminants forage upon.

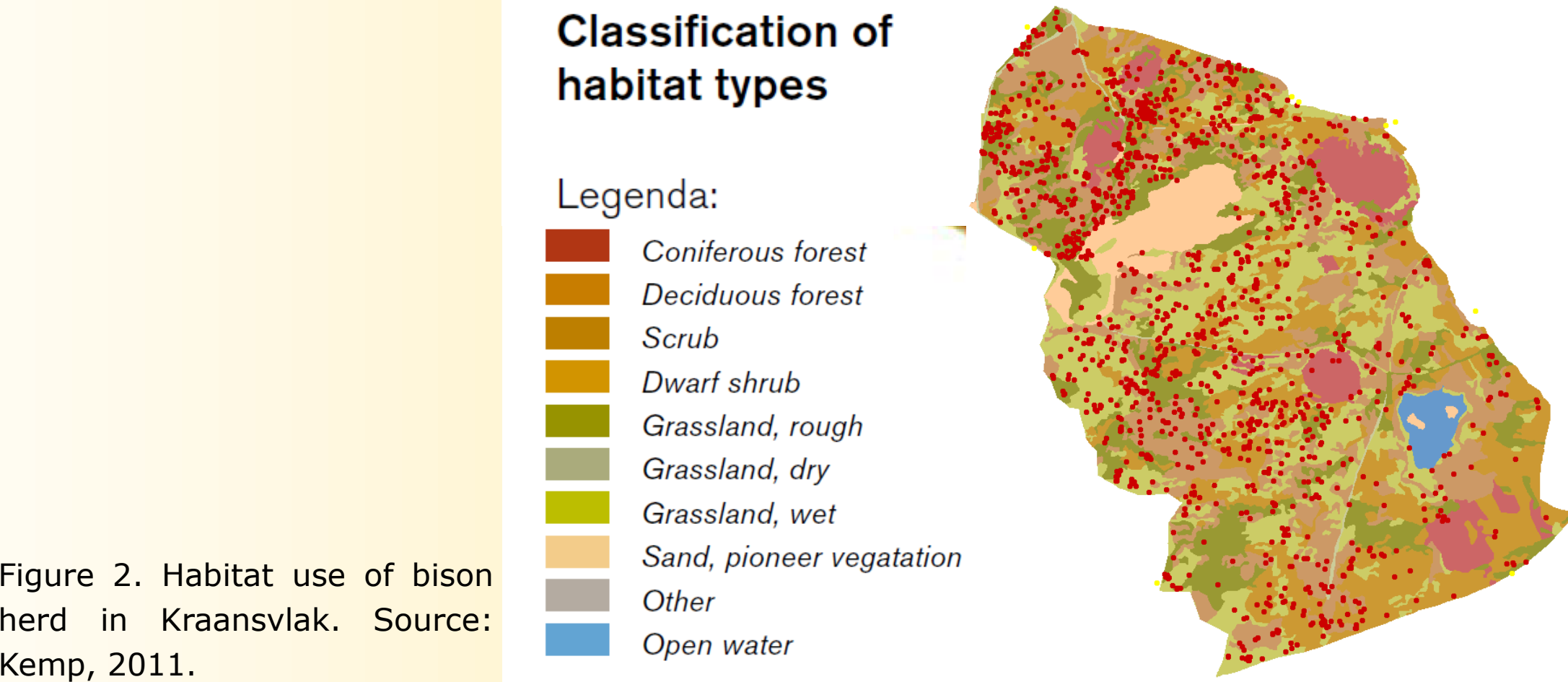


Figure 2. Habitat use of bison herd in Kraansvlak. Source: Kemp, 2011.

Studies about the habitat use of E. bison show a preference for (rough) grasslands and shrubs. This outcome can be linked to foraging. Also, a preference for sandy patches used to ruminate is seen. No significant preferences for forests have been found.

## Field observations

E. bison make open areas in the dunes by taking sand baths and lying resulting in a decrease of pioneer grasses. Their sandy paths connect open areas which is beneficial for insects and reptiles. Also, the bison are capable of using the dune area very well and coexist with other species without any problems. The bison show a different impact on the terrain compared to Konik horse and cattle. Furthermore, feeding is not necessary; the condition of the bison herd decreases a little during winter as is usual with wild grazing animals.

Encounters between people and E. bison show that bison are quiet, harmless animals towards the public. The bison are more relaxed in open area and at a distance >50 m. They are very alert when they have young calves.

## Current status

The herd increased from 6 to 24 individuals, making a contribution to the preservation of the endangered species. In 2011, the pilot has been evaluated very positively. Main partners PWN and ARK Nature extended the project with another 5 years, enabling researchers to study the species into more detail. In 2012, the terrain was enlarged to 280 ha and plans are present to enlarge the area again.

Raising awareness and educate public by guided excursions is an important aspect in the project. From late 2012, the area is partly accessible for public enabling them to have an unforgettable wilderness experience in an area very close to the much urbanized Randstad.

## Future perspectives

The project enlarges the knowledge on E. bison and is of interest for (new) bison projects throughout Europe. The information gathered about diet and habitat selection together with field observations, leads to a better understanding of this wild species' ecology. The practical experience and knowledge gained will be used for possible future reintroductions of this wild species to other natural areas in the Netherlands and abroad.

By releasing different large herbivores into nature reserves, conservationists hope to regain the dynamic, more open-like structure of nature areas and in this way protect historical flora and fauna. The bison project in Kraansvlak shows that the presence of several grazers can be very beneficial for an area and its natural values.

Apart from dealing with practical aspects related to bringing back the species to Dutch grounds, the project enables us to raise public awareness about the importance of more natural landscapes, and educate people by inviting them to visit the area and its inhabitants.

Altogether, the bison project in Kraansvlak makes way for the endangered species, not only in Dutch nature but also in people's minds and hearts and therefore it contributes significantly to open borders for the largest land animal of Europe to thrive again.

Participants in this project besides PWN and ARK Nature are *Stichting Duinbehoud*, *Stichting Kritisch Bosbeheer* and *FREE Nature*.

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