

Capture and Transportation of animals from European Bison Breeding Centre of Prioksko-Terrasnyj Nature Biosphere Reserve

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Abstract: The paper present some methods of European bison transfer between breeding centers. Author discuss how to determine the size of animal body without direct measurements. The methods of preparing and loading and uploading animal is also presented. European bison are transported separate in wooden cages fitted to their size and this method is working properly for more than 50 years.

Key words: European bison transport, wooden cages

Introduction

This paper is based on the archives, reports, and records from Prioksko-Terrasnyj Biosphere Reserve (the "PTBR") as well as personal information over the period 1988–2011, obtained from the European Bison Breeding Centre (the "EBBC") of Prioksko-Terrasnyj Biosphere Reserve.

Individuals of European bison are regularly exchanged between breeding centres in order to avoid inbreeding effects. The EBBC is also taking part in reintroduction programs since 1951. Transportation of such big wild ungulates as the European bison, requires special arrangements including preparation of animals for transportation, assuring that they will arrive in a good condition, and without injuries – even considering a long distance transfers. European bison are primarily transported with trucks but in some cases, such as inaccessible regions of Vologda region or mountain forests in Caucasus areas, caterpillar tractors are used for a part of the way.

The methodology of preparation and transportation of E. bison in Prioksko-Terrasnyji Biosphere Reserve was developed by Mikhail A. Zablotsky (1957). This method has been applied with insignificant variations by not only the EBBC of Prioksko-Terrasnyj Biosphere Reserve, but also by Oksky breeding centre, Russian zoos, and zoos over the former Soviet Union countries as well. It is also often applied to the transport of other ungulates (Sipko *et al.*, 2004).

Since its foundation, the European Bison Breeding Centre of Prioksko-Terrasnyj Biosphere Reserve has seen the birth of 580 European bison calves, out of which 465, i.e. 80% of them, were transferred to over 30 free-ranging bison areas and to over 33 bison breeding centres.

Determination of a size of European bison, and construction of a transportation cage

In case of E. bison it is difficult to exactly measure its size, which is though required to construct a comfortable but not too spacious transport cage. EBBC specialists can roughly (but rather close to exact figures) determine its size when a bison come close to the fence and stand with its side along the rails almost touching them, as our animals are used to do rather often. As soon as the bison takes the proper position, we put marks on the rails to mark its length and height and thus determine dimensions for its transportation cage. The cage must be 10–15 cm wider than the span of bison's horns, thus allowing the bison to lie down freely but preventing it from turning around (since during turning it may break its spine or neck). The cage must not be too high to prevent the bison from getting on its hind legs, falling on its back, or breaking the cage roof with its horns. Usually, a cage is a little higher than an animal's withers. The cage must be long enough to let the bison to bow to get to food and water that are regularly provided through a gap in the lower part of the cage into a fitted feeder. However, it is dangerous to make cages too long. When an animal is free to move, it will try to escape from the cage trying to smash the vertical sliding door (acting as the back wall) with its hind legs or the front wall with its horns. This can lead to its breaking out the cage or damaging its hind legs (especially the joints), or cause open fractures in its horns, which (especially if transported in summer) may trigger blood poisoning and death of the animal. To avoid an injury during transportation, side walls and the back sliding door of the cage must be partially soft covered, which would again protect the bison's skin and coat from chafing. The door must have a strong back stop on its top and sides to withstand smashing by bison's hoofs.

The cage should have 5 windows arranged for ventilation, observation, feeding, and dung removal.

Preparing European bison for transportation and loading into transport cage

Two weeks prior to transportation, the animal should be separated from the herd and placed into the capture pen to let it quiet down, get accustomed to be without the herd, and get used to feeding within the squeeze pen (a narrowing corridor allowing to direct animals into a transportation cage as well as to examine and treat them).

The transportation cage should be placed into the capture pen at least 3 days before the capture, with some space left between the cage and the exit from the squeeze pen for the bison to freely exit the squeeze pen past the cage. The bison must be loaded into the cage in the morning. The bison should not be fed the previous night so being hungry it quickly enters the squeeze pen, where the food had been placed. As soon as the animal enters the squeeze pen, the entrance gates are closed with a long rope tied down to the gates. A supervisor holds the free end of the rope being hidden somewhere in the passage, as not to scare the bison during the capture. In most cases, after the gates are shut down an animal runs along the squeeze pen into the transportation cage, which is in advance set in the exit from the squeeze pen. The second supervisor observing the cage, quickly climbs then up onto the cage roof and releases its sliding door. Usually, the second supervisor remains hidden on the top of the cage behind the elevated sliding door.

If an animal is refusing to enter the passage within the squeeze pen, it should be gently pushed with a stick to make it move from one section to another, blocking its way back with wooden poles placed across the rails of squeeze pen. It is very important to make sure that the animal would not turn around in the first wide section of the squeeze pen, and go along the squeeze pen backwards. E. bison are transported only with their head directed to the front.

A crane or loader is usually used to place cages onto a vehicle. If there is only one bison to transport, the cage is placed right in the middle of the bed, fastened with waling timber and strapped. If there are 2 cages to transport, they are placed close to each other and thus usually take up all available bed space. However, the cages must still be strapped onto the bed. It is absolutely prohibited to place cages across a bed which could cause an injury or even braking limbs of animals during the vehicle move.

Transportation of European bison

All necessary equipment, materials, and food must be acquired well before the transportation. Transportation of E. bison should be preferably commenced at night or in early morning hours when the traffic is not heavy yet, and overheating the animals often leading to a heatstroke (in summer) can be avoided. When on the way, breaks should be planned in a hot time of the day. The vehicle with animals should be then placed in the shadow and there is an opportunity to provide them with water and food.

Calves at the age of 1 to 3 months endure transportation most easily. Also, they adjust to new conditions of their new habitat faster.

Unloading European bison from transport cages

On arrival at the destination point, the transport cage is unloaded into a specifically prepared enclosure, and animals are released there. To release the E. bison from its cage, one person climbs up onto the cage roof, takes the

upper bar of the sliding door and elevates it to the level of cage roof or dismounts it from the joints. The door must stay open until the animal comes out into the pen crabwise. Door has to be lifted quickly, or else while hearing an unusual sound an animal might try to escape from the cage before the door is fully opened and thus may injure its hind legs. When the bison moves already away from the cage, door should be closed and the cage removed from the pen.

Animals should maintain in the pen for at least 30 days for quarantine purposes and for the establishing relations among individuals in the group. Afterwards, animals can be released into the wild.

According to our experience in transfers of E. bison, a new free-ranging herd is created when there is one adult cow among the calves. If calves are released into the wild without a leader, they wander over the whole available territory in small groups and do not form a herd. An adult cow becomes a leader and joins the youngsters together into a herd. Also, an adult cow in a group would provide an example for the youngsters and thus the animals will get used to their new habitat faster.

The European Bison Breeding Centre of Prioksko-Terrasnyj Biosphere Reserve is contributing to preservation of the European bison gene pool within the Russian Federation, by distributing the animals to form new free-ranging populations, and providing a temporary place and care for European bison born in zoos of western Europe to ensure their acclimatization in Russian forests.

References

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Odławianie i przewożenie zwierząt z Ośrodka Hodowli Żubrów Rezerwatu Biosfery Prioksko-Terrasnyj

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