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Successful come back? – the reconstitution of the wisent herd in Skolivsky Beskyd, western Ukraine

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Abstract: Data on population dynamics and structure of wisent herd reintroduced to Beskyd Skolyvski (Ukrainian Carpathians) were collected at the Institute for the Ecology of the Carpathians, National Academy of Science of Ukraine, with the help of foresters from the National Natural Park “Skolivsky Beskydy” (Directorate of State Forests at Lvov). Since June of 2009 (initially 10 animals) the herd grew up to 33 individuals and consists now in 46% of adult individuals (including 18% of bulls and 28% of cows), in 40% of young animals up to 4th year of life, and in 14% of calves. Problems with increasing frequency of entering of wisents to local villages and the strategy for their maintenance and conservation in the future are discussed.

Key words: European bison, the Carpathians, Skolivsky Beskyd, restitution, reintroduction

Introduction

Skolivsky Beskyd, the western part of Ukrainian Carpathians was the site of the first successful reintroduction of wisents (European bison) in this country. In 1965, ten animals belonging to Lowland – Caucasian line (6,4) were brought to Maydan Forestry. In first 30 years, the numbers of this herd grew up to 40 individuals, but by the beginning of XXI century only 10 animals remained there, and finally the herd ceased to exist by February 2008 (Khoyetsky 2012; Perzanowski and Marszałek 2012).

Efforts to restore this herd were initiated in 2004, with support of Large Herbivore Foundation, European Bison Friends Society, Warsaw University of Life Sciences, Polish Academy of Sciences, and Directorate of State Forests at Lvov, but due to administrative barriers and limited funding, first transport of wisents arrived not earlier than in June of 2009 (Maryskevich 2012; Maryskevych and Kulykiv 2015).

Since then, the population numbers of this herd are increasing steadily as well as the size of its home range. The herd in the future may have a chance for an occasional connection and exchange of individuals with wisent population dwelling in Bieszczady Mountains, Poland.



Study area, material, methods

The home range of the wisent herd at Skolivsky Beskyd Mountains is the forestry Maydan situated within National Natural Park "Skolivsky Beskydy" established in 1999 over the area of 35594 ha. Data for this paper were collected at the Institute for the Ecology of the Carpathians, National Academy of Science of Ukraine, with the help of foresters from the National Natural Park "Skolivsky Beskydy" (Directorate of State Forests at Lvov).

Results and Discussion

Reintroduction of wisents to Beskyd Skolivsky was performed in two stages: in 1965 to the Forestry Korostiv (Skole Forest District) 10 animals belonging to Lowland-Caucasian line were transferred for the first time. This herd reached its maximal numbers – 32 individuals in 1996 (Khoetsky 2003). Unfortunately in the 90. of 20th century, because of limited provision of supplemental food (closing of game enterprise Maydan), climatic conditions (severe winters with deep snow cover), and incidence of diseases, the herd gradually shrank and finally disappeared completely by 2004/2005.

The second stage of reintroduction has been initiated at the area of the National Natural Park "Skolivsky Beskydy" (Maydan Forestry) in 2009/2010 as the part of an international program for the restitution of the wisent in the Carpathians. This effort was coordinated by the Carpathian Wildlife Research Station of Museum and Institute of Zoology, Polish Academy of Sciences and the Institute for the Ecology of the Carpathians, National Academy of Science of Ukraine. Detailed description of both stages of reintroduction is given in earlier publications (Maryskevich 2012; Maryskevych and Kulykiv 2015) (Fig.1).

The aim of this paper is the analysis of effects of the second reintroduction, carried out at the area of Beskyd Skolivsky in years 2015–2017. Analysed were observations on population dynamics and spatial distribution collected by the staff of National Natural Park "Skolivsky Beskydy" during winter census of game species, and permanent monitoring of the behaviour and movements of the Maydan sub-population of wisents within the area of the Park and administered by State Forests – forest districts of Skole and Turka (Fig. 2).

During eight years since the beginning of second reintroduction (June of 2009), herd numbers grew up by threefold and on 1.07.2017 reached 33 individuals (Tab. 1).

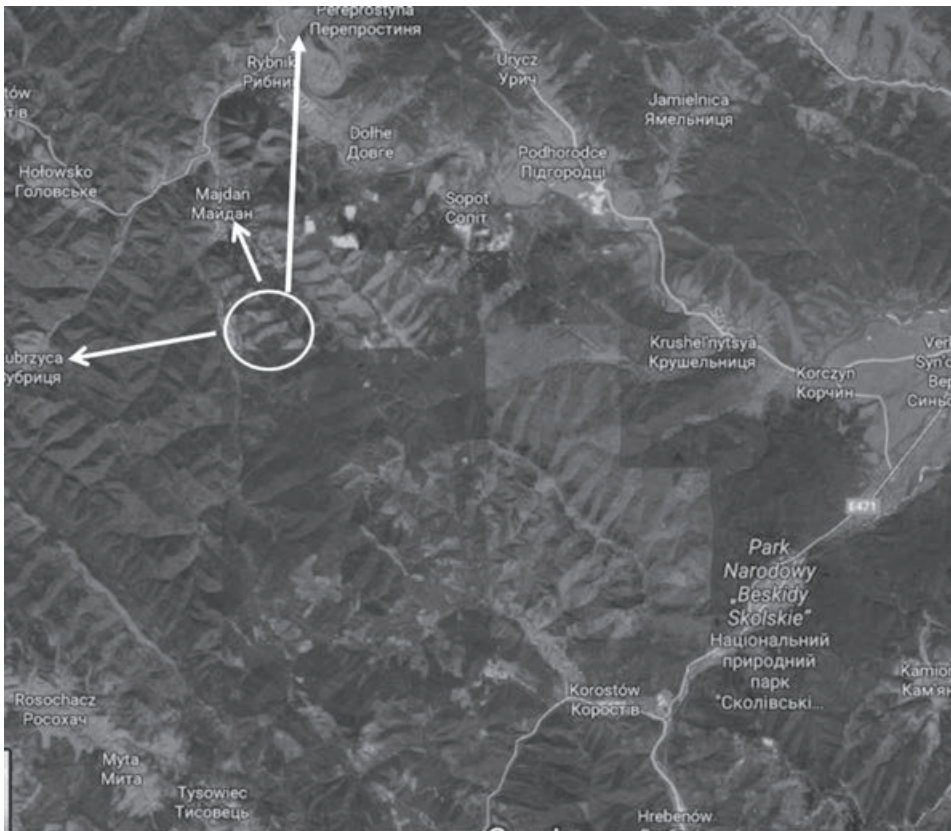


Fig. 1. The map of Beskyd Skolyvski, circle marks the site of the release, arrows indicate movements of wisents towards villages (on the basis of Google maps, modified).



Fig. 2. Group of wisents observed at Maydan Forestry in winter of 2013 (fot. O. Maryskevich)

Table 1. Population dynamics of wisent subpopulation at Maydan (NNP “Skolivski Beskydy”, Ukrainian Carpathians), in years 2009–2017.

Year	Total at the beginning of the year	Increase during the year	Losses	Total at the end of the year
2009	6	2	2	6
2010	6	5*	–	11
2011	11	2	–	13
2012	13	2	–	15
2013	15	2	–	17
2014	17	4	1	20
2015	20	2	–	–
2016	24	4	–	28
2017	28	5**	–	33

* second wisent transport from Western Europe

** July 01, 2017

According to results of the census performed in February 2017, Maydan population consisted in almost 40% of young animals up to 4th year of life, while the proportion of adult individuals was 46% including 18% of bulls and 28% of cows. Calves, i.e. animals in their first year of life made up 14% of this population (Tabl. 2).

Table 2. Structure of wisent subpopulation at Mайдan (NNP “Skolyvski Beskyd”, Ukrainian Carpathians).

Year	Bulls	Cows	Calves (to 1 yr.)	Young (2–4 yrs.)	Total
2009	–	3	1	2	6
2010	1	3	1	6	11
2011	2	3	3	5	13
2012	3	4	3	5	15
2013	7	4	2	4	17
2014	6	4	6	4	20
2015	6	4	4	8	22
2016	5	8	4	11	28
2017	5	8	5*	11	33

* July 01, 2017

An annual increment of herd numbers in years 2011 – 2017 was estimated as high (about 20%). Apparently, the rate of growth of wisent numbers there was possible because of sufficient food base in vegetative season at their range of permanent occurrence – the Maydan Forestry, provided by vast hay meadows and remnants of

orchards at the site of former German settlement Malmansztal, clearcuts at reconstructed secondary spruce stands with large supply of brambles, as well as thickets of gray alder and willows in the valley of Rybnyk Maydanský creek. In winter this herd had an access to supplemental food regularly provided by foresters (Fig. 3). Costs of winter feeding were covered by the regional fund for nature conservation of the Lvov Province under the framework of two programs focused on maintenance of Maydan subpopulation of European bison: first financed at state level for years 2009–2015, and regional for years 2017–2026.



Fig. 3. Feeding point for wisents at Skolivski Beskyd (fot. O. Maryskevich).

Additionally, because the area of national park is much better secured against poaching than regular state or communal forests, animals are much safer there. Among various activities carried out by the Park there, were: informing of local communities about the presence of wisents at their area and reminding about criminal penalty for poaching animals listed in Red Book of Ukraine (Akimov 2009), cooperation with schools under the framework of forest education as well as with Orthodox Church which in Western Ukraine still remains the moral authority.

An increase of the Maydan subpopulation of wisents, already creates a number of problems concerning their future existence at the area of Beskyd Skolivsky.

At the moment the herd is divided into two parts. Cows, young (up to 4th year of life) and calves led by the cow Thyra (introduced at the beginning of the second phase of reintroduction from Tierpark Gera, Germany in 2009) practically dwell for

all the time at the area (7377 ha) of Maydan Forestry, while bulls penetrate the area of the Park and neighbouring forest districts of Skole and Turka same 30 km away from the permanent range of the herd.

In January – March of 2017, staff of the Park and rangers of State Forests (Regional Directorate at Lvov) reported the trespassing of wisents into villages of Zubrycia (Turka Forest District) and Maydan (Drohobycz Forest District). In the first case three bulls entered the village and stayed there for four days feeding on hay stacks belonging to local farmers, which was negatively perceived because so far in Ukraine, compensations for damages caused by the wildlife are not legally established. Thanks to arrangements of the village mayor and the directorate of the Park it was possible to avoid open conflict because damages were partially covered on expense of the Park.

In April of 2017, the main wisent herd counting 18 individuals entered the village of Maydan, but returned on the same day to the Maydan Forestry. It is difficult to explain such behaviour because wisents were not hungry, they had an access to supplemental food in winter, and so far in vegetative season they used to behave like wild animals and avoided people. Additionally forest rangers of Drogobycz Forest District noticed tracks of a cow with a calf in beech stands near village of Kryntyata (Turka region) (Fig. 4).



Fig. 4. A cow with a calf from Maydan herd (fot. O. Maryskevich).

Nevertheless the problem remains, in the area of Skolivsky Beskyd, the density of human population is much higher (about by 10 times) than in Polish Bieszczady (48 – 52 persons/km²). Therefore the Park invented measures minimising chances for movements of wisents towards villages situated within the buffer zone of the Park. For example, in 2017 planned is the purchase (financed by the Foundation for the Protection of Biodiversity of the Carpathians from Slovakia) of electric fence and other necessary equipment for Park rangers, to be installed across the main trails used by wisents to move towards villages of Zubrycia and Maydan.

Additionally, there is necessary to determine in a scientific way the upper limit for the Maydan subpopulation of wisents according to the ecological capacity of Skolyvski Beskyd, because the current rate of growth of this population implies the need for elaboration of the strategy for its maintenance and conservation. Efforts towards the establishment of a new national park "Boykivszczyna" in the Ukrainian part of the Eastern Carpathians within the Turka region, which according to the proposal of the Institute for the Ecology of the Carpathians, National Academy of Science of Ukraine, will have a contact with the national park of Skolivsky Beskyd" (Maryskevych and Kylykiv 2015), reached the stage of the agreements with local administration and State Forests. Perhaps in 3 – 5 years it will become necessary to impose procedures leading to the transfer of wisents from Maydan subpopulation to other suitable localities in Ukrainian Carpathians like Bukovyna or Zakarpacie.

The final success of the second attempt to reintroduce wisents into the western part of Ukrainian Carpathians will depend on the joint efforts not only scientists and conservationists but also the authorities from various levels of administration.

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Udany powrót? – odtworzenie stada żubrów w Beskidzie Skoliwskim, zachodnia Ukraina

Streszczenie: Dane dotyczące dynamiki i struktury populacji dla stada żubrów reintrodukowanego na teren Beskidu Skoliwskiego były zebrane przez Instytut Ekologii Karpat, Narodowej Akademii Nauk Ukrainy z pomocą leśników z Naturalnego Parku Narodowego "Skoliwski Beskid" (Dyrekcja Lasów Państwowych we Lwowie). Od czerwca 2009 (początkowo 10 zwierząt) liczebność stada wzrosła do 33 osobników z czego 46% stanowią żubry dorosłe (w tym 18% byki i 28% krowy), 40% młodzież (do czwartego roku życia) oraz 14% cielęta. Dyskutowane są problemy ze wzrastającą częstością wchodzenia żubrów na teren wsi oraz strategia dotycząca ich utrzymania i ochrony w przyszłości.
