

**Brief information on the restitution of the Tatra Chamois (*Rupicapra rupicapra tatrica*) in the Nízke Tatry Mts., central Slovakia (Artiodactyla: Bovidae)**

Reštitúcia kamzíka vrchovského tatranského (*Rupicapra rupicapra tatrica*) do Nízkyh Tatier, stredné Slovensko (Artiodactyla: Bovidae)

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**Abstract.** Two attempts to reconstitute the Tatra chamois (*Rupicapra rupicapra tatrica* Blahout, 1971) were made in the Nízke Tatry Mts. The first one occurred in the eastern part of the mountain range (Kráľova hoľa Mt., Orlová) in 1935, but was not successful. During the second attempt, a substitute population of the Tatra chamois was established in the Nízke Tatry Mts. in the years 1969–1976. The main aim of these actions was to preserve this endangered and endemic subspecies. Altogether 30 adult individuals (9 males, 21 females) were brought from the Vysoké and Belianske Tatry Mts. At present, the population numbers around 98 individuals. This paper provides a short description of the restitution of the Tatra chamois based on previously unpublished archive materials.

**Key words.** Restitution, chamois, cooperation, Nízke Tatry Mts, central Slovakia.

## INTRODUCTION

The distribution range of the endemic and critically endangered Tatra chamois (*Rupicapra rupicapra tatrica* Blahout, 1971) is restricted to the Slovakian and Polish sides of the Tatry Mts. (BLAHOUT 1976). In geographical terms, local populations represent the northernmost natural limit of the species' range in Europe. In Slovakia, the species currently survives in two small isolated populations restricted to the alpine zone of the Tatry Mts. (Západné, Vysoké and Belianske Mts.) and Nízke Tatry Mts., respectively.

The first effort aimed at chamois reintroduction dates back to the beginning of the 20th century (KARČ 1979). In 1935, an attempt was made to acclimatize the chamois in the Nízke Tatry Mts. at the site Kráľova hoľa – Orlová (eastern part of the Nízke Tatry Mts.). Together was brought three individuals in December, but all died (KARČ 1979). The population which was established in the Nízke Tatry Mts. in the years 1969–1976 is rather small due to the limited area of suitable habitats and thus very vulnerable and in need of heightened attention (ŠPROCHA 1976). From the scientific point of view, a number of osteological chamois findings from the Nízke Tatry Mts. made by OBUCH (1977, 1981) are of prime interest. Some information on the restitution is given by ŠPROCHA (1971) and ANONYMOUS (1979). KARČ (1979) dealt with histori-

cal aspects of attempts to restitute the chamois in the Nízke Tatry Mts. Ecology, numbers and spatial distribution of the chamois population in the Nízke Tatry Mts. were described by KARČ & RADÚCH (1978) and RADÚCH & KARČ (1981). URBAN (1989a) analysed the composition of chamois diet. RADÚCH & KARČ (1981), BAČKOR (2003), BALLO (2003) and URBAN (1989b) dealt with negative factors influencing the behaviour of the chamois population. Description of the chamois with horn abnormalities in the Nízke Tatry Mts. is given by BAČKOR & GALFYOVÁ (2006). Complete bibliography of the chamois in the Nízke Tatry Mts. has been published recently (BAČKOR 2007).

### Main aims of the proposed introduction of the Tatra chamois to other mountain ranges in Slovakia

Decreasing chamois population in the Tatra Mts. prompted a heated debate between conservationists and hunters about the possible introduction of the Tatra chamois into other mountain ranges of Slovakia. The local chamois population of approximately 1,200 individuals counted before the World War II (BLAHOUT 1975) gradually declined due to tense social situation after the war. In 1946, only 280 individuals were left in the Vysoké, Západné and Belianske Tatry Mts.

In 1967, the Czechoslovak Ministry of Forestry and Water Management charged Milič BLAHOUT with a study on the prospective introduction of the Tatra chamois into other mountain regions of Slovakia.

Three different mountain ranges were chosen for the introduction: the Nízke Tatry Mts., the Veľká Fatra Mts., and the Malá Fatra Mts. After preliminary habitat analyses, the Nízke Tatry

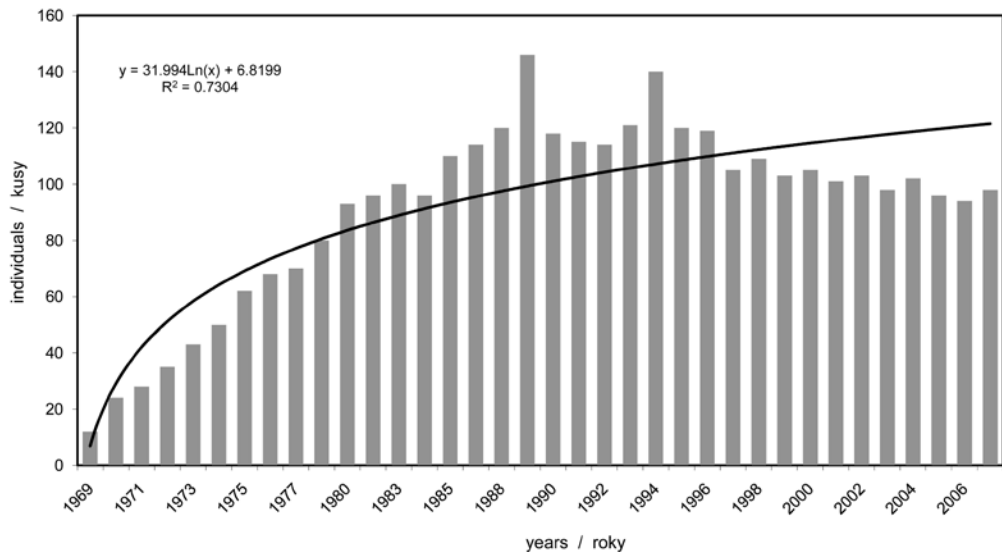


Fig. 1. Numbers of the Tatra chamois in the Nízke Tatry Mts. (based on our data and those given by the former Predajná Forest Enterprise and ONDRUŠ 2002).

Obr. 1. Vývoj početnosti kamzika v Nízkyh Tatráh (podľa našich údajov a údajov bývalého lesného závodu Predajná a ONDRUŠ 2002).

Mts. were selected as the best restitution location, since geomorphological and climatic conditions of the mountain range bore the closest resemblance to those in the Tatra Mts. Two specific sites were chosen for the introduction – one with a southwestern orientation at the head of the Lomnistá dolina (Lomnistá Valley) near Jasenie, and another one at the head of the Vajskovská dolina (Vajskovská Valley). The site assessment was based on seven variables: altitude, food resources, and topographic features, avalanche risk and cattle grazing intensity. BLAHOUT (1968) recommended the Vajskovská dolina since its natural conditions were most suitable for chamois survival. BLAHOUT (1968) also suggested three sites for capture of the chamois in the Vysoké and Belianske Tatry Mts.: 1. Dolina siedmich prameňov (Valley of Seven Springs) – site Kamzičí raj; 2. Monkova dolina (Monk Valley) – site Nad skalou Lastovičie, and 3. Mengusovská dolina (Mengusovská Valley) – site Zlomiská.

### Process of the Restitution

Restitution of the chamois in the Nízke Tatry Mts. took place in the years 1969–1976. For technical reasons, the site in the Lomnistá dolina was chosen for the enclosure (VELIČ 1981). The enclosure was placed above the Ján ŠVERMA Monument. The enclosure was 300 by 250 m in size (9 ha), composed of a wire net fence with 46 wooden pillars and with a chamois shelter in its front part (VELIČ sr., ad verb.). There were also plans to build a hunting shelter for rangers.

The first inhabitant of the enclosure was a one-year-old female released on 19 July 1969 (VELIČ sr., ad verb.). Twelve more chamois were delivered in two stages on 24 August 1969. The forester provided dried rowan berries (*Sorbus aucuparia*) to feed first 12 chamois. The avalanche in January 1970 caused only minor damage to the enclosure; the chamois survived unhurt and were continually monitored as they approached the release area to feed on rowan. In 1970, further 8 chamois were released into the enclosure. In the following years, there were several chamois releases (1972 – 1 individual, 1973 – 1, 1974 – 1, 1975 – 3, 1976 – 4). In total 30 chamois individuals were released into the wild during the introduction.

### DISCUSSION

Both among general public and in scientific circles there are often unclear references to the event of chamois restitution in the Nízke Tatry Mts. In the past, the term “introduction” was primarily used to describe the event (ANNONYMUS 1979, KARČ 1979, BLAHOUT 1976, CHOVANEC 1983, RADÚCH 1981, 1992). The term introduction describes an intentional release of non-native species outside its natural distribution range (KLINDA 2000). KRATOCHVÍL (1980), URBAN (1989b) and CHOVANCOVÁ (1997) preferred to use the term re-introduction for the abovementioned event. Nevertheless, the correct term for the whole event is *restitution*. This term literally refers to the re-introduction of organisms into the sites of their original distribution from which they previously got extinct (ALLABY 2003, ELIÁŠ 2000, ŠTEFFEK 1993). Recently, a number of authors have assessed the event of chamois restitution in the Nízke Tatry Mts. In connection with the event, it is important to mention the names of Jozef RADÚCH and Pavol KARČ who studied the restitution event between the 1970s and 1980s (KARČ & RADÚCH 1978, RADÚCH & KARČ 1981). They briefly assessed the acclimatization itself as well as the act of chamois release in the Nízke Tatry Mts. KARČ (1979) also studied and briefly recorded the release of chamois in the area around Kráľova hoľa back in 1935. The authors often relied on hunting statistics from the 19th and 20th centuries.



Fig. 2. Released chamois in the central part of the Nízke Tatry Mts. in 1979 (photo by Ervín VĚLIČ sr.).  
Obr. 2. Vypustené kamzíky v centrálnej časti Nízkych Tatier v roku 1979 (foto Ervín VĚLIČ st.).

The information on the number of animals which perished during the release event and during transportation from the Vysoké and Belianske Tatry Mts. to the Nízke Tatry Mts. also remains largely unclear. According to the existing original documents, three adult females did not survive the hardships of the journey and subsequent release (VĚLIČ sr., ad verb.).

The current number of individuals present in the Nízke Tatry Mts. reaches 94–98 chamois (GALFYOVÁ & RIGG, in litt.). The maximum abundance was in 1989, when the Administration of the Nízke Tatry National Park counted 140 individuals (Fig. 1). The chamois occur in the centre of the western part of the mountain range. The area can be defined as follows, from west to east: Chabeneč peak (1955 m a. s. l.) – Poľana peak (1889 m a. s. l.) – Chopok peak (2024 m a. s. l.) – Ďumbier peak (2043 m a. s. l.). From south to north: Skalka peak (1980 m a. s. l.) to Bôh peak (1887 m a. s. l.). The main habitats include siliceous screes of the alpine levels, siliceous alpine and boreal grassland and mountain hay meadows (VĚCENIKOVÁ & POLÁK 2003).

The acclimatization was well coordinated and cooperation between the State Forest Company and the Administration of the Vysoké Tatry National Park (TANAP) was very good.

## SÚHRN

V rokoch 1969–1976 bola v Nízkych Tatrách založená náhradná populácia kamzíka vrchovského tatranského (*Rupicapra rupicapra tatrica* Blahout 1971) ako snaha o zachránenie tohto vzácného a ohrozeného poddruhu. Spolu bolo dovezených z Vysokých a Belianskych Tatier 30 jedincov (9 samcov a 21 samic).

Ako miesto pre reštitúciu bola vybraná Lomnistá dolina (katastrálne územie obce Jasenie). V súčasnosti je veľkosť populácie okolo 98 jedincov. Príspevok prináša stručnú správu o celom akte reštitúcie kamzika do pohoria Nízkyh Tatier tak ako ho zachytáva archívna dokumentácia, ktorú do dnešnej doby nikto nepublikoval. Na záver je stručne zhrnutý súčasný stav populácie t.j. počet a areál rozšírenia.

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