

# The White-tailed Eagle (*Haliaeetus albicilla*) in Slovakia

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**Abstract:** This review presents data on the size of the winter and breeding population of the White-tailed Eagle in the Slovak Republic in the period 2001 to 2007. Exact data on the number of wintering eagles have been collected from the Slovak-Hungarian part of the Danube River since 2002. Along this 182 km long Danube River section and its adjacent region including the water bodies of the Gabčíkovo power plant, the highest number of eagles recorded was 70. The breeding population lives along the Slovak part of the Danube River, where the highest number of successful breeding pairs *per year* was four (in 2004), and in Eastern Slovakia with a maximum of two successfully breeding pairs recorded in 2006.

**Key words:** White-tailed Eagle, wintering, breeding, Slovak section of the Danube River.

## Introduction

In the past, the White-tailed Eagle was known as a breeding, wintering and transmigrating bird in Slovakia. Considering its different patterns of occurrence, it is important to consistently divide the data on the abundance of the breeding and the winter population, if possible.

Some time ago, the key breeding sites were situated in lowlands with large water bodies. The most important breeding site was located in the floodplains of the Danube River between Bratislava, the capital, and Čičov village (approx. river km 1865–1795). Breeding in the left-side (Slovak) part of the inundation area of this section of the Danube in the first half of the 20<sup>th</sup> century was first documented by MATOUŠEK (1931), later by BALÁT (1946, 1948); an overview on the breedings and their success in the period 1946–1966 was published by ŠTOLLMANN (1966). During this period, White-tailed Eagles bred 11 times of which 9 times were successful (in total 11 fledged young). The last breeding in the area was noted in 1964 (ŠTOLLMANN l. c.). In 1953, the National Nature Reserve “Ostrov orliaka morského” (Island of the White-tailed Eagle) was constituted in order to protect the nests of one Eagle pair. Early in the 1990s – following the summer occurrence of Eagles along the Danube River – activities aiming to recover the breeding population (feedings and the construction of artificial nests) were supported also by the WWF, the Global Environmental Facility and Regional Environmental Center grants (BOHUŠ 1996). Practically the whole potential breeding area in the Danubian flood-

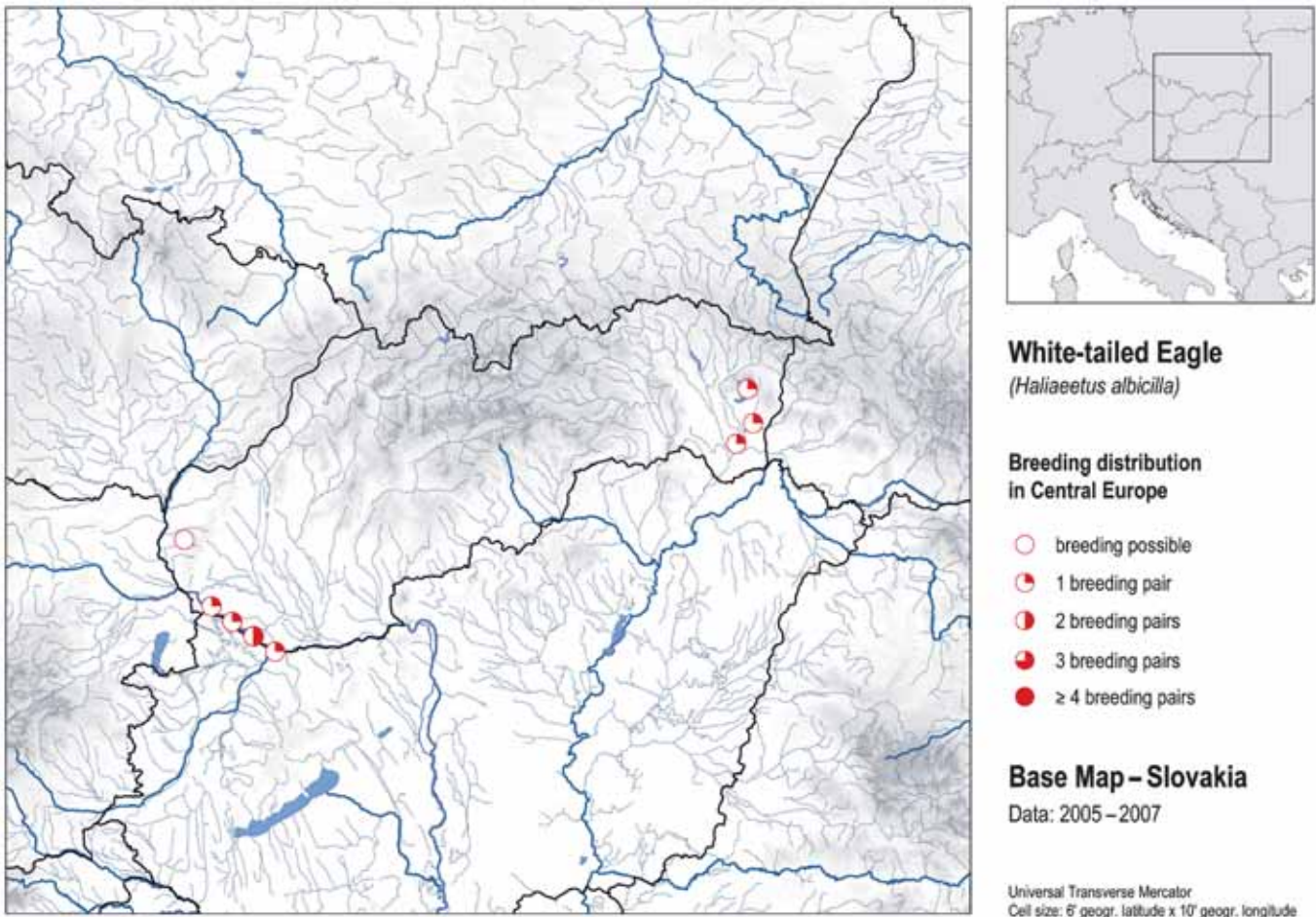
plain forest was classified a Ramsar site in 1993 and became part of the Protected Landscape area Dunajské lúhy in 1997. The area has been proposed as Special Protection Area (SPA).

The second important region is situated in Eastern Slovakia. Breeding of White-tailed Eagles in the Východoslovenská nížina lowland and the adjacent mountains was already known in the first half of the 20<sup>th</sup> century. HRABAR (1932) mentioned a non-documented breeding near the river Latorica. Breeding in the Vihorlat mountains near Morské oko tarn in the 1930s was described by several authors (HRABAR 1932, PORTENKO 1950, Molnár in MATOUŠEK et al. 2002). From this period on up to the beginning of the new millennium, no data on breeding occurrences exist.

Breeding in the westernmost part of Slovakia – the floodplains of the Morava River and the adjacent regions of the Záhorská nížina lowland – was assumed in the past but has never been analysed.

In 1960 and 1961, the only breedings were found near the Oravská priehrada reservoir, an artificial water body in Northern Slovakia. Both broods were unsuccessful (KOCIAN 1960, 1984). In the late 1990s, activities such as feeding and the installation of artificial nests were initiated in the area to stabilize the winter population and to support breeding (TRNKA et al. 1998) – until now to no avail.

Data on wintering eagles in Slovakia are incomplete and mostly refer to the Danubian region (e.g. FERIANC 1955, FARAGÓ & MÁRKUS 1987, ÁČ 1989, DAROLOVÁ 1993, FARAGÓ 1996). In the winter 2001/2002,



**Fig. 1:** Breeding distribution of the White-tailed Eagle in Slovakia 2005–2007. — *Brutverbreitung des Seeadlers in der Slowakei 2005–2007.*

systematic synchronous winter censuses were commenced in this most important Slovak wintering region of White-tailed Eagles and the results have been published regularly (BOHUŠ et al. 2002, 2003, 2005, 2007).

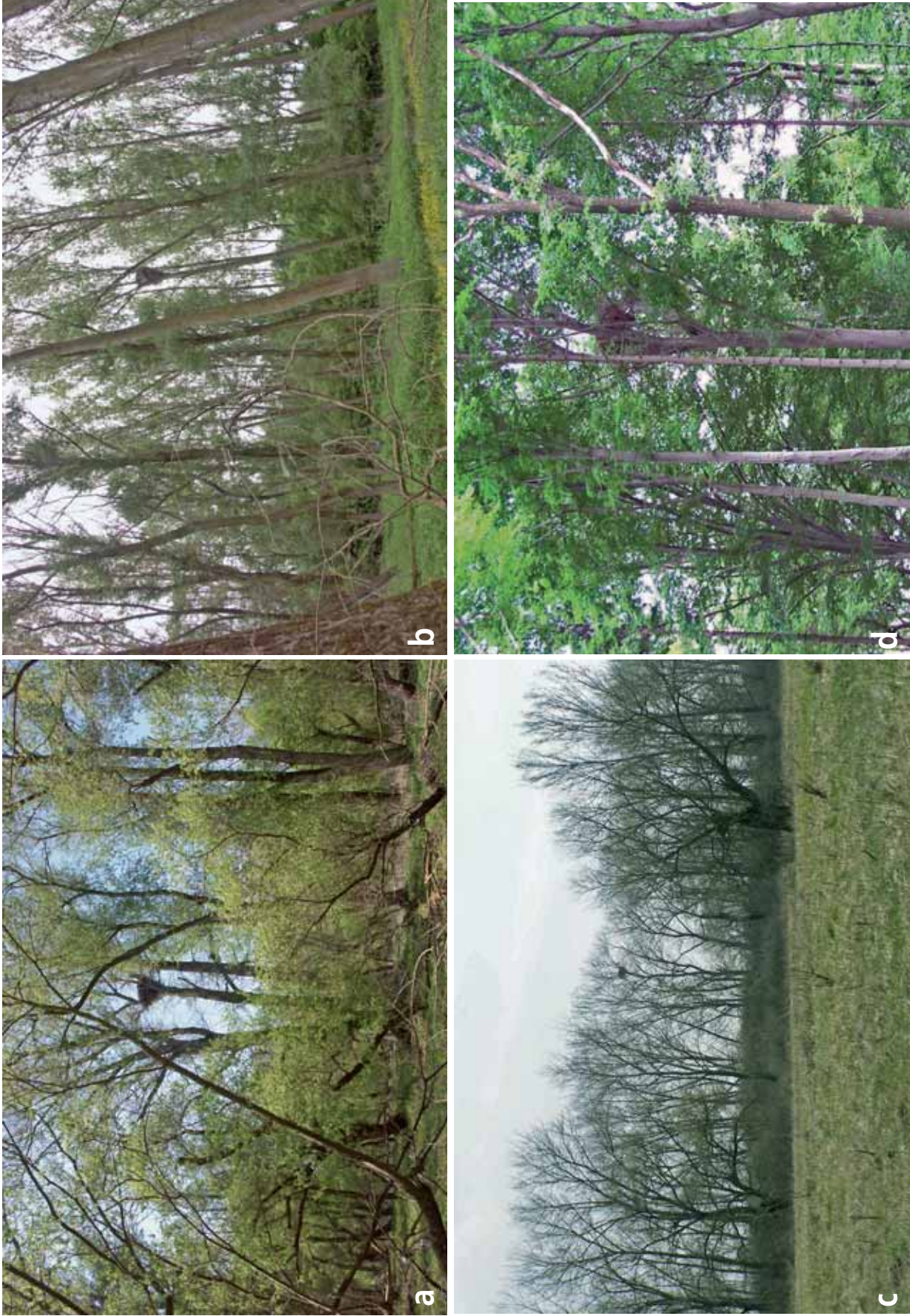
This paper aims to define the breeding and winter population of the White-tailed Eagle in Slovakia in the period 2001–2007.

## Methods

Censuses were conducted annually in the last decade of January between 9:00 and 15:00 hrs (winter 2001/02) and between 9:00 and 14:00 hrs (since winter 2002/03), respectively. Two different methods were used for winter censuses in the Slovak-Hungarian part of the Danube depending on expected eagle densities (estimated according to information obtained during synchronous waterfowl censuses and knowledge of the eagles' spatial relationships). In comparatively low-density river sections (river kms 1776–1715), eagle densities were estimated from line transects. In high-density sec-

tions (river kms 1882–1776), censuses were conducted from adjacent stationary count points. The highest density of those fixed censusing spots ( $n=28$ ) refers to the area between Bratislava (river km 1865) and Medved'ov (river km 1806). For each observed specimen or group of eagles, the observers noted the number of registrations, start and end time of each observation (to the minute), age (adult, juvenile/subadult, unspecified age) and additional information (e.g. group size, behaviour). Location and flight direction, respectively, of each observed specimen were recorded on a map and assigned a number of registration. Data were then plotted on a central map of the whole area. Since 2004, the data have been mapped in GIS. The number of wintering White-tailed Eagles was estimated after comparing the results from all count points and transects with respect to registration time, age and flight direction of the observed birds in order to eliminate double counts.

Breeding data were obtained through direct controls of known nests.



**Fig. 2:** White-tailed Eagle nest **(a)** in the Danube inundation area near Baka village (National Nature Reserve Ostrov orliaka morského, Photo: J. Chavko) and **(b)** near Gabčíkovo village ("Ercséd" site, Photo: J. Chavko); **(c)** in the Východoslovenská nížina lowland ("Senné" site, Photo: Š. Danko); **(d)** in the Vihorlat mountains (Photo: Š. Danko). — Seeadlerhorst **(a)** im Überschwemmungsbereich der Donau bei der Ortschaft Baka (Nationales Naturreservat Ostrov orliaka morského) und **(b)** bei Gabčíkovo (Standort „Ercséd“); **(c)** im Ostslowakischen Tiefland (Východoslovenská nížina, Standort „Senné“); **(d)** im Vihorlatgebirge.

**Table 1:** Winter numbers of White-tailed Eagles in the Slovak-Hungarian part of the Danube River. — *Anzahl überwinternder Seeadler im slowakisch-ungarischen Bereich der Donau.*

	Jan. 26, 2002	Jan. 25, 2003	Jan. 24, 2004	Jan. 22, 2005	Jan. 28, 2006	Jan. 20, 2007
Adults	16	18	30	15–20	28	10
Immatures	22	24	27	7	28	10
Age unknown	7	6	13	28–34	5	5
<b>Total</b>	<b>45</b>	<b>48</b>	<b>70</b>	<b>50–61</b>	<b>61</b>	<b>25</b>

**Table 2:** Breeding success of White-tailed Eagles in the Slovak part of the Danube River. 0 – unsuccessful breeding. — *Bruterfolg von Seeadlern im slowakischen Bereich der Donau. 0 – Brut nicht erfolgreich.*

Site (local Name) Year	Gabčíkovo (Ercséd)	Baka (NNR Ostrov orliaka morského)	Vojka nad Dunajom (Hajósok)	Čičov	Čunovo	Total
2001	0		0	1		1
2002	3		2	1		6
2003	2		1	2		5
2004	2	1	2	2		7
2005	2	1	0	2		5
2006	2	1		0	2	5
2007	2	0		0	0	2

## Results

### Winter population abundance in the Slovak-Hungarian part of the Danube

Exact data on the winter abundance of the White-tailed Eagle in Slovakia are restricted to the inundation area of the river Danube and its adjacent region. Between the winters 2001/02 and 2006/07, eagle numbers varied between 25 and 70 birds (tab. 1). In 2005, fieldwork was hampered by unfavourable weather conditions (i.e. strong winds and low temperatures) which is the reason for range numbers given in that year. Low eagle numbers in 2007 were likely due to the mild winter.

### The breeding population in the Slovak part of the Danube River

In the first half of the 1990s, data on summer occurrences of White-tailed Eagles of all age classes increased in this region. The trend culminated in 1997, when the first breeding pair hatched 2 fledglings. In the Danubian inland delta – approx. between river kms 1865 and 1795 – the breeding population increased. The maximum number of successful breeding pairs per year rose up to four. Breedings in the Slovak part of the river Danube 2001–2007 are summarized in tab. 2.

### The breeding population in Eastern Slovakia (according to DANKO 2005, 2007, 2008, LIPTÁK & MIHÓK 2007)

After an increase of eagle records in Eastern Slovakia (mostly in riverine forests near the river Latorica and artificial water reservoirs), nest building was recorded in 2002 in the Vihorlat Mountains near the Zemplínska Šírava water reservoir. Breeding of this pair was doc-

umented in 2004 (2 fledged young), 2005 (2 fledglings) and 2006 (2 fledglings).

In 2006, the nest of a second breeding pair was recorded near the Latorica River, from which one nestling fledged.

In 2007, the pair near the Latorica river produced 2 fledglings (Danko in litt.). The other pair started to breed near the Senné fishponds, however, this breeding was unsuccessful (DANKO 2008).

### Záhorie region

Following several observations of displaying adult eagles and young birds of unknown origin, breeding of White-tailed Eagles has been assumed since 1997. However, efforts to find a nest in the forested lowland terrain remained unsuccessful (Jureček in litt.).

In 2004, a nest was recorded near the Morava River, but no clutch was produced (Jureček in litt.).

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## Zusammenfassung

Der Artikel gibt eine Übersicht über die Größe der Winter- und Brutpopulation des Seeadlers in der Slowakei in den Jahren 2001 bis 2007. Für den slowakisch-ungarischen Teil der Donau liegen seit 2002 genaue Angaben zur Anzahl überwinternder Vögel vor. Entlang dieses 182 km langen Flussabschnitts und des angrenzenden Bereichs, inklusive den Wasserflächen des Kraf-

werks Gabčíkovo, lag die höchste Anzahl überwinternder Seeadler bei 70 Individuen. Die Brutpopulation befindet sich im Bereich des slowakischen Donauabschnitts mit maximal vier erfolgreichen Brutpaaren im Jahr 2004, und im Osten des Landes mit maximal zwei erfolgreichen Brutpaaren im Jahr 2006.

## Súhrn

V článku sú prezentované údaje o veľkosti zimujúcej a hniezdnej populácie orliaka morského v Slovenskej republike v období rokov 2001 až 2007. Presné údaje o početnosti zimujúcej populácie sú známe iba zo slovensko-maďarskej časti Dunaja od roku 2002. Najväčšia početnosť zimujúcich orliakov morských pozdĺž 182 km dlhého úseku Dunaja a priľahlej oblasti zahŕňajúcej vodné telesá vodného diela Gabčíkovo bola 70 exemplárov. Hniezdna populácia existuje v slovenskej časti Dunaja, kde najväčší počet hniezdných párov za rok bol 4 (2004) a na východnom Slovensku s maximom 2 úspešne hniezdiacich párov (2004).

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