

## PROBABLE NEW BREEDING SITES OF BOOTED EAGLE *Hieraaetus pennatus* IN VOJVODINA (N SERBIA)

### Nova verjetna gnezdišča malega orla *Hieraaetus pennatus* v Vojvodini (S Srbija)

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#### 1. Introduction

Booted Eagle *Hieraaetus pennatus* is one of rarest raptor species in Serbia. Between 1977 and 1996 it was observed in the breeding period in only 1% of 10 x 10km UTM squares in the country, while breeding was confirmed in just one of them. These scarce records originate from Vojvodina (Fruška gora Mt.), eastern Serbia (Đerdap Gorge, Stara planina Mt.), southern Serbia (Kukavica Mt., Radan Mt.), south-western Serbia (Pešter Highland) and Kosovo and Metohija (Dečanska Bistrica River Gorge). The most recent information on population size was collected between 1994 and 1996, when 10 – 15 pairs were estimated to breed in Serbia (MARINKOVIĆ & GRUBAČ 2000).

In 2005 new data were collected about the occurrence in the breeding period of this poorly known raptor in Serbia. The aim of this article is to present and use them to discuss possible changes in status of this species in Vojvodina.

#### 2. Study area

Data were gathered at two sites in the southern part of Vojvodinian Banat. Deliblato Sands (Deliblatska peščara) occupies the south-eastern part of Banat, between the villages of Deliblato, Dubovac, Banatski Karlovac, Alibunar, Vladimirovac and Mramorak. It spreads for 60 km in a northwesterly-southeasterly direction, and is 25 km wide. The average height is 138 m a.s.l. The surface is undulating and covered by dunes and blow-outs. The basic mass of sand was formed partly by winds blowing during the Pleistocene (TOMIĆ *et al.* 2002). Nowadays, after the end of forestation, Deliblato Sands is mainly covered by deciduous and coniferous semi-natural stands with small patches of natural steppe grasslands. Major parts are protected within the Deliblato Sands Special Nature Reserve.

Vršac Hill (Vršачki breg) is situated in the south-easternmost part of Vojvodina, close to the border with Romania. The mountainous region is central, with four hills: Vršачka kula (399 m a.s.l.), Vršачki vrh (463 m a.s.l.), Gudurički vrh (641 m a.s.l.) and Donji Vršisor (436 m a.s.l.; Tomić *et al.*, 2002). This, the highest part of Vojvodina, is covered by mixed deciduous forests and surrounded mainly by extensive agricultural fields and vineyards.

#### 3. Results and discussion

During the breeding season in 2005 we collected four sets of data on observation of five or six individuals of Booted Eagle in the area and their behaviour (Figure 1).



**Figure 1:** Position of sites in Vojvodina (N Serbia) where Booted Eagles *Hieraaetus pennatus* were observed during 2005: 1 – Deliblato Sands / Mali Pesak, 2 – Deliblato Sands/ Dumača, 3 – Vršac Hill

**Slika 1:** Pozicija verjetnih novih gnezdišča malega orla *Hieraaetus pennatus*, najdenih v letu 2005: 1 – Deliblatska peščara / Mali pesak, 2 – Deliblatska peščara / Dumača, 3 – Vršачki breg

One Booted Eagle was observed from a close distance trying to take prey from a flock of Common Starlings *Sturnus vulgaris*. This was on 9 Jul 2005 at 14.45 h above spacious, extensively grazed pastures (site called Mali Pesak; Figure 2, Figure 3) situated on the southern edge of Deliblato Sands, next to the left bank of the Danube-Tisa-Danube canal, close to the villages of Vračev Gaj and Banatska Palanka (UTM EQ26; 44°52' N, 21° 17' E). Soon after, the bird executed one deep stoop which was unsuccessful. Following that, one horizontal hunting flight directed to the same flock of Common Starlings was observed, but was also unsuccessful. Soon after that, the bird flew away towards the south. In the same place on 10 Jul 2005 at 11.30 h, one Booted Eagle was observed coming from the south and soaring above the pasture, followed by one Common Buzzard *Buteo buteo*. After two unsuccessful stoops (apparently towards possible ground prey), a second Booted Eagle appeared. Both birds circled low above the pasture, obviously not disturbed by the presence of us and our car; moreover, tractors passing by and even quite heavy traffic on the nearby local road connecting the towns Kovin and Bela Crkva did not distract them. Both individuals belonged to the pale morph and were adults. This was confirmed, in particular, by the irregular trailing edge due to moult (FORSMAN 1999). Continued observations



**Figure 2:** Extensively grazed pastures of Mali Pesak situated on the southern edge of Deliblato Sands (Photo: M. Tucakov)

**Slika 2:** Ekstenzivni pašnici na Malim Pesku, na južnom robu Deliblatske Peščare (Foto: M. Tucakov)

of these Booted Eagles gave us a chance even to hear the voice of both individuals. Furthermore, one bird was in brief conflict with 3 Common Ravens *Corvus corax*, while the second one used a thermal, lifted very high and took one very deep stoop, again directed to

possible prey on the ground. Finally, one immature (according to CAMPORA & CATTANEO 2005) Short-toed Eagle *Circaetus gallicus* came from the south and glided towards one of the Booted Eagles, with which it flew towards the west (direction of village Kajtasovo), while the other Booted Eagle headed north.

On 27 Jul 2005 Mali Pesak was checked between



**Figure 3:** Booted Eagle *Hieraetus pennatus* observed above Mali Pesak in Deliblato Sands on 10 Jul 2005 (Photo: M. Tucakov)

**Slika 3:** Mali orel *Hieraetus pennatus*, opazovan nad Malim peskom v Deliblatski peščari, dne 10.7.2005 (Foto: M. Tucakov)

9.00 and 11.30 h, but no Booted Eagles were seen. However, around 11:30 two Booted Eagles of dark morph were observed some 10 km to the north of Mali Pesak, in the steppe pastures at Dumača near village Grebenac, situated also on the very edge of Deliblato Sands (UTM EQ17; 44°55' N, 21°13' E). The birds appeared from the mixed deciduous forest and circled near the observer for several minutes. After that both birds flew separately towards the north, while one headed in the direction of Zagajica Hills (Zagajička brda).

A fifth Booted Eagle was observed on 2 Jun 2005 in the area of SE Banat in the foothills of Vršac Hill. One bird of black-and-white morph overflew the southern foothills, in the area between the villages of Mesić and Jablanka (UTM EQ39 45°04' N, 21°23'E). This bird was headed from east to west, flying over mixed deciduous forest and extensive meadows at 16.00 h. The locality of this observation is situated some 40 km to the NE from Mali Pesak and some 30 km to the NE from Dumača.

These observations in Deliblato Sands within the late breeding period (most probably chick feeding

time) probably indicate the reproduction of one pair of Booted Eagles of pale morph in the vicinity of the Mali Pesak area and one pair of dark morph near Dumača. However, this species has not been considered as a breeder on Deliblato Sands (HAM 1986) or of the whole area of the Vojvodinian part of Banat. The only site in Vojvodina with recent records of possible breeding is Fruška gora Mt., some 140 km towards the NW (MARINKOVIĆ & GRUBAČ 2000). Further, according to our information and the literature data, this species was never observed in Vojvodinian Banat or in the Vršac Hills: this is the first observation of this species for this mountain (RAŠAJSKI & PELLE 1993). Although there is a small possibility that at least one of these pairs nested on the adjacent mountain slopes along the left bank of the Danube in Romania, some 5 km from the site of our observation, evidence for breeding sites of Booted Eagles is missing there, as well as in the whole of western Romania (WEBER *et al.* 1994). The nearest known possible breeding site from the place of our observation is situated at least 100 km downstream the Danube, in Đerdap gorge (Iron Gate), but the last available observations from the breeding period are from July 1992 (MARINKOVIĆ & GRUBAČ 2000).

Other than by the avian prey, Booted Eagles could be attracted to Mali Pesak by the very high local concentration of European Sousel *Spermophilus citellus* (HAM *et al.* 1981; also confirmed by our records, including even an observation of an adult Northern Goshawk *Accipiter gentilis* catching one individual), which is one of the highest in Vojvodina. This also holds for the hills covered by steppe grasslands at Dumača. Reconsideration of official protection of these marginal parts of Deliblato Sands by incorporating them into the existing Nature Reserve appears to be urgent.

## Summary

During the breeding season in 2005 we collected four data on the occurrence of Booted Eagle *Hieraaetus pennatus* in the area of SE Banat (E Vojvodina). One individual circled on 9 Jul 2005 and two on 10 Jul 2005 above the pastures on the edge of Deliblato Sands, close to the Vračev Gaj and Banatska Palanka. All of them belonged to the pale morph and were adults. On 27 Jul 2005 two individuals of dark morph were observed near Grebenac. A fifth Booted Eagle in the area was observed in the foothills of Vršac Hill, in the area between the villages of Mesić and Jablanka on 2 Jun. Observations in Deliblato Sands indicate probable reproduction of one pair of pale morph and one pair of dark morph, which would be the first breeding of

this species in the predominantly lowland area on south Banat. Booted Eagles could be attracted to the places where we observed them by the high concentration of European Sousel *Spermophilus citellus*.

## Povzetek

V gnezdilni sezoni 2005 smo zbrali štiri podatke o pojavljanju malega orla *Hieraaetus pennatus* na območju JV Banata (V Vojvodina). Nad pašniki v Deliblatski peščari, v bližini Vračevega Gaja in Banatske Palanke, je 9.7.2005 krožil en osebek in 10.7.2005 dva osebka. Vsi so bili odrasli in so pripadali svetli varianti. Dne 27.7.2005 sta bila dva osebka temne variante opazovana v bližini Grebenca. Peti mali orel je bil opazovan ob vznožju Vršackega brega, med vasema Mesić in Jablanka, dne 2.6.2005. Opazovanja v Deliblatski peščari verjetno pomenijo gnezdenje enega para svetle variante in enega para temne variante, kar bi pomenilo prvo gnezdenje te vrste v ravninskem predelu južnega Banata. Možno je, da malega orla privlačijo področja, kjer je visoka koncentracija evropskih tekunic *Spermophilus citellus*.

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