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# THE ORNITHOFAUNA OF MORAČA CANYON (MONTENEGRO) AND ITS CONSERVATION VALUE


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## ABSTRACT

Saveljić, D. (2008). The ornihtofauna of Morača Canyon (Montenegro) and its conservation value. Ekol. Zašt. Život. Sred., Vol. 11, No 1/2, 55-62.

Morača river canyon is one of the longest and deepest in Montenegro. Beside the fact that one of the most frequent traffic lines passes through, there are no numerous data on birds of the canyon in literature.

Survey conducted in 2008 registered 115 bird species in Morača Canyon. Only three bird species do not have any protection status while the majority are listed in annexes of conventions as species of special importance for protection.

This paper is a contribution to the knowledge of bird fauna of Morača Canyon, in light of the threat of construction of four huge reservoirs in the canyon for the needs of energy production.



**Key words**: bird conservation, Montenegro, Morača Canyon, ornithofauna



## ИЗВОД

Савељиќ, Д. (2008). Орнитофауна на кањонот на Морача (Црна Гора) и нејзината конзервациска вредност. Екол. Зашт. Живот. Сред., Том 11, Бр. 1/2, 2008.

Кањонот на реката Морача е еден од најдолгите и најдлабоките во Црна Гора. И покрај фактот што низ него минува една од најфрекфентните сообраќајници, во литературата не постојат многу податоци за птиците на кањонот.

Истражувањата реализирани во 2008 година во кањонот на Морача утврдија присуство на 115 видови птици. Само три видови немаат никаков заштитарски статус, додека мнозинството се вклучени во анекси на конвенции како видови од посебно значење за заштита.

Овој труд е прилог кон познавањето на фауната на птиците во кањонот на Морача, во светло на заканата од конструкцијата на четири хидроакумулации за добивање на електрична енергија.



**Клучни зборови**: заштита на птиците, кањон на Морача, орнитофауна, Црна Гора.


## Introduction

Thanks to rich bird fauna, attractiveness of landscape and geomorphologic elements, Montenegro has been attracting international ornithologists for more than 170 years. However, beside significant ornithological records of some areas in Montenegro in past, first of all on Skadar Lake and Bojana River delta (Firer, 1894, 1895; Raiser & Führer, 1896), there is no published work on ornithology of Morača, but only a few observations (Vizi & Vasić, 1986). Even Ludwig von Führer, who provided the most voluminous historical data on bird fauna of Montenegro, during the journey through Morača canyon towards Biogradska gora, did not mention a single ornithological finding for this site (Firer, 1895).

Morača canyon was recommended as a monument of nature in the Draft Spatial Plan of Montenegro (Ministry of development of Montenegro, 2006). But, in the final version it was not considered for the protection program; instead, construction of four hydro-accumulations with dams 59-150 m high along its whole length was planned (Minis-

try of development of Montenegro, 2007).The idea of conversion of the canyon into the reservoirs initiated survey of the ornithofauna in order to review its importance for birds. Scientific public in Montenegro does not have data on birds of the canyon, therefore the intention of this paper is to present to the scientific public, primarily Montenegrin, the importance of protection of Morača canyon in light of national legislation, international conventions and EU Bird Directive.

## Study area

Morača is the largest tributary of Skadar Lake. It rises under the Kapa Moračka Mountain on 975 m above sea level with the water course of 99 km. The direction of the watercourse is NW/SE. Central watercourse is the canyon 35 km long with cliffs higher than 1000 m a.s.l.. The width of the river varies between 20 m in the canyon and 250 m in Zeta valley. The depth of the water is from 0,5 in lower course to 10 m in the canyon. Due to high vertical decline to only 5 m above sea level, the river belongs to fast and current waters (Drecun et al., 1985).

Morača is a salmonid river with 33 fish species (Drecun *et al*, 1985) to which richness abundance of food in benthos, loaded with *Ephemeroptera* larvae, contributes to significantly (Zlatičanin, 2007). 1600 species of vascular flora are registered in the canyon, which is almost half of total registered plant species in Montenegro (Bulić, 2008), with more than 60 endemics of Balkan and 85 permanently protected species. However, no detail description of the habitats in the canyon exists so far.

For the purpose of this paper, the part of Morača from Duklja upstream to Mioska, that is app. 50 km of the river course is considered as canyon. In opposite to surveyed canyon part, the river bed is much wider in the lower course, and the shores are populated.

Besides fishing bans, there is no other protection status of Morača canyon.

For the needs of this study, Morača was divided to 5 observation points that significantly differ from the geo-morphological aspect. Representative exploration points are: Duklja – Smokovac, Duga, Andrijevo, Morača Monastery and Međuriječje.

At the point Duklja – Smokovac the canyon is open and the water is shallow in off season of spring-tide water levels. The exploitation of pebble is intensive on several locations that cause blocking of the river and creating small, isolated water surfaces. During summer months, the location serves as a recreation site, and disturbance of the birds is intensive.

The site Duga is open and populated, with agricultural landscape and some places with grassland vegetation. In Andrijevo, the canyon is closed at most with the waterbed width of 20m. On the location Morača Monastery, dominant habitats are oak and beech forests on higher altitudes, planted forests of black pine and orchards. Međuriječje is characterized by mixed deciduous forest and open space in the mouth of Mrtvica to Morača.

On the observed part of the canyon, there are 13 sites with summer intensive exploitation of the river drifts (Zlatičanin, 2007), the riverbed is being divided, river course is being changed and isolated ponds or pebble isles are being created.

## Methods

Study of the birds‘ fauna of Morača was conducted in the period 02.03-10.10. 2008, during 32

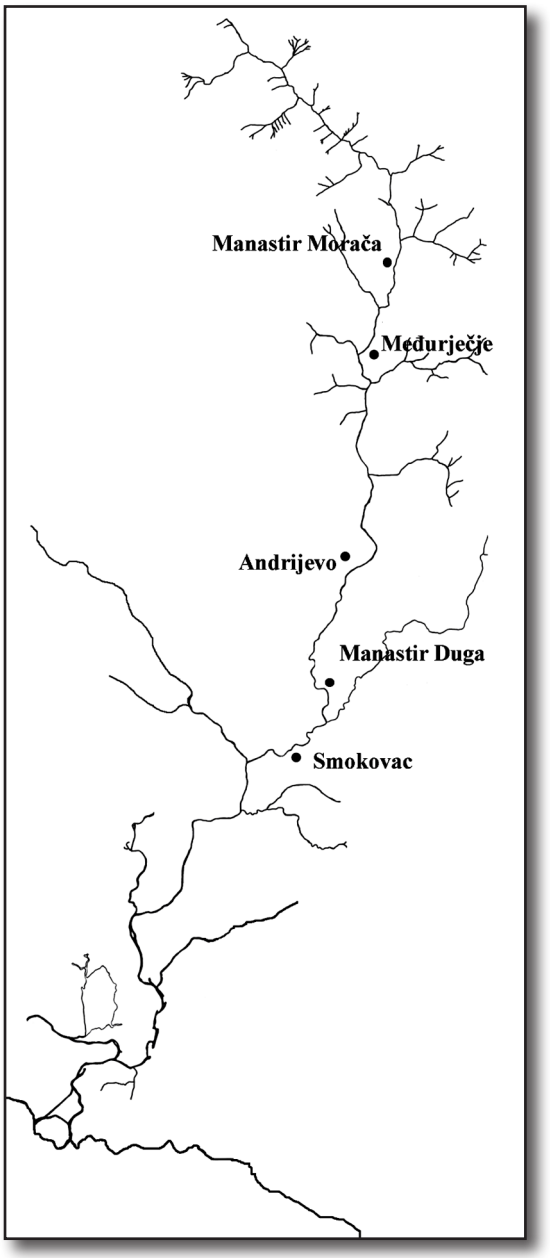


**Fig. 1**. Morača river and observation points
Сл. 1. Реката Морача и точки на набљудување

field visits. The paper is amended with few unpublished data gathered in the period 1999-2005. Observations were done mainly in the morning hours, from dawn to noon, except during some summer field visits, when the observation was done in late afternoon. On average, they lasted 90 minutes at one point, except on Andrijevo profile, where the canyon is narrowest and where the observations lasted maximum 10 minutes.

Having in mind that the main road passes the entire canyon and that the canyon walls are pathless, the observation of the riverbed and the rocks above was done from the road.

The bird species that were registered in the canyon during the breeding season, in almost all field visits were recorded as certain breeding species. Not confirmed breeding species were the ones observed several times on some sites, but did not show territorial behaviour or their breeding could not be confirmed with certainty (example: *Charadrius* sp.).

As the sides of the canyon are inaccessible, it was difficult to count the territories and breeding pairs of some bird species, especially Passerines. Therefore, estimations are given only for species whose number of breeding pairs was easer to assess.

## Results and discussion

By the survey done in 2008, 115 bird species were registered (Tab. 1) including 87 certain breeding species. There are 18 species in the canyon whose breeding was not confirmed, that represents 46 % of the total number of species breeding in Montenegro (Puzović et al, 2004).

Golden Eagle *Aquila chrysaetos* was registered three times during one day of the observations in the canyon, and most probably three different individuals. One nest was registered on the observation point Smokovac. Golden Eagle was shot ten years ago on this site and it is today in the private collection of a local hunter.

Finding of four pairs of Eurasian Thick-Knee *Burhinus oedicnemus* on the meadows between Smokovac and Duga is quite interesting. It is species of open fields, but in this case it breeds in the canyon on dry meadows with grassland vegetation. Beside some 30 pairs in Bojana delta (Schneider et al., 2005) and two pairs registered in Ćemovsko field (Saveljić, 2004), this is the third location where this species breeds in Montenegro. In total, more than 10% of national population breed in the canyon.

**Tab. 1**. List of registered bird species in Morača canyon, their status, population number and evaluation criteria. Only for a few important species the number showing their population size in the canyon is given.

**Таб. 1.** Список на регистрирани видови птици во кањонот на Морача, нивниот статус, големина на популацијата и евалуациски критериуми. Само за неколку поважни видови е дадена големината на популацијата во кањонот.

| Number | Species | Status | Number of pairs-individuals | SPEC | ETS | Birds Directive | Emerald Network | Bern Convention | Bonn Convention | AEWA | CITES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | *Tachybaptus ruficollis* | ab | 14i | - | S | | | II | | | |
| 2 | *Podiceps nigricollis* | wm | s | - | S | | | II | | | |
| 3 | *Phalacrocorax carbo* | ab | 21i | - | S | | | III | | | |
| 4 | *Phalacrocorax pygmeus* | ab | 26i | 1 | S | I | Yes | II | II | Yes | |
| 5 | *Egretta alba* | wm | 8i | - | S | I | Yes | II | II | Yes | |
| 6 | *Egretta garzetta* | ab | 19i | - | S | I | Yes | II | | | |
| 7 | *Ardeolla ralloides* | ab | 6i | 3 | (D) | I | Yes | II | | | |
| 8 | *Ardea cinerea* | ab,w | s | - | S | | | III | | | |
| 9 | *Anas plathyrhynchos* | w | s | - | (S) | II/1; III/1 | | III | II | Yes | |
| 10 | *Pernis apivorus* | b | 4p | -E | (S) | I | Yes | II | II | | II |
| 11 | *Gyps fulvus* | r (ex) | 2i | - | S | I | Yes | II | II | | II |
| 12 | *Circaetus gallicus* | b | 2p | 3 | (R) | I | Yes | II | II | | II |
| 13 | *Accipiter gentilis* | r | 3p | - | S | | | II | II | | II |
| 14 | *Accipiter nisus* | r | s | - | S | | | II | II | | II |
| 15 | *Accipiter brevipes* | b | 3p | 2 | VU | I | Yes | II | II | | II |
| 16 | *Buteo buteo* | r | n | - | S | | | II | II | | II |

| Number | Species | Status | Number of pairs-individuals | SPEC | ETS | Birds Directive | Emerald Network | Bern Convention | Bonn Convention | AEWA | CITES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | *Aquila chrysaetos* | r | 2p | 3 | R | I | Yes | II | II | | II |
| 18 | *Falco tinnunculus* | r | n | 3 | D | | | II | II | | II |
| 19 | *Falco biarmicus* | b | >1p | 3 | VU | I | Yes | II | II | | II |
| 20 | *Falco peregrinus* | r | n | - | S | I | Yes | II | II | | I |
| 21 | *Alectoris graeca* | r | n | 2 | (D) | I; II/1 | | III | | | |
| 22 | *Phasianus colchicus* | ? | s | - | (S) | II/1; III/1 | | III | | | |
| 23 | *Burhinus oedicnemus* | b | 4p | 3 | (VU) | I | Yes | II | II | | |
| 24 | *Charadrius dubius* | ? | s | - | (S) | | | II | II | Yes | |
| 25 | *Charadrius alexandrinus* | ? | s | 3 | (D) | I | | II | II | Yes | |
| 26 | *Scolopax rusticola* | ? | s | 3 | (D) | II/1; III/2 | | III | II | | |
| 27 | *Actitis hypoleucos* | b | s | 3 | (D) | | | II | II | Yes | |
| 28 | *Larus ridibundus* | ab | 8i | -E | (S) | II/2 | | III | | | |
| 29 | *Columba livia* | r | 32p | - | (S) | II/1 | | III | | | |
| 30 | *Columba palumbus* | r | n | -E | S | II/1; III/1 | | | | | |
| 31 | *Streptopelia decaocto* | r | n | - | S | II/2 | | III | | | |
| 32 | *Streptopelia turtur* | b | n | 3 | D | II/2 | | III | II | | |
| 33 | *Cuculus canorus* | b | n | - | S | | | III | | | |
| 34 | *Otus scops* | b | >4p | 2 | (H) | | | II | | | II |
| 35 | *Bubo bubo* | r | n | 3 | (H) | I | Yes | II | | | II |
| 36 | *Athene noctua* | b | n | 3 | (D) | | | II | | | II |
| 37 | *Caprimulgus europaeus* | b | >2 | 2 | (H) | I | Yes | II | | | |
| 38 | *Apus apus* | b | n | - | (S) | | | III | | | |
| 39 | *Alcedo atthis* | b | >6p | 3 | H | I | Yes | II | | | |
| 40 | *Merops apiaster* | b | 18p | 3 | (H) | | | II | II | | |
| 41 | *Coracias garrulus* | ? | 1p? | 2 | VU | I | Yes | II | II | | |
| 42 | *Upupa epops* | b | n | 3 | (D) | | | II | | | |
| 43 | *Picus canus* | r | n | 3 | (H) | I | Yes | II | | | |
| 44 | *Picus viridis* | r | n | 2 | (H) | | | II | | | |
| 45 | *Dryocopus martius* | r | n | - | S | I | Yes | II | | | |
| 46 | *Dendrocopos major* | r | n | - | S | | | II | | | |
| 47 | *Dendrocopos syriacus* | r | n | -E | (S) | I | Yes | II | | | |
| 48 | *Dendrocopos medius* | r | n | -E | (S) | I | Yes | II | | | |
| 49 | *Dendrocopos minor* | r | n | - | (S) | | | II | | | |
| 50 | *Galerida cristata* | r | n | 3 | (H) | | | III | | | |
| 51 | *Lullula arborea* | r | n | 2 | H | I | Yes | III | | | |
| 52 | *Alauda arvensis* | b | n | 3 | (H) | II/2 | | III | | | |
| 53 | *Hirundo rupestris* | b | n | - | S | | | II | | | |
| 54 | *Hirundo rustica* | b | n | 3 | H | | | II | | | |
| 55 | *Hirundo daurica* | b | >7p | - | (S) | | | II | | | |
| 56 | *Delichon urbica* | b | 170p | 3 | (D) | | | II | | | |
| 57 | *Anthus campestris* | b | n | 3 | (D) | I | Yes | II | | | |
| 58 | *Motacilla flava* | r | n | - | (S) | | | II | | | |
| 59 | *Motacilla alba* | r | n | - | S | | | II | | | |

| Number | Species | Status | Number of pairs-individuals | SPEC | ETS | Birds Directive | Emerald Network | Bern Convention | Bonn Convention | AEWA | CITES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 60 | *Cinclus cinclus* | r | >12p | - | S | | | II | | | |
| 61 | *Troglodytes troglodytes* | r | n | - | S | | | II | | | |
| 62 | *Prunella modularis* | w | n | -E | S | | | II | | | |
| 63 | *Erithacus rubecula* | r | n | -E | S | | | II | II | | |
| 64 | *Luscinia megarhynchos* | b | n | -E | (S) | | | II | II | | |
| 65 | *Phoenicurus ochruros* | r | n | - | S | | | II | II | | |
| 66 | *Phoenicurus phoenicurus* | b | n | 2 | (H) | | | II | II | | |
| 67 | *Saxicola torquata* | m | n | - | (S) | | | II | II | | |
| 68 | *Oenanthe oenanthe* | b | n | 3 | (D) | | | II | II | | |
| 69 | *Oenanthe hispanica* | b | n | 2 | (H) | | | II | II | | |
| 70 | *Monticola saxatilis* | b | n | 3 | (H) | | | II | II | | |
| 71 | *Monticola solitarius* | b | n | 3 | (H) | | | II | II | | |
| 72 | *Turdus merula* | r | n | -E | S | II/2 | | III | II | | |
| 73 | *Turdus pilaris* | w | n | -EW | (S) | II/2 | | III | II | | |
| 74 | *Turdus philomelos* | ? | n | -E | (S) | II/2 | | III | II | | |
| 75 | *Turdus viscivorus* | ? | n | -E | S | II/2 | | III | II | | |
| 76 | *Cettia cetti* | r | n | - | S | | | II | II | | |
| 77 | *Hippolais pallida* | b | n | 3 | (H) | | | II | II | | |
| 78 | *Sylvia cantillans* | b | n | -E | (S) | | | II | II | | |
| 79 | *Sylvia hortensis* | b | n | 3 | H | | | II | II | | |
| 80 | *Sylvia curruca* | b | n | - | S | | | II | II | | |
| 81 | *Sylvia communis* | b | n | -E | S | | | II | II | | |
| 82 | *Sylvia borin* | m | n | -E | S | | | II | II | | |
| 83 | *Sylvia atricapilla* | r | n | -E | S | | | II | II | | |
| 84 | *Phylloscopus collybita* | r | n | - | S | | | II | II | | |
| 85 | *Muscicapa striata* | m | n | 3 | H | | | II | II | | |
| 86 | *Parus palustris* | r | n | 3 | D | | | II | | | |
| 87 | *Parus lugubris* | ? | n | -E | (S) | | | II | | | |
| 88 | *Parus ater* | w, m? | n | - | (S) | | | II | | | |
| 89 | *Parus caeruleus* | r | n | -E | S | | | II | | | |
| 90 | *Parus major* | r | n | - | S | | | II | | | |
| 91 | *Sitta europea* | r | n | - | S | | | II | | | |
| 92 | *Sitta neumayer* | b | n | -E | (S) | | | II | | | |
| 93 | *Tichodroma muraria* | r | n | - | (S) | | | II | | | |
| 94 | *Oriolus oriolus* | b | n | - | S | | | II | | | |
| 95 | *Lanius collurio* | b | 9p | 3 | (H) | I | Yes | II | | | |
| 96 | *Lanius excubitor* | w | n | 3 | (H) | | | II | | | |
| 97 | *Lanius senator* | b | n | 2 | (D) | | | II | | | |
| 98 | *Garrulus glandarius* | r | n | - | S | II/2 | | | | | |
| 99 | *Pica pica* | r | n | - | S | II/2 | | | | | |
| 100 | *Pyrrhocorax graculus* | r | n | - | (S) | | | II | | | |
| 101 | *Corvus corone* | r | n | - | S | II/2 | | | | | |
| 102 | *Corvus monedula* | r | 74p | -E | (S) | II/2 | | | | | |

| Number | Species | Status | Number of pairs-individuals | SPEC | ETS | Birds Directive | Emerald Network | Bern Convention | Bonn Convention | AEWA | CITES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 103 | *Corvus corax* | r | 12p | - | S | | | III | | | |
| 104 | *Sturnus vulgaris* | r | n | 3 | D | II/2 | | | | | |
| 105 | *Passer domesticus* | r | n | 3 | D | | | | | | |
| 106 | *Passer montanus* | ? | n | 3 | (D) | | | III | | | |
| 107 | *Fringilla coelebs* | r | n | -E | S | | | III | | | |
| 108 | *Carduelis chloris* | b | n | -E | S | | | II | | | |
| 109 | *Carduelis carduelis* | r | n | - | S | | | II | | | |
| 110 | *Carduelis spinus* | w | n | -E | S | | | II | | | |
| 111 | *Coccothraustes coccothraustes* | r | n | - | S | | | II | | | |
| 112 | *Emberiza melanocephala* | b | n | 2 | (H) | | | II | | | |
| 113 | *Emberiza cirlus* | r | n | -E | S | | | II | | | |
| 114 | *Emberiza cia* | r | n | 3 | (H) | | | II | | | |
| 115 | *Miliaria calandra* | b | n | 2 | (D) | | | III | | | |

**Abbreviations**:

Breeding status: R-resident, R (ex) – former resident, disappeared during the study period, B -breeding, M – migration, W - wintering; AB – after breeding at Lake Skadar; ? – Unknown status;

Population size: p - pairs; i - individuals, s- few individuals; n- not counted without symbol – no estimation exists

SPEC Categories: 1 - SPEC 1; 2 - SPEC 2; 3 - SPEC 3; „—e“ - non-SPEC in Europe;“ —EW“ - non-SPEC in Europe for the wintering populations; „—“ – non-SPEC.

European threat status: EN - Endangered; VU – Vulnerable; D – Declining; R - Rare; H - Depleted; S - Secure, () – status provisional.

**Кратенки**:

Гнездов статус: R-станарка, R(ex) - поранешна станарка, исчезната за време на истражувањето, B - гнездилка, M - при миграција, W - на зимување, AB - по гнездење на Скадарско Езеро, ? - непознат статус

Популациски статус: p - парови, i - единки, s - неколку единки, n - не е броено, без симбол - не постои проценка

SPEC категории: 1 - SPEC 1; 2 - SPEC 2, 3 - SPEC 3, „—E“ - не-SPEC во Европа; „—EW“ - не-SPEC во Европа за зимувачките популации; „—“ – не-SPEC.

Европски статус на загрозеност: EN - загрозен; VU – ранлив; D – во опаѓање; R - редок; H - осиромашен; S - безбеден, () – провизорен статус.

Levant Sparrowhawk *Accipiter brevipes* with 3 breeding pairs is also interesting breeder and the Morača canyon could be considered the northernmost breeding site of this species in Montenegro. Previously, it was registered on Skadar Lake, Buljarica (Saveljić et al, 2007) and Bojana delta (Schneider et al., 2005), also on Zeta River (Saveljić et al, 2007).

The European Roller, *C. garullus,* was registered only once in the lower part of the canyon.

Canyon cliffs are one of the largest breeding sites for swallows in the country.

Clear, vertical strips of birds' distribution are recognised in the canyon: 15 bird species are connected to the water, out of which 3 inhabit pebble isles and shores, while the rest are connected to Mediterranean maquia, thermophilous forest and canyon cliffs. Large number of raptors registered in the canyon proves its high biological value and level of preservation.

Habitats in Morača canyon do not significantly differ from habitats in larger canyons of its tributaries: Cijevna, Mrtvica and Mala rijeka. For the majority species listed in the list of breeding species of Morača, one can undoubtedly state that they could be found in the surrounding canyons. It is important to mention that in Montenegro, only Tara River canyon was studied properly (Vasić et al. 1990), but it differs significantly by geomorphological and habitat features from the Morača canyon, primarily

due to high influx of Mediterranean climate into the Morača canyon.

Morača canyon fulfils A1 and B2 criteria for designation of IBA (Heath & Evans, 2000). The triggering species is the Pygmy Cormorant *Phalacrocorax pygmeus* due to its presence after breeding season on the Skadar Lake. Majority of species registered in the canyon do not have favourable conservation status in Europe, so protection of areas where they breed is an imperative (B2 criterion for designation of IBA). 32 of 52 identification species for IBAs in Montenegro are registered in the canyon (Rubinić *et al*, 2006). In Montenegro, until 2007 13 IBA were identified, which is about 10,6% of the total territory (Saveljić et al., 2007).

112 species registered in the canyon has some kind of national or international conservation status: 25 species are in Annex I of Bird Directive (*Council of Europe*, 1979), 71 are SPEC species (BirdLife International, 2004), 23 species are in the Resolution 6 of Bern Convention (The Standing Committee of the Convention on the Conservation of European Wildlife and Natural Habitats, 1998), 85 species are in the Annex II of Bern Convention (Convention on the Conservation of European Wildlife and Natural Habitats, 1972); 45 in the Annex II of Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animals, 1979); 14 species is on CITES list (Convention on International Trade in Endangered Species of Wild Fauna and Flora - CITES, 1973) and 6 species are treated by AEWA (Agreement on the Conservation of African-Eurasian Migratory Waterbirds – AEWA, 1995).

Montenegro ratified CITES and Bern Conventions (Kasom & Adžiablahović, 2007; Government of Montenegro, 2006). By applying for the membership in the EU in December 2008, Montenegro has expressed readiness for respecting the principles and laws that are the foundation of European Union. 25 birds from the Annex I of Bird Directive that are of special interest for protection on the EU level are sufficient recommendation for protection of this canyon in the frame of national legislation.

Thanks to presence of more than a half of total number of vascular flora of Montenegro (Bulić, 2008), it is also potential Natura 2000 site in Montenegro, significant for flora and for ornithofauna at the same level, therefore it complies with Habitat and Bird Directives.

As it seems, Morača Canyon deserve special attention of scientist, especially in the light of eventual building of hydropower accumulations. Flooding of a great part of canyon, particularly the lower half which is the most interesting for bird protection, the diversity of habitats will be lost. Dams will cause loss of dry pastures and *B. oedicnemus*, for ex., raptors will be lost their hunting areas and Passerines, especially Mediterranean species such as *Oenanthe hispanica*, will leave the canyon too.

## Conclusions

115 bird species are registered in Morača canyon, including 87 confirmed breeders and 18 species whose breeding has not been confirmed. Out of total 297 protected bird species in Montenegro (Official Gazette of Montenegro, 2006) 104 are registered in Morača canyon and for additional 7 species, hunting ban season is valid. This canyon complies with A1 and B2 criteria for designation of IBA (Heath & Evans, 2000). Majority of registered bird species in Morača canyon are listed in Annexes of CITES, AEWA, Bonn and Bern Conventions, as well as in Annex I of the Bird Directive.

Possible change of land use of canyon area, conversion to hydro-accumulation would drastically reflect on the survival of more than half of registered flora species in Montenegro and 115 bird species populating this canyon.

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## ОРНИТОФАУНА НА КАЊОНОТ НА МОРАЧА (ЦРНА ГОРА) И НЕЈЗИНАТА КОНЗЕРВАЦИСКА ВРЕДНОСТ

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### Резиме

Планираната изградба на четири хидроакумулации во кањонот на реката Морача без претходна студија за проценка на влијанието врз животната средина се заканува да загрози значајни живеалишта за 115 видови птици регистрирани на ова подрачје. Кањонот ужива статус на глобално значајно подрачје за птици. Само три видови не се под национална заштита, додека мнозинството се опфатени со меѓународните конвенции и директивата за птиците.

Заштитата на кањонот претставува предизвик и императив за државата која во 1992 година себеси се прогласи за „еколошка држава“.