

**PRELIMINARY ORNITHOLOGICAL SURVEY  
IN THE MARAMUREŞ MOUNTAINS NATURE PARK  
(MARAMUREŞ, ROMANIA)**

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**ABSTRACT**

A preliminary ornithological survey was conducted in the Maramureş Mountains Nature Park in 2007. Observations were made from ten routes and six observation points of different regions in the park. A total of 102 species were identified. The most important breeding species of the park is the Black Grouse (*Tetrao tetrix*), as this is one of the few sure breeding sites in Romania. Other representative species identified were: Golden Eagle (*Aquila chrysaetos*), Capercaillie (*Tetrao urogallus*), Pygmy Owl (*Glaucidium passerinum*), Tengmalm's Owl (*Aegolius funereus*), Ural Owl (*Strix uralensis*), Three-toed Woodpecker (*Picoides tridactylus*) and White-backed Woodpecker (*Dendrocopos leucotos*). The most significant threatening factor detected was the excessive lodging activity dominating most of the park's area, which could lead to the decline or disappearance of a large number of species.

**ZUSSAMMENFASSUNG:** Vorstudie zur Vogelfauna des Naturparks Maramuresch Gebirge (Maramuresch, Rumänien).

Während des Jahres 2007 wurde im Naturpark Maramurescher Gebirge eine vorläufige Vogelzählung durchgeführt. Die Beobachtungen wurden auf zehn Trassen und sechs Beobachtungspunkten unterschiedlicher Gebiete des Naturparks vorgenommen. Dabei wurden insgesamt 102 Vogelarten festgestellt. Die aus Sicht des Naturschutzes bedeutendster Brutvogelart ist das Birkhuhn (*Tetrao tetrix*), wobei es sich um eines der wenigen sicheren Brutgebiete in den Karpaten Rumäniens handelt. Andere beobachtete, repräsentative Arten sind Steinadler (*Aquila chrysaetos*), Auerhahn (*Tetrao urogallus*), Sperlingskauz (*Glaucidium passerinum*), Raufußkauz (*Aegolius funereus*), Habichtskauz (*Strix uralensis*), Dreizehenspecht (*Picoides tridactylus*) und Weissrückenspecht (*Dendrocopos leucotos*). Der wichtigste festgestellte Gefährdungsfaktor ist die excessive Waldrodung, die in den meisten Bereichen des Parks stattfindet. Werden die Abholzungen nicht bald kontrolliert, könnten sie durch den Verlust an Lebensraum zur Reduzierung oder dem Verschwinden der Brutbestände vieler Vogelarten führen.

**REZUMAT:** Studiu preliminar asupra avifaunei Parcului Natural Munții Maramureşului (Maramureş, România).

În 2007, în Parcul Natural Munții Maramureşului a avut loc un recensământ preliminar a avifaunei. Observațiile au fost efectuate de pe zece trasee și șase puncte de observație din diferite regiuni ale parcului. Au fost identificate, în total, 102 specii de păsări. Specia cuibăritoare cea mai importantă din punctul de vedere al conservării este Cocoșul de Mesteacăn (*Tetrao tetrix*), acesta fiind unul dintre puținele locuri sigure de cuibărit în România. Alte specii reprezentative, identificate au fost: Acvila de Munte (*Aquila chrysaetos*), Cocoșul de Munte (*Tetrao urogallus*), Ciuvica (*Glaucidium passerinum*), Minunița (*Aegolius funereus*), Huhurezul Mare (*Strix uralensis*), Ciocănitoarea de Munte (*Picoides tridactylus*) și Ciocănitoarea cu Spate Alb (*Dendrocopos leucotos*). Cel mai semnificativ factor periclitant, identificat a fost defrișarea excesivă, ceea ce are loc în cea mai mare parte a parcului. Defrișările, dacă nu vor fi controlate, în curând, ar putea duce la reducerea sau dispariția efectivelor cuibăritoare a multor specii de păsări.

### INTRODUCTION

Recent ornithological data are missing from large areas of Romania, national and natural parks being no exception. In the last few years, however, after the forming of national and natural parks administrations and with the first preparations of the management plans, there were some projects initiated in many parks aiming the gathering of recent information on biodiversity. In 2007 the “Milvus Group” Bird and Nature Protection Association conducted a preliminary survey of the Maramureş Mountains Nature Park’s avifauna. The main objectives of the study were to create a list of breeding species, to gather information about the distribution of some rare or / and conservation dependent species inside the park and to identify major threatening factors of these species. Some important species were identified during a previous visit in 2006. These data are also presented.

### STUDY AREA AND METHODS

The study area consisted of the Romanian part of the Maramureş Mountains, which was recently designated as a natural park. It is a relatively high range, elevations ranging from about 350 m to 1956 m, covering a wide range of habitats. The main vegetation types are (from lower elevations towards the highest): beech, mixed beech - coniferous and spruce forests, *Pinus mugo* shrubs and alpine meadows. Mainly in the major valleys, around the human settlements, but for a lesser extent also on higher altitudes large areas are covered by secondary meadows, which are presently used as hay meadows or pastures. In these regions, the landscape is characteristic, grasslands alternating with patches of forests.

Observations were made from ten routes selected to cover the main habitats and subdivisions of the park. The selected routes were the following (with the main habitat types): 1. Bistra - Tocarnea Peak - Luhei Valley: alternation of hay meadows, pastures and beech forest; 2. Bistra Valley - Poloninca Peak - Șerban Peak - Culmea Șerban - Bistra Valley: beech, mixed and spruce forests, *Pinus mugo* shrubs, alpine pastures and natural alpine meadows; 3. Paltinul Chalet - Culmea Șerban - Șerban Peak - Pop Ivan Peak - Culmea Râpei - Paltinul Chalet: beech, mixed and spruce forests, *Pinus mugo* shrubs, alpine pastures and natural alpine meadows; 4. Repedea Valley - Petriceaua - Vinderel Lake - Mihailecu - Repedea

Valley: beech, mixed and spruce forests, *Pinus mugo* shrubs, alpine pastures; 5. Poienile de sub Munte - Obcina Priporului - Poienile de sub Munte: alternation of hay meadows, beech forest and scattered houses; 6. Bardi Valley - Culmea Coşnea - Pecealu Peak - Pietrosu Bardăului - Bardi Valley: mixed and spruce forests, *Pinus mugo* shrubs, alpine pastures, mountain river; 7. Prislop Pass - Piciorul Cearcănului: spruce forests, *Pinus mugo* shrubs, alpine pastures; 8. Piciorul Cearcănului - Fântâna Stanchii - Jupania: spruce forests, *Pinus mugo* shrubs, alpine pastures; 9. Țâșla Valley - Piciorul Caprei- Lucăceasa - Toroiaga: spruce forests, *Pinus mugo* shrubs, alpine pastures and natural alpine meadows; 10. Vaser Valley until Făina: mountain river, human settlement, beech, mixed and spruce forests, hay meadows.

Additional observations have been made from six points in the Vişeu Valley, as many species characteristic to hills may be present in the park only in this major valley. The main habitat types around these observation points were: extensive agricultural fields, hay meadows, orchards, the Vişeu River, a small lake near Petrova, human settlements and the garbage dump near Vişeu de Sus. Observations were carried out during 10-23 July 2007. The selected routes were completed between 6<sup>00</sup>-22<sup>00</sup>. At least 30 minutes were spent at each of the observation points in the Vişeu Valley. All bird species observed and the number of individuals was noted. In 2006 observations were made between 05-12 May.

In the case of some species, such as owls, grouse and woodpeckers, we used some special methods to identify them. We have searched for footprints, feathers, excrements and pellets. The Pygmy Owl (*Glaucidium passerinum*) is a mostly diurnal species, consequently we used its calls to detect it in spruce forest. We have tried to play the sounds of nocturnal owls only once in the Repedea Valley. This time we have used the sounds of Tawny Owl (*Strix aluco*), Ural Owl (*Strix uralensis*) and Tengmalm's Owl (*Aegolius funereus*). In the case of the woodpeckers, we drummed on dead trees to call them. We have also verified more than 50 Black (*Dryocopus martius*) and Three-toed Woodpecker.

## RESULTS

During the two weeks spent in the park we have observed 98 species of birds. Other three species were identified indirectly (Ural Owl - a feather found, Black Grouse (*Tetrao tetrix*) - excrements found, Three-toed Woodpecker - a lot of holes found). Tengmalm's owl was heard only in 2006. Additionally there was also a male Black Grouse seen and three Pygmy Owls heard in 2006, too.

The list of bird species identified in the Maramureş Mountains Nature Park in 2006 and 2007 is the following: *Tachybaptus ruficollis* (Pallas, 1764), *Ciconia ciconia* (Linnaeus, 1758), *Ciconia nigra* (Linnaeus, 1758), *Anas platyrhynchos* (Linnaeus, 1758), *Aquila chrysaetos* (Linnaeus, 1758), *Buteo buteo* (Linnaeus, 1758), *Pernis apivorus* (Linnaeus, 1758), *Accipiter gentilis* (Linnaeus, 1758), *Accipiter nisus* (Linnaeus, 1758), *Falco tinnunculus* (Linnaeus, 1758), *Falco subbuteo* (Linnaeus, 1758), *Falco peregrinus* (Tunstall, 1771), *Tetrao urogallus* (Linnaeus, 1758), *Tetrao tetrix* (Linnaeus, 1758), *Bonasa bonasia* (Linnaeus, 1758), *Coturnix coturnix* (Linnaeus, 1758), *Gallinula chloropus* (Linnaeus, 1758), *Charadrius dubius* (Scopoli, 1786), *Tringa ochropus* (Linnaeus, 1758), *Actitis hypoleucos* (Linnaeus, 1758), *Columba livia domestica* (Gmelin, 1789), *Columba palumbus* (Linnaeus, 1758), *Columba oenas* (Linnaeus, 1758), *Streptopelia decaocto* (Frisvaldszky, 1838), *Streptopelia turtur* (Linnaeus, 1758), *Cuculus canorus* (Linnaeus, 1758), *Otus scops* (Linnaeus, 1758), *Glaucidium passerinum* (Linnaeus, 1758), *Aegolius funereus* (Linnaeus, 1758), *Strix aluco* (Linnaeus, 1758), *Strix uralensis* (Pallas, 1771), *Apus apus* (Linnaeus, 1758), *Alcedo atthis*

(Linnaeus, 1758), *Upupa epops* (Linnaeus, 1758), *Dryocopus martius* (Linnaeus, 1758), *Picus canus* (Linnaeus, 1758), *Picus viridis* (Linnaeus, 1758), *Dendrocopos major* (Linnaeus, 1758), *Dendrocopos leucotos* (Bechstein, 1802), *Picoides tridactylus* (Linnaeus, 1758), *Jynx torquilla* (Linnaeus, 1758), *Alauda arvensis* (Linnaeus, 1758), *Hirundo rustica* (Linnaeus, 1758), *Delichon urbicum* (Linnaeus, 1758), *Delichon urbicum* (Linnaeus, 1758), *Riparia riparia* (Linnaeus, 1758), *Anthus trivialis* (Linnaeus, 1758), *Anthus spinoletta* (Linnaeus, 1758), *Motacilla alba* (Linnaeus, 1758), *Motacilla cinerea* (Tunstall, 1771), *Cinclus cinclus* (Linnaeus, 1758), *Troglodytes troglodytes* (Linnaeus, 1758), *Prunella modularis* (Linnaeus, 1758), *Erithacus rubecula* (Linnaeus, 1758), *Luscinia luscinia* (Linnaeus, 1758), *Phoenicurus ochruros* (Gmelin, 1788), *Phoenicurus phoenicurus* (Linnaeus, 1758), *Saxicola torquata* (Linnaeus, 1758), *Oenanthe oenanthe* (Linnaeus, 1758), *Turdus torquatus* (Linnaeus, 1758), *Turdus merula* (Linnaeus, 1758), *Turdus philomelos* (Brehm, 1831), *Turdus viscivorus* (Linnaeus, 1758), *Turdus pilaris* (Linnaeus, 1758), *Sylvia atricapilla* (Linnaeus, 1758), *Sylvia borin* (Boddaert, 1783), *Sylvia curruca* (Linnaeus, 1758), *Phylloscopus collybita* (Vieillot, 1817), *Regulus regulus* (Linnaeus, 1758), *Regulus ignicapillus* (Temminck, 1820), *Ficedula albicollis* (Temminck, 1815), *Aegithalos caudatus* (Linnaeus, 1758), *Parus palustris* (Linnaeus, 1758), *Parus montanus* (Baldenstein, 1827), *Parus cristatus* (Linnaeus, 1758), *Parus ater* (Linnaeus, 1758), *Parus major* (Linnaeus, 1758), *Parus caeruleus* (Linnaeus, 1758), *Remiz pendulinus* (Linnaeus, 1758), *Sitta europaea* (Linnaeus, 1758), *Certhia familiaris* (Linnaeus, 1758), *Lanius collurio* (Linnaeus, 1758), *Lanius excubitor* (Linnaeus, 1758), *Pica pica* (Linnaeus, 1758), *Garrulus glandarius* (Linnaeus, 1758), *Nucifraga caryocatactes* (Linnaeus, 1758), *Corvus monedula* (Linnaeus, 1758), *Corvus cornix* (Linnaeus, 1758), *Corvus corax* (Linnaeus, 1758), *Sturnus vulgaris* (Linnaeus, 1758), *Oriolus oriolus* (Linnaeus, 1758), *Passer domesticus* (Linnaeus, 1758), *Passer montanus* (Linnaeus, 1758), *Fringilla coelebs* (Linnaeus, 1758), *Carduelis cannabina* (Linnaeus, 1758), *Carduelis carduelis* (Linnaeus, 1758), *Carduelis chloris* (Linnaeus, 1758), *Carduelis spinus* (Linnaeus, 1758), *Serinus serinus* (Linnaeus, 1766), *Coccothraustes coccothraustes* (Linnaeus, 1758), *Loxia curvirostra* (Linnaeus, 1758) and *Emberiza citrinella* (Linnaeus, 1758).

We would also like to present the distributional data of some rare or / and conservation dependent species. The location of observations on other species, like Golden Eagle (*Aquila chrysaetos*) and Peregrine Falcon (*Falco peregrinus*), however, will not be presented as a safety measure. The only Black Stork (*Ciconia nigra*) was observed in the Vaser Valley. The Capercaillie (*Tetrao urogallus*) was widespread all across the higher regions of the park and was mostly identified after its excrements. The only sure Black Grouse excrement from 2007 came from Fântâna Stanchii. Other excrements were found and a lekking male was seen in 2006 at the Cearcănul and Piciorul Cearcănului. Two Quails (*Coturnix coturnix*) were heard at high altitudes (1570 and 1660 m) at Cearcănul and at Fântâna Stanchii. A pair of Green Sandpipers (*Tringa ochropus*) was seen in the Vaser Valley. The only Pygmy Owl answering the calls played by us in 2007 was in the vicinity of the Petriceaua Peak. In 2006, however, there were three heard, all of them around the Prislop Pass and Cearcănul. The only Tengmalm's Owl was heard in 2006 near the Prislop Pass. No nests of these two owl species were found in 2007. The Three-toad Woodpecker, based on the holes excavated in dead trees, was seemingly widespread in all spruce forests, but, in spite of the efforts made to detect it, no birds were seen.

Another objective was to detect the most important threatening factors. There was excessive lodging activity all across the park, which can be considered far the most important and dangerous factor, threatening a high number of bird species.

## DISCUSSIONS

The field observations were carried out in the month of July, which has led from one hand to the absence of some species from our list, which probably breed in the park area. On the other hand the number of observed bird individuals was also lower than in the optimal survey period (in the months April and May). In the dominant habitat types we consider that most of the bird species have been identified. The abundance (the number of specimens observed from each species) however is close to real only on higher altitudes (from the spruce forest level). The bird species breeding on lower altitudes and some early breeding spruce forest bird species (owls, grouse and woodpeckers) were recorded in numbers much lower than in their main breeding period of time. Important species missing from our bird list, species which were not detected probably only because of their secretive behaviour after the mating period, are the Corncrake (*Crex crex*) and the Red-breasted Flycatcher (*Ficedula parva*). A higher number of bird species could have gone undetected in the Vişeu Valley, where relatively little time was spent for the actual survey.

The most important breeding bird species of the park is the Black Grouse, as this is one of the very few sure breeding areas of the species in Romania (it also breeds in the Rodnei Mountains (Daróczy, 2006) and it may also breed in nearby ranges as far south as the Călimani Mountains (Munteanu, 2002). All our observations came from the special conservation area Cornu Nedeei - Ciungii Bălăsâni, designated for this species protection. It is not excluded that it occurs outside of this area. Consequently further information is required to determine its exact distribution and its habitat - mainly *Pinus mugo* and *Juniperus* shrubs - have to be protected.

Between the other conservation dependent species, we can consider important the breeding of relatively high numbers of Capercaillies, which prefer spruce forests with variable structure; the Pygmy Owl, the Tengmalm's Owl and the Three-toed Woodpecker, which all prefer old spruce or mixed forests with dead trees for breeding; the Black Stork, which breeds in old forests and feeds in undisturbed valleys; the Black Woodpecker and the Ural Owl, which may breed in any kind of old forest; and the White-backed Woodpecker, Collared and Red-breasted Flycatcher, which prefer the old beech forests with dead trees. The Golden Eagles usually breed on cliffs, but tree nesting is not excluded. Peregrines may also breed in the park, however, only a juvenile bird was observed.

We consider important to mention the breeding of the Quail at altitudes over 1600 m. According to Cramp (1998) it usually breeds below 1000 m, at higher altitudes being rare. The pair of Green Sandpipers observed in the Vaser Valley in mid July is also worth mentioning, as there is no evidence so far of its breeding in Romania (Munteanu, 2002).

Lodging was far the most important threatening factor. Large areas were clear-felled especially in the western part of the park, where very few old stands remained. Lodging activity, however, has also started to take large proportions in the eastern regions, which, being less accessible, are still in better condition. We have to underline the fact, that some of the species, like owls or woodpeckers have relatively large territories and forests inside "special conservation areas" will not be large enough to support viable populations. These species will also need large areas of old forests with standing dead trees outside of these areas, where forestry activities will not be cancelled, but limited, and where a special management system will be created and applied taking in consideration nature conservation problems. If lodging will not be controlled, the populations of many species will heavily decrease or disappear.

Another important threat is the decline of the number of domestic grazing animals, which will lead to the abandonment of the hay meadows and pastures. This will affect species like birds of prey and the corncrake. Human disturbance does not seem a very important threatening factor at the moment, but in case the number of the tourists visiting the park increases, measures have to be taken for controlling their activity.

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