





Milvus Group Bird and Nature Protection Association publication

Authors: Aczél-Fridrich Zsuzsanna, Boné Gábor, Daróczi J. Szilárd, Domokos Csaba, Fülöp Tihamér, Hegyeli Zsolt, Kelemen Atilla Márton, Kelemen Katalin, Komáromi István, Komáromi Réka, Kovács István, Nagy András Attila, Nagy Attila, Papp Judith, Papp Tamás, Sos Tibor, Sugár Szilárd, Zeitz Robert, Vizi Iulia.

Translation: Lajos Corina, Turdean Laura

Graphics and editing: Sos Tibor

Foreword 3

25 years is a very long time...

This report is a retrospective, an assessment, even appraisal for all the gained results, and a diary - because we are pleased to see a synthesis of everything we have achieved during this long time.

I am less concerned about the number of achievements, and what I would like to know is whether they will still be apparent in less than 25 years. I hope they will be, although it is quite difficult to anticipate. Because by then, the Earth will have to sustain almost 9 billion people. And as the climate changes rapidly, and despite many professed good intentions and several international conventions, the destruction of nature is growing. In this global context, what we've been doing is just a drop in the ocean. We know it. However, we cannot change the way we act or the way we are. What we do, we do out of conviction and we see its purpose.

"Milvus Group" Association was founded by people who wanted to do something for nature. We have been working as volunteers for years, but even now, when we earn wages, we set our priorities based on the most important nature conservation activities (and when it comes to projects, we might face problems sometimes). We've managed to keep this principle within the organization, and it's a good thing we did because only committed people can do their job full-heartedly. And this is the kind of job that only makes sense when carried out with passion. This is why I'm so proud of the team on whose behalf I am writing these lines, colleagues and friends alike: what we have achieved, we achieved together. I am proud of the results, what we've done and what we're still doing for nature, for birds. In this assessment, we tried to focus on the very essence of these.

We strongly believe in nature conservation made on a scientific basis. It sounds quite simple, but it is far from it. Nature conservation in itself is already a very contentious subject. And because of its novelty, it touches almost all the branches of economy - water administration (for instance, river regularisation), road construction, various renewable energy investments, excessive expansion of settlements, forest administration, etc. Ideally, each of these branches would include nature protection in their own culture and would not try to change the nature protection requirements for self-serving purposes. Until this change occurs, this matter will remain highly contentious. Especially when under a new democracy, such as ours, in Romania, where investors see an obstacle in every necessary authorization. They can't even imagine that such authorization may stop them to carry out what they had planned. Nonetheless, such cases do exist and, generally, on environmental grounds.

Sometimes, when scientifically based decisions are made, one may come into conflict even with their best supporters. The best nature conservation advocates are the people who are sensitive to its protection. Usually, their approach is emotional and they are reluctant to change it, even when the scientific basis is missing. For example, feeding the water birds (swans, ducks, gulls) is harmful for the birds. But how can anyone who's been doing this for years believe us?

Nevertheless, we must inform them, as this is the only way we can carry on, the only way to be credible.

Nature conservation based on real, scientific arguments is difficult to achieve because in many cases the priorities are not the same as those of the common environmentalist. Surely, it is our fault as well for not raising the alarm about the biggest problems. Here's an example: everybody knows that in Romania forest management is a huge problem. And so it is. Nonetheless, from nature's point of view, its magnitude is by far overpassed by that of agriculture's. Countless petitions are initiated and many articles are written in the press on issues related to forests (clear-cutting or cutting of virgin forests etc.). But so far, almost no one has been outraged by a tilled grassland or by the disappearance of small, agricultural plots in the country's lowlands and their replacement with chemically treated monocultures, true deserts for biodiversity. Agriculture has undergone far more changes than silviculture. Romania has lost uncounted valuable grasslands, home to many species of birds and plants, once they were transformed into arable land or sites for various constructions. This is also shown in the populations of birds that have their habitat in forests and whose number did not drop significantly at the European level, whereas those in agricultural areas plummeted. This is why, although many expect us to fight forest cutting, we prefer to improve agriculture. Not so popular? We know that. Unattractive? Unfortunately, it seems so. But despite all, it is indeed important.



### A Brief History of Our Organisation



In the autumn of 1991, a few bird enthusiasts founded "Milvus Group" Association in the kitchen of Mr Zoli Szombath. Below, are some of the most important stages of the association that was established that day:

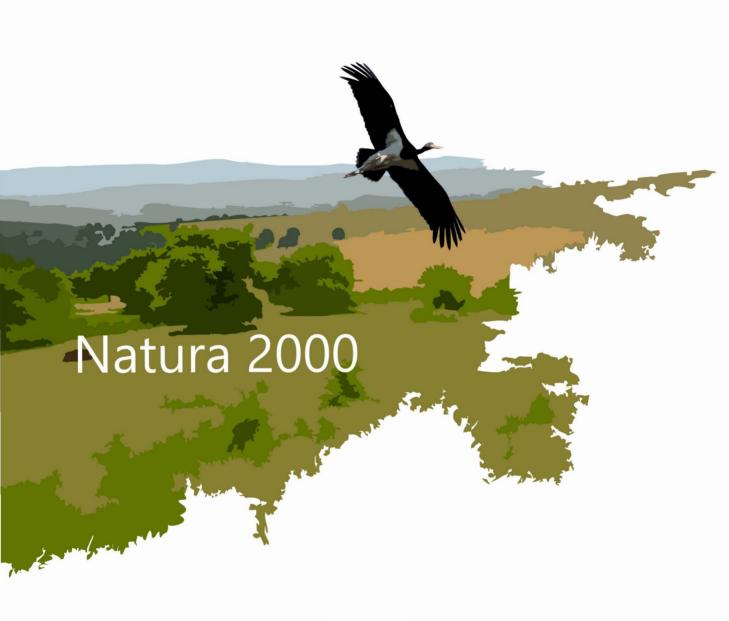
**Birth 1991-1993:** The average age of members was 17, topmost enthusiasm. Activities: bird-watching in an organised way, shared data collection system. A cheerful group of friends.

**Childhood 1993- 2001:** Almost carefree, just as any childhood should be, an optimistic and productive period. The members become adults (officially, at least), but not necessarily mature. Besides the academic studies, the first relevant project is carried out - we had been organizing bird ringing camps in the Gurghiu Mountains for ten years, and for two years on Chituc Overbank (I still have no idea how we did it with so few resources). Influenced mostly by our academic education, our

focus was on research. The friendly atmosphere is still present, to which some quite solid tribal structures were added. Everything is done voluntarily.

**Adolescence 2002-2010:** Insecure, with many changes which usually occur during adolescence. The members are now adults, but as it appears, they will never mature. We get extraordinary results in environmental protection - for us at least. There's still a friendly atmosphere, but not everyone is a volunteer anymore. We can now afford to pay wages to some people. After Romania joined the European Union, we achieved our biggest success: we had been focusing for years on the designation of Natura 2000 sites and thanks to us, the network of protected areas in Romania nowadays covers 24% of the country's surface. The White Stork and the birds of prey play an important role in our activities - we mainly focus on the Lesser Spotted Eagle, Red-Footed Falcon, Golden Eagle, Peregrine Falcon etc. The organisation does not focus only on birds, but also on mammals, amphibians, reptiles, fish - anything related to nature conservation. We are also starting our environmental education programme.

Adulthood 2010-2016: Some members' hair starts to turn grey and there's a certainty: they will never grow up. Thanks to the EU funds, we realise that one can live off nature conservation as long as one does it passionately and believes in it. But there comes bureaucracy in our lives and it uses up more and more of our time. We begin to understand very soon that we cannot solve all problems. However, we still try to. After the designation of protected areas, we become custodians of several sites, which consumes a huge amount of our energy. We have been rescuing wild birds for a long time and the moment has arrived to get to the next level. Together with Vets4Wild, we are creating a nationwide network and build professional aviaries. With more or less success, we are influencing the economy branches with the biggest consequences on nature. For instance, we are trying to change the financial support system in the agricultural sector to make it friendlier with nature and small farmers by developing new agri-environment schemes. We strive to give a voice to nature in other policies, too: forest management and wildlife hunting. We carry out projects that aim at the conservation of several species: the Lesser Spotted Eagle, the Saker Falcon, the European Roller etc. We have a few memorable achievements over these years. Over 15 pairs of Saker Falcon (one of the nearly extinct nesting species) are now nesting in the western part of the country, using the artificial nests that we have previously installed. We also started some monitoring programmes by ourselves or together with the Romanian Ornithological Society. We initiate numerous censuses and learn more than in all the previous years combined about the bird populations (but also about other species, i.e. the European Ground Squirrel) and their distribution in Romania. Within our ecological education programme, we keep seminars for teachers all over the country and we publish many guidebooks. The Milvus Scholarship supports the research of students engaged in nature conservation.





### Natura 2000 Sites Designation

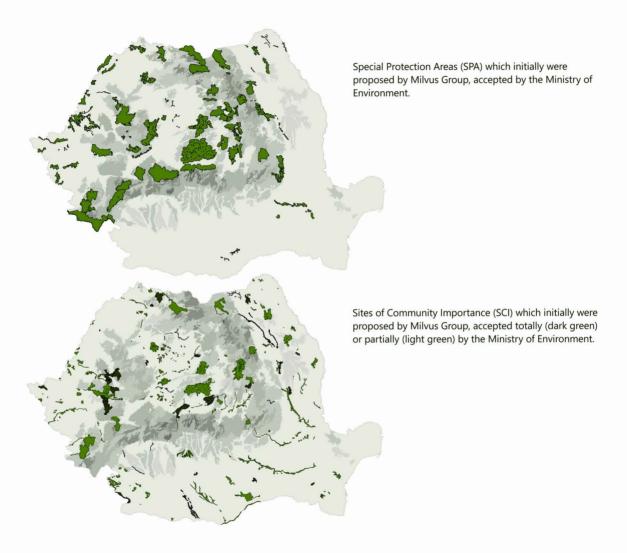
There are two directives at the foundation of nature conservation in the European Union: on the conservation of wild birds (79/409/CEE, 1979) and on the conservation of natural habitats (43/92/CEE 1992). They both set out the norms for protecting nature within the EU. Furthermore, all member states have designated their protected areas - Special Protection Areas (SPA) and Sites of Community Importance (SCI) - under these directives. All these sites make up the Natura 2000 network, the largest system of protected areas in the world, covering 18% of the land area and 6% of the marine area of all 28 member states. The designation of Natura 2000 areas was an important milestone for nature conservation in Romania because it ensured the increase of the protected areas from 7% to almost 23%. "Milvus Group" Association has contributed significantly to the designation of both types of Natura 2000 areas. According to official statistics, in 2016, 162 SPA were designated in Romania, covering 15.31% of the country's surface area. About half of these sites were granted the protected status as per our

increase of the protected areas from 7% to almost 23%. "Milvus Group" Association has contributed significantly to the designation of both types of Natura 2000 areas. According to official statistics, in 2016, 162 SPA were designated in Romania, covering 15.31% of the country's surface area. About half of these sites were granted the protected status as per our recommendations since we had data collected in the field by the employees and the volunteers of our organisation between 2007 and 2011. The publication of the book Important Bird Areas has also contributed to gaining these results. Moreover, we played a major role in the designation of SCI as, being in possession of data previously collected in the field, we made proposals for 397 new sites, which since 2010 can be found on the website www.natura2000proposals.ro.

This achievement wouldn't have been possible if we had not represented on two occasions the Natura 2000 Coalition at the biogeographical seminars, where we managed to demonstrate to representatives of the European Commission that the previous designations were insufficient. It fills us with great joy that some of these sites have already got management plans. For us, this is the most important achievement of our organisation so far, as we made a considerable contribution to the fact that the surface of the protected areas in Romania has increased by more than three times.



office@milvus.ro • 0265 264 726







### 10 Protected Area Management

Unfortunately, the management of protected areas is not solved at the state level in Romania. Although currently 23% of the country's surface is protected, the Danube Delta is the only protected area for which funds are allocated from the state budget. The administration of protected areas may be taken over by NGOs, institutions or private companies, without any financial support from the government. Milvus Group is the custodian of several protected areas - Special Protection Areas (SPAs), Sites of Community Importance (SCIs) or other types of protected areas. These are administered solely by Milvus Group or in partnership with other organisations.

These protected areas are as follows:

ROSPA0041 Ponds of Iernut-Cipău,

ROSPA0067 Barcău Meadow,

ROSPA0103 Alceu Valley,

ROSPA0113 Cânepişti and ROSCI0223 Salt Steppes and Salt Marshes of Ocna Veche, 2.343 Salt Steppes, Salt Marshes and Ocna Veche nature reserve with a part of ROSCI0238 Suatu-Cojocna-Crairât overlapping ROSPA0113 Cânepişti,

ROSCI0210 Lechinta Ravine,

ROSCI0367 River Mures between Moresti and Ogra,

ROSCI0368 River Mureș between Deda and Reghin,

ROSCI0369 River Mureș between Iernuțeni and Periș,

ROSPA0028 Hills of Târnavele - Nirajul Valley and ROSCI0186 Pubescent Oak Forests on the banks of Târnava Mare and the nature reserves of 2.488 Firtuş Hill and 2.634 *Chamaecyparis lawsoniana* Arboretum.







# **Bird Ringing**

Bird ringing is an important research tool that enables us to get information about: migration routes, migration preparations, wintering grounds or dispersion of migratory birds. At the same time, bird banding has an important role in environmental education. Thus, the volunteers who join us can have direct access to the research activities in the field of nature conservation. **Since its foundation, Milvus Group has organized the highest number of bird ringing camps in Romania**. During these camps, more that 75,000 birds were ringed between 1993-2015, and 30,000 of them by the members of our organisation. We also coordinate programmes where we mark birds with coloured rings: the Golden Eagle (*Aquila chrysaetos*), the Lesser Spotted Eagle (*Aquila pomarina*), the Red-Footed Falcon (*Falco vespertinus*), the Common Kestrel (*Falco tinnunculus*), the Saker Falcon (*Falco cherrug*) and the European Roller (*Coracias garrulus*). Here's a list of our ringing camps:

**Gurghiu Mountains.** The camp went on between 1993 and 2002, and during its ten-year course, over 1,200 birds were banded. It was the first long-standing camp in Romania where an entire generation of ornithologists grew up.

**Chituc Spit.** The most important ringing camp in Romania in terms of the number of species and banded individuals. It was first organized between 1996 and 1997. Compared with other camps where curtain nettings were applied for trapping birds, here we used mainly the Heligoland trap, which was a premiere in Romania. After a long break, the camp resumed its activity in 2014. Since then, it's been organised every year. In five years, 142 species and over 46,000 individuals were ringed.

**Village of Sic.** the main objective of the camp in Sic, during its two-year existence (2003-2004) was banding typical reed species. A total of 6,500 birds were ringed.

**Retezat Mountains, Gura Zlata.** the camp was organised in 2005. Only 447 birds were trapped and banded here.













Contact Person: Kovács István • istvan.kovacs@milvus.ro • 0728 303 898



#### National Surveys and Bird Monitoring Programmes

Changes that occur in agriculture and forestry, development projects, tourism or climate change may have significant effects on the natural world, and therefore on birds, too. This is why it is essential to monitor changes within the breeding, migrating and wintering bird populations. It enables prompt detection of negative effects and helps to develop appropriate conservation measures. The purpose of national surveys and monitoring programmes is to gather information on the distribution of bird species, their number as well as their population changes across Romania. We are coordinators and also participants of several national monitoring programmes:

**National Raptors Monitoring Programme.** From the very beginnings, we paid special attention to the birds of prey, and their research is still a top priority. The first national survey of raptors coordinated by us took place between 2005 and 2007. At that time, the target species of the census was the Lesser Spotted Eagle (*Aquila pomarina*), but we gathered data about other birds of prey, too. One of the most important results was to discover that the Lesser Spotted Eagle, considered rare until then (300 pairs), has in Romania one of the largest populations in the world (2,000-3,000 pairs). We repeated the survey in 2014, adding additional target species.

**Midwinter Waterfowl Census.** In partnership with the Romanian Ornithological Society, for more than 10 years we have been organizing this programme in Romania, which is conducted in almost all European countries. Milvus Group has a fairly large amount of work, as we gather data from 20 counties of Romania. Year by year, we collect essential data from 50-60 important wetland areas, where 100,000-160,000 birds spend the winter. The relevance of the programme is given by the fact that observations are made simultaneously with other European countries (but also around the world). Therefore, we yearly get a clear picture of the evolution





Contact Person: Kovács István • istvan.kovacs@milvus.ro • 0728 303 898



of waterfowl numbers even at a European level.

**Monitoring of Wintering Raptors.** Most research was focused on breeding and migratory populations, and we had very little data about those that overwinter. So, in 2006 we launched this programme, which has been carried out nationally and operates with volunteers. The main aim is the long-term analysis of the distribution of birds of prey that winter in Romania, their numbers and population changes. During the ten-year course of the programme, 144 routes and 1,316 km in total, were covered on foot at least once. On additional 50 routes, observations are conducted regularly. Yearly, during the monitoring programme which includes two sessions in every winter, an average of 1,200-2,000 raptors are recorded.

**National Red-footed Falcon (**Falco vespertinus) Monitoring. The Red-footed Falcon is an endangered species with distribution and populations known only in certain regions. We started a national monitoring programme in 2015 in partnership with the Romanian Ornithological Society. The purpose is the long-term analysis of the changes in the country's population, but we also collect data about the locations and sizes of the nesting colonies. As Red-footed Falcons mostly nest in the rook colonies (Corvus frugilegus), we get important information about this species as well.

Golden Eagle (Aquila chrysaetos) and the Peregrine Falcon (Falco peregrinus) Census. The Golden Eagle is one of the rarest raptors in Romania and the Peregrine Falcon is a species that reached the brink of extinction in the '60s and '70s. We conducted a thorough census between 2007-2011 in a significant part of the Carpathian Mountains (Apuseni Mountains, Banat Mountains, Retezat Mountains, partly in the Eastern Carpathians). Although there are still many regions to investigate, we know the numbers of these species in the surveyed areas and, in many cases, even the nesting sites. Thus, we documented the repopulation of the Peregrine Falcon, but also the increase of its numbers, which has been spectacular in the last 15 years. In 2003, the first breeding pair has been registered since the 1970s and hundreds of pairs are currently nesting in Romania.

**Nocturnal Birds in Open Habitats Monitoring Programme.** This is one of the two nocturnal programmes that we coordinate and run in partnership with the Romanian Ornithological Society. The programme began in 2014 and was designed to tackle analysis on bird distribution, species abundance and long-term population changes of a few target species: the Corncrake (*Crex crex*), the Eurasian Scops Owl (*Otus scops*) and the European Nightjar (*Caprimulgus europaeus*). 164 squares of 10x10 km have been surveyed, and we plan to conduct annual surveys with volunteers in 30-50 of them.

**Tawny Owl (Strix aluco) and Ural Owl (Strix uralensis) National Survey.** This is the second nocturnal species monitoring programme that we coordinate. It was first carried out between 2013-2014 and has been repeated every six years ever since. We surveyed 164 squares of 10x10 km each and recorded 147 Ural Owls and 611 Tawny Owls. We have also gained a clearer picture regarding the distribution of the two species in Romania, but also their frequency in certain areas.

**Eurasian Pygmy Owl (Glaucidium passerinum) National Survey.** The Eurasian Pygmy Owl is a small, discreet owl species, active during the daytime, which can be found in coniferous forests. Until 2010, there were very few observations in the country. Although it was reported in several places after 2010, there was no information about the distribution and abundance of the species in most of the Carpathian Mountains. This was the reason why we ran a national survey for this species in 2013-2014. Examinations were made in over 1,000 survey points and more than 236 owls were recorded. Thereby, it has been confirmed that there is a significant



population of this species breeding in the coniferous forests of Romania.

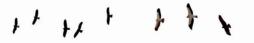
Winter Census of the Long-eared Owl (Asio otus) in Romania. The wintering Long-eared Owl often gather in clusters and can be easily observed during the winter months in their roosting places, which are often in towns and villages. The programme with its first edition began in 2009, and in 2015 it employed a new scientific method. The goal is to identify roosting sites, to record and monitor their numbers on the long term and to identify potential threats.

Romanian Breeding Birds Atlas. More than 200 bird species are breeding in Romania. In recent years, thanks to voluntary and professional observers, hundreds of thousands of records have been collected related to the distribution and numbers of these species. The two organisations that initiated the programme were Milvus Group and the Romanian Ornithological Society. According to our plans, after we process the data collected between 2006-2017, we will be able to publish the first Romanian atlas of breeding birds.

**Common Bird Monitoring Programme.** The presence of common birds and abundance are important indicators of the status of our environment. This is why the study of the distribution and population changes of certain species is of particular importance. The programme was launched by the Romanian Ornithological Society and we have been their partners in this endeavour since 2007. Each year, our volunteers collect records near their homes, and in some years, even in more remote areas which haven't been surveyed before and where several sample squares are covered.

# Censuses and Local Monitoring Programmes

For the management of protected areas, knowing the local species and which need to be protected is essential. Details related to the distribution, numbers, behaviour, ecological needs and threats are vital. In the last ten years, we participated in many censuses that ensured the basis for the management plans of these sites. The two most important censuses were carried out in the area of the Hârtibaciu Valley in southern Transylvania (Hârtibaciu Plateau SPA – Natura 2000 area) and Trascău Mountains (Trascău Mountains SPA - Natura 2000 area), but we also performed small-scale censuses in Măcin and Maramureş Mountains, near Şinca Nouă (Braşov county), Făgăraş Mountains, as well as in lezer-Păpuşa Mountains. During our field trips, we collected tens of thousands of data on bird fauna from the surveyed areas on species of Community interest, but on species which are not protected, as well.



# 18 Raptor Migration Research

During migration, raptors and other birds that use thermal soaring avoid the seas and the high mountain ranges. Consequently, they gather in large numbers in narrow corridors bordered by seas and mountain ranges. In Europe, such corridors are between the Black Sea and the Carpathian Mountains in Romania, respectively above the Bosporus Strait in Turkey, where on a 20-25 km wide coastal strip the entire populations of many bird species breeding in Central and Eastern Europe migrate. Studying the migration of raptors and other soaring birds is one of the most important research activities. Over the years, we organized several research camps:

Măcin Mountains. The camp was active between 2002-2007, each year between mid-August and mid-October. Researchers counted here annually up to 14,000 raptors and 10,000-40,000 storks. Getting a clearer picture of the target-species' migration dynamics was its most important result.

**Bosporus Strait.** In 2008, the members of our organisation decided to set up a camp to study the migration of raptors over the Bosporus, during the Lesser Spotted Eagle's 21 days of migration. For the first time in the history of these surveys, it was conducted simultaneously on four different locations and we manage to cover most of the strait. Over the three weeks, a total of 140,000 raptors, out of which 58,000 Lesser Spotted Eagles and 74,000 Common Buzzards have been observed.

**Dobruja.** As per our experience in Măcin Mountains, the occasional observations and the data we got from the satellite transmitters mounted on birds, it became clear that Eastern Romania and the entire Dobruja are part of an important migration route. For an indepth investigation, we set up a camp in 2010 with 15 survey points in Northern Dobruja and 13 in Southern Dobruja in the next year. The survey was performed simultaneously at all locations. The results helped reveal the most important migration passages. But to get more accurate results, more similar research is necessary.



# OpenBirdMaps: An Open Access Online Database

TOOO!

Over the past 25 years, the members of "Milvus Group" Association have collected over half a million ornithological observations. But most of these notes are in notebooks and offline databases, which does put a limit to being used by members of our organisation and the general public. Over time, it has become necessary to develop a database that would allow the storage and administration of all our ornithological data. On the other hand, we thought it was important to publish these records to give others the possibility of using them for free in non-profit fields such as science, nature conservation, environmental education etc. Last but not least, we also wanted to create a platform where others could do the same.

OpenBirdMaps was created on the foundation of these three principles - an online database with free access to everyone. This platform aims to collect and give out information about the distribution in time and space of wild birds across Romania. By publishing the data garnered by professional and amateur birders, we want to ensure public access to a large amount of information (but not with easy access to) with the purpose to being used. At this moment, OpenBirdMaps contains over half a million records, a part of which has limited access to due to some contractual restrictions, but uploading information in the database is still in progress.

Henceforward, we intend to develop similar databases for other groups of animals. A database for mammals, fish and herpetofauna is already under development.



Contact Person: Bóné Gábor • gabor.bone@milvus.ro • 0722 533 815



### Raptor Research and Conservation

Milvus Group has immersed in the research and conservation of raptors since 1995. The first steps were made under the professional guidance of Zoltán Szombath, András Libus and János Bagyura, which came almost as a guarantee for the success that was about to come. Our activities over the years have indeed diversified. In the beginning, we strived to find, identify and protect the nests of the raptors in the proximity of our homes. Then, involving foreign experts, we carried out national surveys (i.e. for the Lesser Spotted Eagle) and managed to put an end to the decreasing numbers of certain species or even to increase them (i.e. the Red-Footed Falcon in Crişana). As for the Saker Falcon, we managed to ensure the repopulation of this species in Romania.

### Golden Eagle

The Golden Eagle (Aquila chrysaetos) is one of rarest birds of prey within Romania. Until 2000, we had very little information about their distribution and sheer number. It was estimated that there were 20-25 pairs across the country. The activities which focused on this species began in 2001 in Trascău Mountains. We've been following their population changes, reproductive success rate and threats in the Apuseni Mountains and certain areas of the Eastern Carpathians ever since. We conducted surveys within the frame of several projects and, besides the aforementioned areas, also in Banat and Retezat Mountains. Hence, **we could make a more realistic estimation of its population at the national level, to around 90-150 pairs.** The GPS transmitters which we mounted on chicks more recently allow us to collect data about how these birds use their habitat and the moves of the young individuals. As per conservation actions, designating Natura 2000 areas for the conservation of this species and the support we gave in designing their management plans are the most important. But additionally, we have installed numerous artificial nests as well.



Contact person: Kovács István • istvan.kovacs@milvus.ro • 0728 303 898



# **Lesser Spotted Eagle**

In the early 2000s, we launched a series of projects that were financed by the Romanian Environmental Partnership Foundation and focused on the conservation of raptors in Transylvania. Since then, the Lesser Spotted Eagle (Aquila pomarina) became one of our target species. According to data from that time, its population in Romania was estimated at 200-300 breeding pairs, but these numbers were not based on any real assessment. In 2005, we organised an almost nationwide survey in the Carpathian Mountains and we were supported professionally by experts from abroad and financially by WWF and CERI. The outcome was astounding: the overall national population consists of around 2,000 pairs, thus placing Romania of utmost importance in the conservation of the Lesser Spotted Eagle. We continued the census in 2007 by extending to the remaining uncovered areas, hence the first national assessment of the species. Naturally, we did not stop there. In 2010, we began a national LIFE project for the conservation of the Lesser Spotted Eagle in partnership with Sibiu County's Environmental Protection Agency and the Romanian Ornithological Society. The four-year project won EU's recognition and was included among the best LIFE projects. We developed the management plan for this species in Romania and we updated the management plan at the European level (Species European Action Plan). We also assessed the threats. The Lesser Spotted Eagle is a long-distance migrant, spending the winters in southern Africa. Therefore, these problems cannot be solved only at the national level. The most important conservation factor in Romania is to preserve current agricultural practices. We developed a financial support system that will provide an additional income to farmers who manage their lands in an eagle-friendly manner. Another result of the project is a guidebook for the proper management of the Lesser Spotted Eagle's habitat. It can be accessed by the custodians of the protected areas and bird enthusiasts alike. The project website is:

www.pomarina.ro













#### 24 Red-footed Falcon

The Red Kite (*Milvus milvus*) and the Red-Footed Falcon (*Falco vespertinus*) differ not only in colour but also in the regions they cover. Nonetheless, Milvus and the Red-Footed Falcon have been inseparable for almost 20 years, as Milvus Group began banding and monitoring the nesting colonies in Crişana in the '90s. Our first project for the conservation of this species ran for a year and had a \$5,000 budget. The second was an international LIFE project with eight partners, lasted four years and had a budget of several million Euros.

The Red-footed Falcon is an endangered and protected bird of prey. In the temperate zones, it generally prefers grasslands and spends the winter in the countries of southern Africa. Its breeding ecology is quite peculiar in two aspects: it does not build its own nest (to raise its chicks, it occupies the nests of other birds) and, unlike other raptors of Romania, it is a gregarious bird and breeds in colonies. Since the Rook is the most common colonial bird in the Romanian lowlands, the Red-footed Falcons generally use their abandoned nests. The rooks start to breed as early as the first days of spring and, when the Red-footed Falcons return, the chicks are ready to leave their nests. Thus, the fate of the Red-footed Falcons depends to a large extent on the Rook breeding population. This is why our Red-footed Falcon conservation programme includes the Rook as well. But their presence is not always to the liking of people, and protecting the nesting sites of the Red-footed Falcons becomes an even more difficult task.

When tackling the ecology of the Red-footed Falcons, we must cover the roosting gatherings before their autumn migration. In the evenings of September, in the lowlands, several hundred, sometimes even thousands of Red-footed Falcons gather in certain groves and roadside trees, where they return every year. This is the time when they prepare for their several thousand kilometre journey. Therefore, the undisturbed roosting sites and suitable territories for food play a vital role in keeping the mortality rate during autumn migration down and the number of returning individuals as high as possible.













Contact Person: Nagy Attila • attila.nagy@milvus.ro • 0728 303 868



In the last 10 years, Milvus Group has been involved in the research and conservation of the Red-footed Falcons in Romania in all possible means. As part of a LIFE project ran between 2006-2009, we carried out a census of the Red-footed Falcon and Rook populations in Crişana and Banat. The evolution of the most important nesting colonies is constantly monitored. We strived to locate and assess the populations in the southern and eastern parts of Romania as well. We gathered detailed information about the entire breeding population within the country.

Together with our Hungarian partners, we monitor every year the dynamics of their numbers in the pre-migration roosting sites. In 2016, we discovered the largest roosting site known till now - to West from the Black Sea. Several Red-footed Falcons were equipped with satellite transmitters allowing us to track their migration routes and their wintering territories. To complement the natural nesting possibilities, we installed hundreds of artificial nests in Crişana and Banat. For over 10 years, **lobbying, we've managed to protect the nesting sites by introducing a period of prohibition on hunting rooks during the breeding period**. At the same time, we contributed to the designation of over ten Natura 2000 areas in Romania for the conservation of this species. For some of them, we have also developed management plans and three are in our administration. As part of the Red-footed Falcon ringing programme in the Carpathian Basin, more than a thousand individuals were banded with coloured rings, and together with our Hungarian partners, we launched a genetic study of the species. Even though the conservation and research activities of the Red-footed Falcon are far and wide, they extend year by year.



#### 26 Saker Falcon

The Saker Falcon (Falco cherrug) is a bird of prey threatened with extinction and strictly protected. About 100 years ago, the species was present all across Romania - except for the Carpathian Mountains. But in the early 2000s, the number of breeding pairs dropped dramatically and only a few pairs were known. The Saker Falcon usually feeds on small mammals who live on grasslands and arable land. Its favourite food is the European Ground Squirrel, but it can be seen quite often stealing prey (field mice) from other raptors, like falcons, harriers. Occasionally, in periods with limited food resources, the Saker Falcon's menu may also include small or medium-sized birds, such as birds that regularly group in large flocks; starlings, pigeons, corvids. Like other falcons, it doesn't build its own nest and occupies the abandoned nests of other raptors or corvids. We have recently discovered that it may also take up artificial nests mounted on high-voltage electric pillars. The distribution area of the Saker Falcon covers the wooded plains from Central Europe to China. Unlike the populations in Central Europe, the world's population is in a continuous decline, therefore it can be asserted that the species is endangered in almost its entire area of distribution. As for its numbers in Central Europe, and particularly those in Hungary, show a progressive increase as a result of several decades of conservation work. Having this example, "Milyus Group" Association joined these international collective efforts. An international project, carried out between 2009-2013 in four countries, managed to save the Saker Falcon population in Romania, which until then was threatened with extinction. As a result of placing artificial nests, in 2016 we recorded 14 pairs in Banat and Crisana who had a nine times higher number of chicks, compared to the numbers of chicks in 2011, when only two pairs were known. Just as the population grew, so did our responsibility - a bigger population brings more chances for the species survival. Therefore, keeping up with the conservation actions, for instance, reducing the mortality rate caused by electrocution, will remain a priority for the foreseeable future.





# Great Bustard

The Great Bustard (Otis tarda) is the heaviest flying bird in Europe and an endangered species globally. The populations in Romania have declined dramatically in the last two centuries, placing the species on the brink of extinction. The 50-60 individuals that survived in Salonta, Bihor, encapsulate the only viable Great Bustard population in Romania. This is why its conservation is our top priority. These birds equally use habitats in Romania (Salonta - the border area) and Hungary (Mezőgyán area). Thus, the conservation of this population can only be achieved through international cooperation. As this species is closely linked to its territories and long-established habitats, such a small, isolated and vulnerable population is threatened by any unfavourable change in its habitat. Consequently, the conservation of the bustards from the area of Salonta is our top priority. So far, the Milyus Group's programme for the conservation of the Great Bustard materialised mainly in specific activities, not in projects. At the foundation of all our actions is tracking the population changes, the so-called monitoring, which allows us to assess whether a population is declining, increasing or remains the same. It's already been ten years since we participated in the first documented Great Bustard observation session in Salonta. Since then, during the 81-day field visits, over 1,200 individuals have been recorded. Naturally, these observations refer to the 50-60 individuals that live here. As a result of our monitoring, it became clear to us which were the most important Great Bustard habitats in Salonta. So we were able to focus mainly on these habitats. On some occasions, even females with flightless chicks have been observed. This also proves that this species is breeding in Salonta, even though we haven't been able to find a nest vet. We identified and fought against many factors that threatened the bustards' habitats. For us, it's an immense success that, strengthened by international support, we've been able to stop a wind farm project, whose wind turbines would have divided the habitat of the bustards fragmenting it even more.











Contact Person: Nagy Attila • attila.nagy@milvus.ro • 0728 303 868



#### 28 White Stork

The White Stork (Ciconia ciconia) is one of the best known and most popular birds in Romania. This bird has been nesting close to human settlements for a very long time. On stables, haylofts and trees in the past, and almost exclusively on electric pillars nowadays. From an evolutionary point of view, this nesting site shift happened exceptionally quickly. The first stork nest located on an electric pillar was recorded in 1971, and currently, 93% of the entire stork population is nesting on these poles. Therefore, the conservation of White Storks is closely linked to the electrical grid: not only because their nests are on low-voltage electric pillars, but also because most storks die electrocuted on medium-voltage power lines, especially during migration. The nests on the power poles may cause many problems for both the energy suppliers and the birds as they may cause short circuits, catch fire etc. There are solutions to both problems - artificial nesting platforms must be installed under the nests and the medium voltage power lines which cause electrocution must be insulated or replaced with avian safe electric pillars. In 2005, 1999 nesting platforms were placed under the stork nests across the country and progress was made in solving the death of birds caused by electrocution on mediumvoltage power lines. Milvus Group has assumed a pioneering role in these activities and is constantly working on better solutions more details in the Birds and Overhead Power Lines chapter. We published two handbooks on the matter: A Guide for White Stork Nesting Platforms on Buildings, which was addressed to the local residents and A Guide For White Stork Nesting Platforms on Electric Poles (already published in two editions) for energy suppliers. Despite their popularity, the complaints against storks have unfortunately increased in the last 10 years, especially because of the mess made by the nesting birds. We carried out many awareness-raising campaigns over the years - we organised an exhibition dedicated to storks with over 8,000 drawings from three countries and installed information panels in many villages, like Dumbrăvioara, Cristian, Ciumesti etc.

Organising and conducting stork censuses is an important conservation action as this is the only way to see the population-level

















changes. We started counting storks in 1994 in several areas, covering a few counties (Mureş, Braşov etc.) or riverbanks (Târnava Valley), which resulted in the printing of several publications. Between 2004-2005, we organised a national stork census in partnership with the Romanian Ornithological Society, which was repeated ten years later. Based on these assessments, we can affirm that **the stork population in the country is stable and it contains 5,500-6,000 breeding pairs**.

We paid special attention to a village with many storks that we grew very fond of. In 2004, we launched a complex programme - Dumbrăvioara, the stork village. We established the Stork Museum, we organised a stork festival and we tried to develop local tourism. It was also here that we installed the first Romanian webcam on a stork nest. Between 2006 and 2009, the nest live streaming was available only in the museum, but since 2010, the nest in Dumbrăvioara may be watched online. And since 2015, the events within the nest can be seen at a much better resolution.

It is well-known that White Storks are migratory birds. The data we get from the ringed storks help us immensely in identifying their migration routes and wintering sites. Until 2016, Milvus Group banded more than 1,000 storks, mostly chicks.



#### **European Roller**

Our organization pays special attention to birds that live in endangered habitats in the Western Plain, such as the European Roller (Coracias garrulus). Since the 1990s, by making regular observations, we aimed to estimate the distribution area, the population size and its dynamics. To increase the survival rate, we placed artificial nests. The "Conservation of the European Roller in the Carpathian Basin" project, funded by LIFE Programme, meant significant progress for the conservation of the species. The main beneficiary of the Romanian-Hungarian five-year-long project is the Hungarian Ornithological Society, having three partners in Hungary and two in Romania (Satu Mare County's Environmental Protection Agency and Milyus Group). The project has a €5,046,097 budget, out of which 75% is the EU's contribution. The aim is to strengthen the roller population in the Carpathian Basin and to ensure its **long-term conservation.** Here are some of our main conservation actions; creating nesting sites in Natura 2000 areas, improving the conservation status of the habitats in three project locations, reducing the mortality rate, ensuring the long-term conservation of the species through the "Farmers for the European Roller" programme, disseminating roller-friendly agricultural practices in Natura 2000 areas and awareness-raising campaigns. The targeted area in Romania is in Crisana and Banat and includes the 15 protected areas in the counties of Satu Mare, Bihor, Arad and Timis. The main activities include: assessing the number of the woodpecker species that can dig burrows in trees (i.e. the European Green Woodpecker, the Black Woodpecker) and the status of their habitats, designing a set of recommendations for the conservation of the European Roller addressed to the stakeholders (landowners and farmers, then water, forest administration and environmental protection agencies). The up-coming activities are: installation of more than 1,000 artificial nests, monitoring the important trees for the species and, in case of they are being cut, alerting the competent authorities, tree planting and caring, insulating the medium-voltage power lines that present danger for birds, involving the local community in the conservation activities, mounting rollers with satellite transmitters etc.



Contact Person: Zeitz Robert • robert.zeitz@milvus.ro • 0735 878 520

#### 32 Brown Bear

The main threats to the Romanian brown bear (Ursus arctos) population are the low level of social acceptance (mainly because the damages it may cause and the widespread misconceptions which harden or even hinder the conservation of the species), the lack of scientific data (vital for planning and implementing the species' conservation and management actions) and the fragmentation of the natural habitats. We address these three main issues in our programme launched in 2006, "Brown bear conservation and research program in a model area in Romania". The targeted areas are the upper river basins of Niraj and Târnava Mică and the central part of Gurghiu Mountains, respectively. But there are activities which are not restricted to these areas. Related to the social component, at first, we donated electric fences to farmers whose properties were damaged by bears and

carried out educational activities for primary school students. We are now working on a large-scale survey. Another objective is to communicate factual information to the local population through the mass media. We are simultaneously carrying out several studies. To gather information on habitat use and to identify crucial ecological corridors, as well as important feeding and wintering areas, we monitor bears fitted with GPS collars (so far, we mounted collars on 19 individuals that provided tens of thousands of GPS locations). With the support of local specialists (foresters and professional hunters), we are mapping and measuring bear dens (we identified a total of 101 dens and 7 open nests until now).

We collected genetic samples from around 150 individuals. These form the basis of several studies that are carried out in partnership with research institutions from abroad. We study internal parasites by examining animals harvested by hunters (43 individuals up to now) and scats collected from the wild (211 scats analysed so far), whereas external parasites are collected from animals that we capture for our telemetry study.

As for habitat conservation, we are implementing two main activities. We proposed six new Natura 2000 areas, which after being











Contact Person: Domokos Csaba • csaba.domokos@milyus.ro • 0720 538 422

officially designated in 2011, the protected area for the conservation of bears, other species and also habitats has been extended with a total of 1,048.89 km2. By using methods such as tracking, hair trapping, we monitor the route of the planned Tîrgu-Mureş-laşi motorway to promote and mediate the construction of adequate wildlife passages.

Once the motorway will be finalised, these crossing structures will become vital for bears and other species alike in order to get to the important feeding and wintering areas, thus preventing the fragmentation of the bear population. In addition to the already mentioned activities, we also deal with cases of emergency. During the last years, we rescued a total of 10 bears from wire-snares set by poachers and saved a total of 14 orphaned cubs that were later handed over to the Orphaned Bear Cub Rehabilitation Centre operating in the Hăşmaş Mountains. We relocated three bears "habituated" to people.

An important part of the programme is the cooperation with specialists from Romania and abroad. Without this, the implementation of many of our activities would be impossible. We are grateful to the following people in Romania: Károly Pál, Károly Illyés and Ágoston Pál (professional hunters), to the Vets4Wild Association, to István Birtalan, Leonárd Mărmureanu-Bíró, Cristian Apetroaei and Leonardo Bereczky. We would also like to name a few foreign partners: Dr. Bogdan Cristescu, Dr. Gábor Majoros, Dr. Gábor Földvári and Peter Damerell, as well as the Conservation Genetics Group from the Senckenberg Research Institute. Financial support for the programme is provided each year exclusively by foundations from abroad: EuroNatur and Frankfurt Zoological Society (Germany), Bears in Mind (the Netherlands), Bernd Thies Foundation (Switzerland), Columbus Zoo and Aquarium, the International Association for Bear Research and Management - IBA (United States of America) and Nando Peretti Foundation (Italy).









#### 34 Blind Mole-rats

Blind mole-rats are small steppe rodents, typical for Eastern Europe, very little known. What characterises them is the subterranean lifestyle. In partnership with our peers from the Hungarian Natural History Museum and Eötvös Loránd University, we've been researching for almost a decade their distribution, ecology and taxonomy in the Carpathian Basin and Romania. Among other activities, we contributed to the taxonomic re-evaluation of the genus of Balkan mole-rat species (*Spalax graecus*), considered until then only one species.

One of the important results of the study, in terms of taxonomy and conservation, is enlisting Méhely's blind mole-rat (*Spalax antiquus*) as a distinct species, thus becoming the only endemic mammal species in Transylvania that we know of so far. We researched the size of the population of this species, by making an inventory of the molehills in several places across the Transylvanian Plain.

Being part of the research community, we conducted an assessment of the conservation status of all blind mole-rat species in the Carpathian Basin. This was another important achievement. Besides from the already mentioned species, two more species live in the Romanian part of the area: the Transylvanian blind mole-rat (*Nannospalax transsylvanicus*) and the Hungarian lesser blind mole-rat (*Nannospalax hungaricus*). Both species belong to the group of lesser blind mole-rats and are part of the *Nannospalax* (superspecies *leucodon*). We proposed the first species to be enlisted in the "vulnerable" category and the second (Méhely's blind mole-rat) in the "threatened" category, according to the criteria of the International Union for Conservation of Nature (IUCN). In recent years, we have also been involved in the repopulation programme of the Transylvanian blind mole-rat in Hungary, coordinated by our Hungarian peers. This was also the first significant measure for the conservation of this species' populations in Hungary.











#### **Eurasian Otter**

The Eurasian Otter (Lutra lutra) - one of our target species - is the top predator of the freshwater habitats in Romania. It belongs to the Mustelidae family and its diet mainly consists of fish. Being an important indicator of the state of aquatic ecosystems, its conservation can indirectly be useful in the conservation of other species that live in both running and non-moving waters. For the scientific substantiation of the Natura 2000 network (within the project "Supporting the efforts of the Romanian Ministry of Environment and Sustainable Development to meet the EU requirements, by identifying and substantiating new European importance areas"), between 2009-2010, we explored the courses of all major rivers in Romania in search of otters and assessed the presence and permanence of the species over a total length of 4,000 km. The research methodology was based on the recommendations of a group of otter experts from the International Union for Conservation of Nature (IUCN). First, we focused on the vital signs of the species (especially on tracks and spraint). Based on these findings, we submitted a list of more than 150 proposals for Sites of Community Importance (Natura 2000 protected area). In the following years, almost all have been accepted. Between 2013 and 2014, we coordinated the drafting of a national management plan for the otter (within the "Elaborating management measures in Romania for Castor fiber, Lutra lutra and Mustela lutreola species" project), which included also a national survey for the distribution of the species. Within the same project, we conducted extensive research on the feeding habits of otters in ponds to determine what percentage of fish species of economic interest are in its diet. We also monitored the seasonal activity of the species, road-crossing possibilities for otters near watercourses and we made recommendations for the prevention of damages that may be caused by otters to fish farms. We had dealt with the latter long before as well - when we published the booklet "Carnivores and humans - is their peaceful coexistence possible in Romania?", which is still freely accessible.



#### 36 European Ground Squirrel

The European Ground Squirrel (Spermophilus citellus), a rodent which has become endangered in most parts of its distribution area. has drawn our attention over a decade ago and has since become one of our most intensely studied species. As a typical mammal of the steppe, it prefers grasslands with short vegetation from the plain regions. The destruction of these habitats caused by ploughing up and infrastructure development, as well as their bad management practises put considerable pressure on the ground squirrel populations. Over the years, we carried out successfully the distribution mapping of this species within Romania by locating a substantial part of its existing habitats. Based on data collected from different regions of Romania, we have significantly increased the number of Natura 2000 protected areas designated for the conservation of the ground squirrel. Since 2011, we have been regularly conducting ground squirrel monitoring and conservation activities in the western part of the country (the Pannonian Biogeographical Region), among other things, by relocating ground squirrels from some habitats facing threats. These activities played also a key role in our efforts to conserve the Saker Falcon (Falco cherrug). Such actions are continued also within the international project "Securing prey sources for endangered Falco cherrug and Aquila heliaca population in the Carpathian basin (RAPTORSPREYLIFE)", co-financed by the LIFE+ program of the European Union. The important activities within this project include the introduction of new individuals for the revitalization of declining colonies, the genetic comparison of different colonies and the restoration of degraded grasslands by mowing, as well as various awareness-raising and educational activities. Over the past years, we have regularly collaborated with a group of researchers studying ground squirrels in Moldova, eastern Romania. We are constantly fighting against the illegal destruction of pastures and we also want to encourage farmers to ensure appropriate habitat management for this rodent by a proposed new agri-environmental scheme. www.sakerlife3.mme.hu













# European Wildcat

The European Wildcat (*Felis silvestris*) is currently listed as one of the most vulnerable carnivore species in Europe, which is at risk of genetic introgression due to hybridization with domestic cats. Even from a global perspective, in the Carpathian Mountains and Transylvania live significant wildcat populations. In the past years, we began a morphological and genetic study of the wildcat in Romania, primarily to determine the degree of hybridization. The analysis of the genetic purity of the individuals is based on morphological markers. Tissue samples are taken mainly from roadkill victims and we also use hair traps to get hair samples. The genetic analysis is carried out by Senckenberg Research Institute and the Natural History Museum in Frankfurt. The results obtained so far are encouraging. It seems that, at least in Transylvania, hybridization with domestic cats is a relatively rare phenomenon, which proves the existence of a healthy wildcat population.

# **Owl Pellet Analysis**

The analysis of owl pellets (lumps of indigestible fur and bones regurgitated by owls after feeding) is an important indirect research method. Pellets, collected from abandoned buildings, church towers, stables etc., are essential tools in the study of small mammal fauna at Milvus Group. They provide information about the small mammals that live on the hunting territories of different owl species (Barn Owl, Little Owl, Tawny Owl, Long-eared Owl, Short-eared Owl, Eurasian Eagle-owl, Ural Owl and Boreal Owl). Thus, we were able to rediscover a rare species of a small mammal considered extinct in Transylvania. We also analyse uneaten food remains of diurnal raptors. We, therefore, have a clear picture in terms of food preferences and habitat use of the Saker Falcon, Lesser Spotted Eagle, Golden Eagle and Long-legged Buzzard.











Contact Person: Hegyeli Zsolt • zsolt.hegyeli@milvus.ro • 0735 878 518

#### 38 Birch Mice

As per their small dimensions and reclusive lifestyle, but also because of the lack of research, there has been few information about the presence in Romania of Birch Mice species for a long time. Based on the current taxonomic knowledge, there are three birch mouse species in our country: the Northern birch mouse (*Sicista betulina*), the Hungarian birch mouse (*Sicista trizona*) and the Nordmann's birch mouse (*Sicista loriger*). The last two belong to a species group of steppe-dwelling birch mice that have only been recently classified separately by taxonomists. Until 2009, there was only one record of a Hungarian birch mouse, which dates back to 1900, when Orosz Endre collected a female individual near Apahida, Romania.

In the Barn Owl and Little Owl pellets, collected between 2008 and 2010 in various places of the Someş Plateau, several bones belonging to birch mice have been discovered. During subsequent expeditions carried out together with members of Bükk Mammalogical Society from Hungary, Milvus Group investigated the locations of the two steppe species that had been recorded in the early scholarly literature. In 2012, the first individuals were captured with live traps near Cluj-Napoca, and in 2013, several birch mice were captured near laşi. The genetic analyses revealed information on the taxonomic situation of the steppe mice in Romania.

The individuals in Transylvania belong to the Hungarian Birch Mouse (endemic to the Carpathian Basin) species and represent the Sicista trizona transylvanica subspecies. The mice found on the steppes in Moldova have been identified as being Nordmann's Birch Mice (Sicista Ioriaer).

During the live trapping of small mammals over the last decade, several Northern birch mice have been found on the wet meadows of the Giurgeu Depression. There are only four records of this species in early scholarly literature in Romania. These date between 1943–1996 and the located in the Eastern and Southern Carpathians. There are four recent observations as well - one in the Gurghiu Mountains in 2006, one in the Giurgeu Depression in 2008, where other two were captured in 2010.











Contact Person: Hegyeli Zsolt • zsolt.hegyeli@milvus.ro • 0735 878 518

# Large Carnivores and Eurasian Otter Study in Natura 2000 Areas

Large carnivores are amongst the target categories of our mammal studies. Our research has been focused on the conservation of four mammal species of Community interest: the Brown bear (*Ursus arctos*), the Grey Wolf (*Canis lupus*), the Eurasian Lynx (*Lynx lynx*) and the Eurasian Otter (*Lutra lutra*). First, we wanted to find out more about the conservation status and the size of their populations in several Natura 2000 areas. But they are in relatively small numbers and need considerably vast territories, which make the research of large carnivores to be time and money consuming. Due to the relatively short duration of the survey, we had to apply both direct and indirect research methods. The exact size of the populations can only be deducted if there is extensive knowledge of the long-term alternation of seasonal and occasional territories. Such costly research may consist of mounting GPS trackers or genetic analyses of populations. Signs of presence that can be observed in optimal conditions, such as anthills destroyed by bears or otter spraints left to mark its territory, were a less expensive option for population estimation. We tracked wolves and lynx in winter following their prints in the snow. Our research has been often complemented with information from the local people who were familiar with the area. While conducting the study on bears, we considered examining the feeding habits and habitat sustainability as being essential. Analysing scats, we showed that in addition to acorns, wild pears or other fruit with similar sugar content have an important role in the bear's diet. Moreover, we enriched our knowledge by the field assessment of 23 species of plants that bears feed upon.



## 40 Carnivores and Humans: Can They Peacefully Coexist in Romania?

The project was implemented between 2004-2005 with the financial support of the Matra-KNIP programme (the Embassy of the Netherlands in Bucharest, Romania). Our goal was to examine damages caused by wolves, bears and otters in Transylvania. We analysed in total: 32 cases when wolves, respectively 9 cases when bears caused damages at sheep pens, 27 cases of crops damaged by bears, 5 bear attacks on people and 7 cases of damages in fisheries caused by otters. For each case we also tried **to identify the circumstances that might have contributed to causing the damage**. Within the project, we also published a booklet (in English, Hungarian and Romanian) in which we showed our results and presented detailed damage prevention measures.

# Carnivores and Humans: Improving Human-Wolf Coexistence

The project ran between 2005-2006 and gained financial support from the Romanian Environmental Partnership Foundation. The activities of the project included: investigating damages caused by wolves, implementing damage prevention measures, carrying out educational activities and studying the biology and ecology of wolves. We examined the damages caused by wolves at more than 30 sheep pens. We implemented damage prevention measures at a total of 6 sheepfolds: we mounted fladries in 4 locations and set up electric fences at 2 sheep pens (all equipment has been donated to the sheepherders). We carried out educational activities both in rural schools within the project area, as well as in schools in the city of Tîrgu Mureş. In the winter of 2005-2006, we studied the size of wolf packs, pack territory size, habitat use and the diet of wolves. Also within the project, we published a brochure (in Hungarian and Romanian) on wolf biology, the project results and efficient damage prevention methods. The project gained the Romanian Central European Heritage Award offered by the Romanian Environmental Partnership Foundation.













Contact Person: Domokos Csaba • csaba.domokos@milvus.ro • 0720 538 422

# Hungarian Meadow Viper

Today, the Hungarian Meadow Viper (Vipera ursinii rakosiensis) is on the list of the most endangered snake subspecies in Europe having its isolated populations in decline despite actual environmental legislation. Its habitats, which once covered considerable areas, gradually disappeared in sync with the conversion of natural grasslands to arable lands, which is still going on. In Romania, the development of agriculture brings continuous pressure on these remaining habitats. Every year, more and more natural grasslands registered incorrectly as arable lands are tilled and, in many cases, these actions take place with the support of agrienvironment schemes. Setting fire to existing grasslands, overgrazing - which is also a consequence of agricultural subsidies - cause continuous habitat degradation. Moreover, the locals kill cold-bloodedly the individuals they might encounter and, unfortunately, the species is also threatened by illegal possession and trafficking.

The last habitats of the Hungarian Meadow Viper are the steppic grasslands in Hungary and Transylvania. Whereas in Hungary it may appear in 10 isolated locations, in Transylvania it occurs in only five. The most recently discovered habitat was in 2016, by a Milvus Scholarship research student and her peers. As per its rarity and vulnerability, it has been included even as subspecies on the taxa list, based on which Natura 2000 areas are designated. With well-documented proposals, we made a valuable contribution to the designation of such areas, but also for the expansion of the existing ones. Thus, the habitats of the first four known populations are already included in the Natura 2000 network. Our activities aimed at the conservation of this subspecies include monitoring habitats, identifying threats, involving competent authorities in conservation, raising awareness and exploring new habitats. The illegally tilled habitats in Cicârd managed to get on the agenda of the competent EU institutions, which to some extent was due to our complaints. Consequently, Romania was asked to assess the species' current conservation status and take measures to save it from extinction.



Contact Person: Sos Tibor • tibor.sos@milvus.ro • 0735 878 519

#### 42 European Pond Turtle

The European Pond Turtle (*Emys orbicularis*) is one of the species that has been negatively affected by the drainage of wetlands in the XXth century and the reconfiguration of their purpose. This change hit hard especially the populations in the Transylvanian Plateau. As the European population of the species is also in decline, it has been added to the list of relevant species for designating Natura 2000 areas. Thus, over the years, we used this opportunity to propose new Natura 2000 areas aimed for the conservation of this species, and in several cases we also made our contribution in drafting the management plans targeted for the species. We issued a warning about the unfortunate situation of the species in Romania by a publication in 2011, which was part of the project "Conservation of the European Pond Turtle in Transylvania: a guideline for monitoring and management of its small populations and their habitats". The project was implemented by Green Echoes Association, Romania, and was financed by the Ministry of Foreign Affairs of the Netherlands - MATRA/KNIP 2009-2011.

WWW.emys-ro.webs.com

All across Europe, invasive turtles once held as pets are being released into the wild. The problematical species of nowadays are the Red-eared Slider and the Yellow-bellied Slider (*Trachemys* ssp.). Their release and presence in the natural habitats of the European Pond Turtle represent a threat because invasive species compete with the native turtles for vital resources, such as food, basking and egg-laying sites.

To raise awareness about the existing situation, we created **an online community called Trachemys Adoption - Romanian Coalition** (2008). The website and the Facebook group are www.trachemysadoption.webs.com and www.facebook.com/groups/tarc08. Here, unwanted turtles may be adopted or given up for adoption. Since 2012, we have been managing a Romanian herpetology group - **Herping Romania**, which aims to raise awareness and conserve native species of reptiles and amphibians.



Fish

Even though most of the activities of our organisation are aimed at the conservation of birds, we believe it is important to protect other groups of wildlife, too. We've been conducting ichthyofaunal studies in several areas of the country since the designation of the Natura 2000 areas. Then based on the findings, we proposed new areas for several sections of the following rivers: Mures, Niraj, Târnava Mică and Târnava Mare, Somesul Mic, Mare, Cald and Rece, Sieu, Crisul Alb, Teuz, Timis, Olt, Râul Negru, Oltet, Siret, Neailov, Nera, Suceava, Gilort, Jiu, Moldova, Motru, Teleorman, Vedea etc. And most of them have been accepted. For instance, to protect the Huchen (Hucho hucho), we proposed the section between Deda and Reghin on Mures river, which was accepted in 2011 as a Natura 2000 area, but no fish species were mentioned in the standard data form. It took intense lobbying for the seven protected fish species to appear on the form. The conservation of the Huchen is particularly important to us. Together with our partners from the Association of Hunters and Sport Fishermen "Târnava Mare" and the Accent GeoEcological Organisation, we managed in 2014 to prove that the Huchen population in the Mures can successfully reproduce naturally. Since then, our peers have been monitoring the habitat of the Huchen, while also paying exclusive attention to the protection of its breeding sites. Currently, "Milyus Group" Association is the custodian of four protected areas located along Mures river, designated primarily for the conservation of fish species. Our objective is the long-term conservation of the species of fish (and not only) that live here. Fishermen could be of great help to us as we do not intend to ban fishing, but to encourage appropriate ways to practise this sport within the limits of the law. We hope that as a result of our actions, the ecological balance of the river will be restored over time and that we will be able to maintain access to the breeding sites. This could be achieved by setting up effective fish ladders, but also by flooding periodically the backwaters and the wet areas that are left the after gravel exploitations. And a few decades hence, fishermen on the banks of the Mures might be catching plenty of fish.











Contact Person: Nagy András Attila • andrasattila.nagy@milvus.ro • 0720 018 089



# **Ecological Education**

In addition to conservation activities, we believe that implementing educational programmes for young people and teachers is very important.

We started to visit schools as early as the mid-'90s. We used to hold bird presentations with slide-projectors which now would rather make people smile. Since then, we have been trying to reach out to the younger generation with better electronic devices. We developed an interactive programme for children in pre-primary and primary schools. Over the years, we organised almost 1,000 activities and had over 15,000 young participants. As per our competitions, by which many skills and competences may be developed, we aim to attract children who are not particularly interested in the natural values. We strive to offer many outdoor activities so children can find out more and also grow fond of nature's wonders. We carry out these activities as part of various programmes, such as our "Forest School" programme, field trips or "Alternative School Week" (a national programme of the government). However, most probably our Forest School educational camps have the biggest impact on children. For more than ten years, we've been organising school camps in Rigmani, Mures county, where children stay in a yurt. Far from civilisation, children have the opportunity to become more familiar with the natural world, by adapting to the laws of nature. We aim to facilitate the work of teachers by offering them various publications and training seminars. To those working in Natura 2000 protected areas we offer information about local natural values, so the pupils might appreciate them as well. More than 900 teachers participated in our training programmes. We published several booklets: mini atlas, animal tracks guide, bird colouring books, collection of ecological games, various teaching packages. The online version of these materials can be found on the website of our organisation. We carry out most activities in Mures county, but we try to get to other parts of the country as well. We did so in the counties of Arad, Brasov, Bihor, Clui, Satu-Mare, Sibiu, Timis.



Our environmental education programmes are conducted within various projects, but also by voluntary work. The Romanian Environmental Fund Administration has so far supported our educational programmes on three occasions. We took part in educational activities in Natura 2000 protected areas that were financed by the Romanian Sectorial Operational Programme for Environment. Moreover, we organised educational activities also within projects with other partners, such as WWF Romania, Adept, ProPark.

We hope we have contributed to motivating teachers in setting up activities about birds and nature conservation for children. There's already a new generation that grew up at our side and we have peers either in our organisation or working in the same field. Nonetheless, our purpose stays the same - to help raise generations that would treat nature as a fundamental value and necessity in whatever field they would be active in.



## Milvus Scholarship

We have always believed that it is important to involve young biologists in nature conservation and research. This was the reason why, in 2005, we set up the Milvus Scholarship Programme. Over the years, we funded both individual and collective research projects. At five open calls in 2005, 2006, 2007, 2010 and 2015, we received 62 research project proposals and 30 have been awarded. We funded undergraduate, as well as high school students. The applications predominantly came from the largest university centres: Cluj-Napoca, Bucharest, Iași, Timișoara. Benefiting from our financial support, some scholars were able to conduct their research for several years. The scholarship programme has enhanced a more in-depth knowledge of several rare species of Romania and has valuably contributed to the designation of Natura 2000 areas. Besides project proposals based on conservation, we funded ecological, taxonomic, morphological and genetic research, too. We can affirm that Milvus Scholarship has also an educational role, because many of our awarded biologists are still connected to nature conservation. Here are some of the projects:

Mapping the Herpetological and Avian Fauna in Ciupercenii Noi and Bistret Lake area - Cosmin Ovidiu Manci, 2015 European Ground Squirrel (Spermophilus citellus) Assessment in the Western Plain of Romania in Furtherance of Natura 2000 Area Designation - Hegyeli Zsolt, 2006

Chiroptera in Tosoroa Cave - Emanuel Baltag, 2007

Study of the Eel Populations (Misaurnus fossilis) in the Ciuc Basin for the Elaboration of an Efficient Conservation Plan -Imecs István, 2010

Estimating the Probability Distribution of the Hungarian Meadow Viper by Using Ecological Niche Modeling - Păun Georgiana, 2015

The list of the awarded projects is available on the website of our organisation: www.milvus.ro





in 2005 am adunat date mai ales

intre lunile iulie si octombrie. La din sud-estul judetului (Fig. 1). deplasări ne-am folosit de o mașină Fată de anul 2005, când am reusit si am cartat mai ales habitate vizibil

ufibieni și reptile în estul României - capturare sau cu aiutorul unui cărliu (Moldova) este departe de a fi bine cunoscut. Județul lași nu face ex-cepție de la această regulă. Cele mai cuprinzătoare publicații cu privire la herpetofauna zonei au fost pină am realizat hărți de distribuție pen-acum volumele din Fauna R.P.R. (Amuhibila, Reptilia). Ulterior, date cu localitățiile cele mai apropiate de (Ampurous, Reputial). Otterior, date

on iau fost aduse de un număr relativ

mare de autori însă, până în prezent,

nu a fost efectuat nici un studiu do

nentru fiecare specie un statut (orad

Studiul compoziției și distribuției herpetofaunei din judetul lași (România); rezultate preliminare



pământ brună (Pelobates fuscus), poluată resursa de apă sub

Studiul ihtiofaunistic al bratelor moarte ale râurilor Olt și Râul Negru din județul Covasna

#### Hegyeli Zsolt

În anul 2005, în cadrul "Bursei Milvus" am beneficiat de finantarea proiectului intitulat Studiul ihtiofaunistic al bratelor moarte ale râurilor Olt și Râul Negru din județul Covasna, cu privire speci. și identificarea speciilor de

ală la unele specii stagnofi sau periclitate. Proiectul șipus analiza ichtiofaunei b moarte de pe cursul total al Negru și porțiunea din j Covasna al râului Olt, în w întocmirii unui plan de c vare pentru unele specii ra habitatelor acestora. Princ obiective au fost: evaluarea velor a patru specii țintă, sta răspândirii și frecvenței sp invazive in aceste ape, p

Contact Person: Komáromi István • istvan.komaromi@milvus.ro • 0720 527565





#### Wildlife Rehabilitation Centre

We have been taking care of the birds since our inception because we would encounter all the time injured, confiscated or smuggled individuals. During the first few years, the rehabilitation location was in the courtyard of the organisation's office, where initially we had improvised cages and only much later professional aviaries. The medical treatment was provided in the first years by several veterinarians in Tîrgu-Mureş. Then, thanks to Dr Borka Levente's enthusiasm, a veterinary association has been assembled - Vets4Wild, which today represents the very foundation of the Milvus rehabilitation centre. The centre has been developed by human and financial resources ensured by Milvus Group and Vets4Wild, but also by projects and donations. Currently, the rehabilitation centre includes two facilities: in Tîrgu Mureş and Sânsimion. In the Tîrgu-Mureş facility, injured animals receive daily care and treatment. After they do not require further medical treatment, the birds are transferred to Sânsimion, where before their release, they can recover by building muscle and strength in larger aviaries.

Our centre receives not only birds but mammals and reptiles, too. Thanks to the national wildlife rescue network, on average, one "patient" arrives every second day in one of our 20 aviaries. In addition to hundreds of recommendations given over the phone, we have more than 150 wild animals in our centre every year. Apart from the ever-expanding network, we also have an emergency telephone number available 24/7 to increase the recovery chances of injured animals.

0722.533.816

We get calls on a daily basis - sometimes up to a few dozen - from various parts of the country for advice, information or guidance on how to save a wild animal. The operation of the centre is carried out voluntarily, as a joint effort of the two organisations.

#### www.wildliferescue.ro







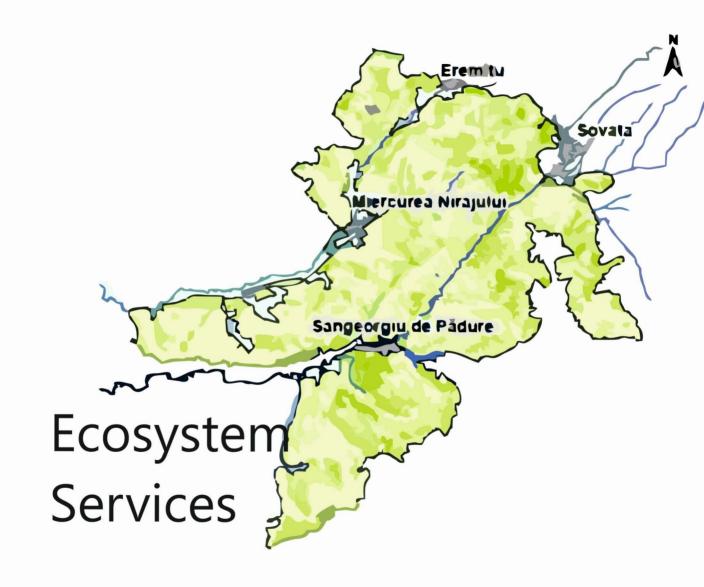






Contact Person: Komáromi Réka • reka.komaromi@milvus.ro • 0725 226 174





## Studies on Ecosystem Services

Nature conservation doesn't have not only an emotional facet, but also an economic one. It is important that those who appreciate less nature conservation be aware of its value nonetheless. This is why we engaged in 2014 in a domain which was new to us at the time - the study of ecosystem services. Ecosystem services are essential benefits that natural (or quasi-natural) ecosystems offer to human society. The concept gained popularity in main science groups after the publication of "Millennium Ecosystem Assessment" in 2005. Since then, these services have been introduced in many international and European biodiversity conservation policies. We would also like to draw attention to the goods and services which nature provides us for free and to make the people from the business sector realise that natural values should be appreciated financially too. In 2014, we started a project funded by EEA and Norway Grants carried out in partnership with the Centre for Ecological Research of the Hungarian Academy of Sciences and CEEweb for Biodiversity: "Mapping and Assessment of Ecosystem Services in Natura 2000 Sites in Niraj-Târnava Mică Area". The main aim was to study and assess ecosystem services in Niraj-Târnava Mică Valley by involving large groups of different social categories. The locals managed to identify 35 ecosystem services. Then, they were ranked according to their importance with illustrations - wood, natural fodder, wild fruit and mushrooms, honey and pollination, rainwater harvesting, carbon sequestration, tourist attraction and local identity. We also determined collectively the economic value of six such services, which annually contribute to the local economy with 57 million RON. To prepare ourselves for the safeguarding of these services, we also estimated how their capacity might vary. As we had expected, a nature-friendly legal framework has turned out to be one of the decisive factors for the conservation of these services. However, to everyone's surprise, according to local opinion makers, solidarity among the local community proved to be equally important.





## Wildlife Trade Regulations - CITES

The members of our organisation have been facing nature conservation problems caused by the trade of protected species ever since the 1990s. Consequently, since the end of that decade, we've been systematically checking the markets, where illegally captured Fringillidae species would be sold. In earlier years, we had been concentrating on the markets of Tîrgu-Mures, then we expanded our attention to a wider area until 2003 when we set up a network of volunteers to tackle crime against wild birds, which included volunteers from 15 major cities. The members of the network carried out 117 inspections in 2003 alone, thus contributing to the release of several hundred protected birds. As per the regular inspections and information campaigns, the phenomenon of illegal wild birds trade has disappeared almost completely. In the same year, we launched an international project (in partnership with Green Borders on the Balkans, GTZ and REC), which has permitted us to officially tackle the international trade of endangered species of wild fauna and flora – CITES. As part of the project, we published several materials designed for border crossing points and organised training seminars for customs agents and employees of various other institutions responsible for the implementation of the convention. In August 2003, we hosted in Tîrgu Mures an event during which the CITES Working Group was formed within CEEweb, an international network of NGOs from Central and Eastern Europe. Eventually, this working group has become the structure by which we conducted most of our CITES-related activities. We trained staff of law enforcement institutions and NGOs (Romania - 2008, Poland - 2011, Kenya - 2012), we analysed law enforcement capacity in the countries within the network (CeeTES project – 2008), we organised touring exhibitions and information campaigns at the network's international airports and we investigated the on-line trade of CITES species (2007 and 2010). We have regularly participated in the conferences of the signatory parties (2004 - Bangkok, 2007 - The Hague, 2010 - Doha, 2013 - Bangkok, 2016 - Johannesburg).



Contact Person: Papp Tamás • tamas.papp@milvus.ro • 0720 530 117

## 54 Policy

Sooner or later, any nature conservation organisation will get to a point at which they will also have to engage in environmental policy as the efficiency of conservation very much depends on it. And it has been in the focus of our organisation since the late 1990s and early 2000s. We carried out studies, provided expert opinion or even drafted laws, we worked on local, national or international strategies, verified the application of global conventions related to nature conservation and undertook also lobbying work. The designation of the Natura 2000 network of protected areas has been one of our priority programmes. Since 2006, we have mainly dealt with the designation of SPAs. Nonetheless, at the first biogeographical seminar on SCIs, it was Milvus Group who yet again has mainly represented the civil society. We also helped to eliminate the shortcomings that were identified within the network. Being aware that man-made habitats are also important for nature conservation, we've been involved in the drafting of agrienvironment packages of the National Rural Development Programme. Besides other things, we had a great contribution in the developing and getting the approval of the authorities for the following packages: Lesser Spotted Eagle, Great Bustard, European Ground Squirrel and blind mole-rats. We issued amendments and improved laws relevant to nature conservation. We made important changes to the provisions of the hunting laws concerning the number of game species and matching the duration of the hunting season with the ecology of the species. By significantly increasing the moral value of the game and protected species, we created an efficient deterrent mechanism against poachers and illegal wildlife traders. We worked extensively to promote the implementation of various international conventions for nature conservation, in particular the Washington Convention (CITES) on International Trade in Endangered Species of Wild Fauna and Flora. As per our direct involvement in the last five Conferences of Parties, we have also been able to show results with global implications for nature conservation.



MONITORU.

ROMÁNI

LES MECHEN TENÍTÓRIO MAI

Contact Person: Papp Tamás • tamas.papp@milvus.ro • 0720 530 117

#### National and International Partnerships

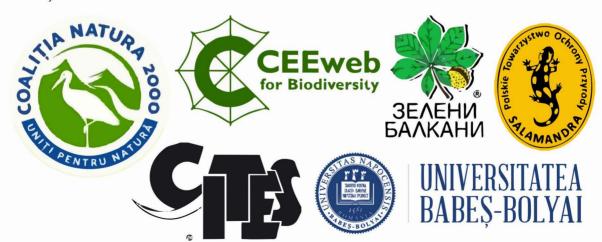
In its efforts for nature conservation, "Milvus Group" Association has always strived to collaborate with other organisations because partnerships lead to better results. A group of researchers has analysed the connections between LIFE projects within the EU in a scientific article: Nita, A., Rozylowicz, L., Manolache, S., Ciocănea, C. M., Miu, I. V., Popescu, V. D. Collaboration Networks in Applied Conservation Projects across Europe. Xia C-Y, ed. PLoS ONE. 2016; 11(10):e0164503. doi:10.1371/journal.pone.0164503. After having noticed our involvement in many international projects, the authors concluded that **Milvus Group holds an important place among nature conservation organisations in Eastern Europe**.

Natura 2000 Coalition, the largest consortium of NGOs in Romania, has become a federation recently. We have been its members since its foundation and we are part of the management committee as well. We also carried out projects in partnership with several other members.

Internationally, we have been members of CEEweb for over 20 years. This network brings together nature conservation NGOs from Central and Eastern Europe. By being a part of it, we can be heard by the EU decision-makers as the network ensures the representation of the NGOs in Brussels. Moreover, CEEweb provides an appropriate collaboration framework for its members. Green Balkans in Bulgaria and Salamander Foundation in Spain - to name only a few organisations that we have been working with for many years on different topics, such as CITES or wild bird rehabilitation centres.

As the scientific basis has always been important for us, we are in good relations with Babeş-Bolyai University in Cluj-Napoca and we collaborate on several programmes.

We are proud that over the years we have been able to work with such partners and we hope that we will continue our collaboration in the years to come.



#### 56 Agriculture and Nature Conservation

It may come as a surprise, but the transformation and industrialisation of agriculture may be one of the most important causes of biodiversity loss within the EU. However, if we were reminded that some form of agricultural activity is happening on 40% of the total area of the EU and the changes that had occurred over the years within this sector with all their harmful impact on nature are much more powerful than, for example, in the forest sector, things would be much clearer.

The EU's Common agricultural policy (CAP), including the subsidies, does not support small producers or nature-friendly farming. As a result, it generates big changes in agriculture. Nature-friendly and healthy agriculture corresponding to a human scale (as there still are in Transylvania), where the land is divided among villagers, becomes an industrialised, fully mechanised agriculture, which makes excessive use of chemicals and from which the human element is missing - where extended areas are controlled by one or two owners, where short-term profit prevails over human health and nature. This type of agriculture creates an unhealthy environment also for humans (pollutes the water, produces chemically-treated food etc.) and may lead to the depopulation of our villages. Extensive agriculture creates a multifunctional landscape, where the land not only offers harvestable benefits but may also contribute to tourism, water retention, protection against soil erosion and can add naturalness to the landscape, thus being the basis of many other ecosystem services.

However, some subsidies can help maintain healthy, nature-friendly, sustainable agriculture. One of the most important such financial supports comes in the form of the agri-environment schemes. These packages support traditional and more nature-friendly agriculture. That is why we would like more and more farmers to use them. We strive to make these packages more accessible and profitable for nature and farmers alike. We used the feedback we got from the farmers and improved the already existing packages by drafting plans for the conservation of the Red-footed Falcon (eligible in plain areas mostly) and the Corn Crake (eligible



Contact Person: Kelemen Katalin • katalin.kelemen@milvus.ro • 0722 437 863

mainly in the historical region of Transylvania). Also, we developed new agri-environment packages on our initiative or at the request of the Ministry of Agriculture (i.e. **for the conservation of the Great Bustard**).

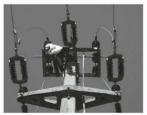
We hope that in certain areas of Transylvania the agri-environment subsidies for arable land, as for the conservation of the Lesser Spotted Eagle, will be available before 2020. We want to support extensive agriculture not only with proposals but also by offering practical support to farmers. This was the reason why we got involved in the "Rural Development and High Nature Value Farmlands" project, coordinated by ADEPT Foundation and funded by the Swiss-Romanian Cooperation Programme. Within the project, four local community representatives were able to participate in training courses, and together with them, we presented the opportunities and profitability of nature-friendly agriculture in the settlements from the Valleys of Niraj and Târnava Mică.



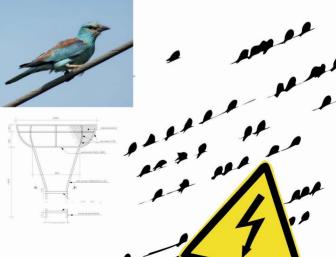
#### 58 Birds and Electricity Power Grids

The causes of bird mortality which are more known to the public are poaching and poisoning. Nevertheless, there are other factors that mainly the specialists are well aware of - electrocution and collision with power lines. Both are causing the death of thousands, if not tens of thousands of birds every year. For example, annually 25% of young storks that leave their nest die because of electrocution. This is why the ornithologists of Milvus Group have always been interested in the relation between birds and power grids, and why we have taken on a pioneering role in providing technical solutions for this matter since 1990. In the birds-power grids relation, there are also situations which are favourable for birds, such as nesting of white storks on low-voltage electric pillars. If the nest is built upon electric wires, there is a high risk of a short circuit, the nest may catch fire etc. On the other hand, if the nest is built on a support pole, the birds are no longer in danger and the electricity provider does not have to make interventions either. Thanks to the good cooperation with the local energy supplier, Milvus Group initiated in Mures County the installation of the first stork nest platform in Romania. The first ones were placed in Mures and Satu-Mare counties in 1996. In 1999, we published a quidebook for energy suppliers on how to make and install stork nest platforms. It was republished in 2004 and has largely contributed to the emergence of support poles in all the other counties of Romania. In 2015, there were 1999 that we knew of. Generally, electrocution affects medium and large-sized birds such as storks, raptors, corvids etc. However, it poses an even greater threat to protected species - Saker Falcon, White-tailed Eagle, Eurasian Eagle-owl - in which case even the loss of a few individuals would be detrimental. There are over one million medium-voltage power lines in Romania that may electrocute birds. Transforming them into bird-friendly power lines isn't cheap at all. Nonetheless, we've already got some promising results. We had several meetings with representatives of the energy supplying companies. We presented them with some technical solutions that had been successfully used abroad, and we managed to insulate several thousand electric poles.









Contact Person: Papp Tamás • tamas.papp@milvus.ro • 0720 530 117

## Watchdog

For the past 25 years, Milvus Group had to use legal action against natural and legal persons who caused damage to nature. It's an extremely unpleasant task, because during the procedures sanctions will be taken, and we believe prevention is always more efficient. But unfortunately, sometimes these are inevitable. Damages to natural resources and nature itself may take various forms. Over the years, we sent more than a hundred complaints to the competent authorities. Let us recount some of the most significant cases.

#### Wind Farms

The main problem is not the farm itself, but its location.

Although wind farms have recently become a symbol of environmental protection, they can cause serious problems in nature conservation. If they are established in inadmissible places, for which we filed complaints – such as the wind turbines on the limits of the Măcin Mountains National Park area - where after the installation of wind turbines, the more sensitive ground-nesting birds that feed on grasslands will either avoid the place or those that will stay will be constantly exposed to the danger of collision. If the wind farm is built at a distance of at least 3 km from the forest (or the lake), on arable land, not grassland, the impact will be minimal. The problem is, at the planning stage, when the location is chosen, design engineers do not take into account the environmental requirements. We have reached out to the European Commission on this matter as well.



#### 60 Mountain Rivers and Green Energy

Renewable energy production has been gaining ground in Romania in the last two decades. Unfortunately, because of people's greed and incompetence, these "green" investments have become rather "red". Apart from the positive side of not producing carbon dioxide, but due to inappropriate design, execution and operation, their negative impact outweighs the positive. In the case of these investments, the biggest problem is the loss and, respectively, the fragmentation of the habitat. The activities of Milvus Group within the project "Natura 2000 and Rural Development Programme in Romania" included the implementation of two environmental impact studies of some investments whose initial studies concluded an insignificant negative impact (shadow assessment). One study was carried out for the construction of a wind farm near the village of Greci, in Dobruja, and the other for the investment of a micro-hydropower plant on the course of Râul Alb.

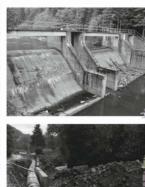
The initial impact studies conducted at the request of the investors concluded that the investments will not have a significant negative impact on the protected areas. However, the studies of our specialists showed exactly the opposite. As for the microhydropower plant designed on Râul Alb (where, in the meantime, construction works have already begun), Federation Coalition Natura 2000 (that Milvus Group is part of) initiated legal action against the Environmental Protection Agency, Hunedoara, and the investor, requesting the withdrawal of the permit issued based on erroneous considerations.

Our specialists have shown that this investment can have significant negative effects on river fauna by removing a large quantity of water from a 5 km long sector. Moreover, the construction of the water turbine will disrupt the river, thus limiting the free movement of species with reduced swimming capacity, such as the European Bullhead. Finally, the court ruled in favour of Federation Coalition Natura 2000 and ordered the withdrawal of the environmental permit. To our knowledge, this is the second case in Romania when an environmental protection agency has to withdraw the environmental permit issued for small capacity hydropower plants.











Contact Person: Nagy András Attila • andrasattila.nagy@milvus.ro • 0720 018 089

Poisoning 61

Sadly, we quite often encounter cases when birds of prey and other predatory animals are targeted for poisoning. The poisoned raptors are often collateral victims of the baits intended for foxes and stray dogs, but there are also cases when these illegal actions are directly aimed at birds of prey - for example, eagles, which feed on small game species. In most poisoning cases in Europe, the death of birds is caused by the extremely harmful pesticide called carbofuran. The use of carbofuran pesticides has been banned in the EU in 2008. Even though there were cases of poisoning reported in several areas in recent years, we do not know the extent of this phenomenon throughout the country. A case in Bihor County which spans over several years indicates that this might be an on-going phenomenon in the whole country as well.

We collected data for over 10 years, and we can state with certainty that we are dealing with repeated actions of poisoning on a hunting ground in Salonta. Perpetrators usually inject pesticide into pig lungs or chicken eggs, then place the baits in the wild. We recorded over 40 poisoned birds so far, but they are just the tip of the iceberg. Unfortunately, the poison spared not even individuals of endangered species, such as the Eastern Imperial Eagle, whose known breeding population in Romania consists of a single pair. We took several steps for a criminal prosecution, nonetheless perpetrators have not been prosecuted so far. On the other hand, as a result of our complaints, the number of poisonings has dropped. Some cases ended well, such as that of the White-tailed Eagle found by Andrei Dinescu on the Danube's riverbank, near Calafat. Thanks to a quick intervention, we managed to save the bird that had been poisoned. Later, we found out that some locals "capture" wild ducks for consumption with maize treated with carbofuran. The helpless, poisoned birds are then collected and consumed after their internal organs are removed. After the emergency rescue, the White-tailed Eagle was brought to Milvus Group's Rehabilitation Centre and, after the full recovery, the bird was released in the area where it had been found.



#### 62 Roadside Trees

The lowlands of Romania are mostly characterized by an acute lack of tree vegetation. Numerous endangered bird species, such as the Lesser Grey Shrike and the Red-footed Falcon, often find refuge in secondary habitats, which include roadside trees. They can play a contradictory role in conservation. On one hand, they may seem like traps in a treeless environment, attracting birds which then may become roadkill victims. On the other hand, their absence may explain why some bird species are absent in the local avian fauna. These alignments should be replaced by clusters of trees in habitats that provide safety for birds, but until there are no other alternatives their protection is essential. Poplars (the species which is generally found along roadsides) age very guickly and their presence can raise objections in terms of traffic safety. The conservation of the Red-footed Falcon is one of the priority activities of our organisation, and significant populations of this species use roadside trees for nesting and pre-migration gatherings. Over the years, we sent referrals to the authorities whenever the cutting of these trees was intended to. In most cases, we haven't been able to save not even the most important sectors because the traffic safety considerations will always come before environmental motivations. The same happened in Banat, where a poplar roadside tree alignment between Varias and Gelu was cut down. This was one of the largest Red-footed Falcon gathering sites in the Carpathian Basin. The environmental agency ignored our arguments for the poplars to be spared at least on a sector of 150 m. Consequently, the nesting colony disappeared and the falcons moved to the outskirts of Varias. The number of falcons during pre-migration decreased so much as only a third (36%) returns to Varias. Fortunately, we have positive examples as well. In 2008, we managed to partially save the trees between Zerind and Chisineu Cris in Arad County. It turned out to be an even greater achievement because, since then, the breeding pairs of rooks and falcons have multiplied.



#### **Grassland Conservation**

The biodiversity of the grassy fields is extremely rich in the natural or semi-natural grasslands. They possess a high socio-economic potential, to which their priceless landscape should be added as well. Grazing and/or mowing play essential roles in the conservation of the grassland biodiversity. Currently, over 30% of the agricultural land in Romania falls into the grassland category (pastures and meadows), but these surface areas are continuously decreasing since Romania has joined the EU. For instance, between 2007 and 2013, the total area of pastures within the country has shrunk with 56,100 ha. This can be noticed especially in the lowland areas, near larger human settlements, where the soils are richer and where people use the easiest method for urban and infrastructure development – sacrificing grasslands. The traditional livestock farming has also declined mainly because of the plummeting numbers of animals, and hence the grasslands lost their value, After the EU integration, the agricultural sector has been reactivated by subsidies and the depreciated grasslands attracted many Romanian and foreign big investors. In most cases, these grasslands had persisted over the decades (or even the centuries) because they were in ideal places or because they were not suitable for crops (salt steppes or sandy areas). Thanks mainly to the European subsidies, then to the Romanian legislation and the diversity of the new crop varieties, these lands start subsequently to enter the agricultural cycle. Even though ploughing up grasslands or using them as sites for development and infrastructure are illegal - countless national and European laws forbid these practices - nonetheless, it is precisely the lack of such regulations that allow these to happen. Milyus Group reported to the competent authorities numerous cases of illegal activities affecting the grasslands. For instance, the referrals of several such irregularities that took place in Timis and Arad counties stopped the disappearance of 780 ha of grassland. In most cases, these either belonged to a protected area or had been protected as a habitat.





# International "Milvus" Nature Photography Contest

The first edition of the contest took place in 2009, and since then it has become the longest-lived and most prestigious international nature photography contest in Romania. As there are always valuable photographs in the final stage, the judging process is always a challenge for the three members of the jury: András Tamás AFIAP - President, István Kerekes EFIAP / d1 and Dan Dinu AFIAP. We are often asked why we, as a nature conservation organisation, organise a photography contest. The answer could not be easier - we love nature and to us, it is here that the most beautiful photos are taken. We are certain that nature photography has the power to bring people closer to the natural values. We strongly believe that the purpose of nature photography is to arouse interest and bring people closer to the wonders of the natural world. The first edition has been organised by István Kerekes, a former volunteer of "Milyus Group" Association, Since then, the jury members have evaluated more than 4,300 photos from over 20 countries. The categories change from year to year – thus, specialised photographers may also get the chance to win the first prize as well. Winners receive cash and custom-designed trophies. Dan Dinu: "I have been in the jury since the first edition and I have to admit that I'm always looking forward to this moment with great enthusiasm and curiosity. I have always been surprised by the photographs that were submitted and I am glad to see that lately, they are increasingly unique and interesting. Another positive aspect of these past eight years is the growing number of Romanian participants. One can learn a lot in a contest. Even though the expectations are high, the most important thing to the competitor is to participate. Contestants can compare their works with the others' and they can realise what they should change in their works to get better results. On the other hand, I noticed that more young Romanian photographers are awarded, which also contributes to the development of nature photography in Romania. If I weren't part of the jury, I would definitely be among the participants."



us Nature











Contact Person: Papp Judith • judith.papp@milvus.ro • 0722 435 905

# 66 Grand Prizes 2009-2016



2009 • Forrásy Csaba HU • Swanstart



2010 • Csonka Péter HU • In the rainstorm



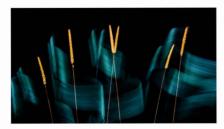
2011 • Gönye Csaba HU • Spring phototaxis



2012 • Szőke Attila SK • Mimicry



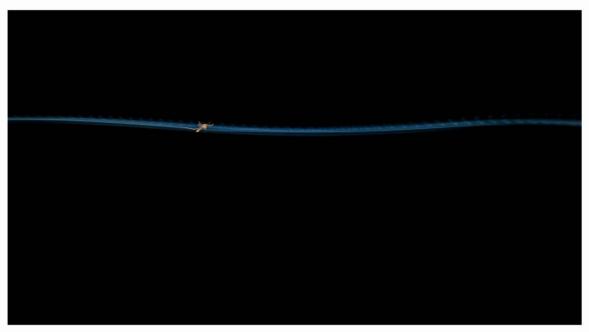
2013 • Gergely Zoltán Nagy RO • Winter visitor



2014 • Kiss Csaba HU • Light and fantasy



2015 • Lukács Gábor HU • Magic morning



2016 • Daróczi Csaba HU • Mosquito's highway



#### List of Scientific Articles

Over the years, the members of Milvus Group wrote numerous scientific articles. Here are some of them:

**Aczél-Fridrich, Zs.**, Cserkész, T., **Hegyeli, Zs.**, **Sugár, Sz.** & Péter, D. 2011. Előzetes adatok Szenéte környékének kisemlősfaunájához.. In: Markó, B. & Sárkány-Kiss, E. (eds.). A Gergyói-medence: egy mozaikos táj természeti értékei. Kolozsvári Egyetemi Kiadó, 229–233.

Adam, C., Chişamera, G., **Daróczi, J. Sz.**, Sándor, D. A., Gogu-Bogdan, M. 2009. Data on the chewing lice fauna (Phtiraptera: Ambylacera, Ischnocera) from some wild and domestic birds of Romania. Travaux du Muséum National d'Histoire Naturelle «Grigore Antipa», 52: 177–232.

Adam, C., **Daróczi, J. Sz.** 2006. The chewing lice (Phtiraptera: Ambylacera, Ischnocera) collected on some Falconiformes and Strigiformes (Aves) from Romania. Travaux du Muséum National d'Histoire Naturelle «Grigore Antipa», 49: 145–168.

Bănăduc, D., **Nagy, A. A.**, Curtean-Bănăduc, A. 2012. New SCIs proposal regarding the ichtiofauna after the first Continental Biogeographic Seminar for Romania, Sibiu (Transylvania, Romania) 9-12 June 2008. Acta Oecologica Carpatica, 5: 135–150.

Bănăduc, D., **Nagy, A. A.**, Curtean-Bănăduc, A. 2012. New SCIs proposal regarding the ichtiofauna after the first Stepic Biogeographic Seminar for Romania, Sibiu (Transylvania, Romania) 9-12 June 2008. Transylvanian Review of Systematical and Ecological Research, 14: 111–122.

Băncilă, R. I., Ozgul, A., Hartel, T., **Sos, T.**, Schmidt, B. R. 2016. Direct negative density-dependence in a pond-breeding frog population. Ecography 39: 449–455.

Barti, L., **Kovács, I.**, 2001. A málnásfürdői mofetták gerinces áldozatainak jegyzéke (1999. Február 28.- 2000. Szeptember 18.). Acta Siculica 1999/1, Sepsiszentgyörgy.

Carpenter, J., **Hegyeli, Zs.**, Bugariu, S., Moldován, I. 2014. First confirmed records of Lesser Mouse-tailed Bat, *Rhinopoma cystops* Thomas, 1903, for Sinai, Egypt (Mammalia: Chiroptera). Zoology in the Middle East, 60(2): 180-182.

Cserkész, T., **Aczél-Fridrich, Zs.**, **Hegyeli, Zs.**, **Sugár, Sz.**, Czabán, D., Horváth, O., Sramkó, G. 2015. Rediscovery of the Hungarian birch mouse (*Sicista subtilis trizona*) in Transylvania (Romania) with molecular characterisation of its phylogenetic affinities. Mammalia, 79(2): 215–224.

Csorba, G., Krivek, G., Sendula, T., Homonnay, Z. G., **Hegyeli, Zs.**, **Sugár, Sz.**, Farkas, J., Stojnić, N., Németh, A. 2015. How can scientific researches change conservation priorities? A review of decade-long research of blind mole-rats (Rodentia: Spalacinae) in the Carpathian Basin. Therya, 6(1): 103–121.

Dehelean, L., **Fülöp, A.**, **Nagy, A.**, Sandu, A. 2011. Interesting food source for six juvenile Saker Falcons *Falco cherrug* near Bečej. Ciconia, 20: 96.

Diaz-Real, J., Serrano, D., Pérez-Tris, J., Fernández-González, S., Bermejo, A., Calleja, J. A., De la Puente J,De Palacio, D., Martínez, J. L., Moreno-Opo, R., Ponce, C., Frías, Ó., Tella, J. L., Møller, A. P., Figuerola, J., Pap, P. L., **Kovács, I.**, Vágási, I. Cs., Meléndez, L., Blanco, G., Aguilera, E., Senar, J. C., Galván, I., Atiénzar, F., Barba, E., Cantó, J. L., Cortés, V., Monrós, J. S., Piculo, R., Vögeli, M., Borràs, A., Navarro, C., Mestre, A., Jovani, R. 2014. Repeatability of feather mite prevalence and intensity in passerine birds. PLoS ONE 9: e107341.

Domahidi, Z., Zeitz, R., Daróczi, J. Sz. 2004. Raptor Migration as a Conservation Opportunity: First Full-season Migration

Counts in South-east Romania. In: Chancellor, R. D. & Meyburg, B.-U. (eds.). Raptors Worldwide. World Working Group on Birds of Prey & BirdLife Hungary, Budapest, 815–822.

**Domokos, Cs., Kecskés, A.** 2006. The possibilities and difficulties of wolf conservation in Romania. Acta Scientiarum Transylvanica – Múzeumi Füzetek, 14(1): 79–91.

Dorresteijn, I., Hanspach, J., **Kecskés, A., Latková, H., Mezey, Zs.**, **Sugár, Sz.**, von Wehrden, H., Fischer, J. 2014. Human-carnivore coexistence in a traditional rural landscape. Landscape Ecology 29(7): 1145–1155.

Fehérvári, P., Solt, S., Palatitz, P., Barna, K., Ágoston, A., Gergely, J., **Nagy, A.**, Nagy, K., Harnos, A. 2012. Allocating active conservation measures using species distribution models: a case study of red-footed falcon breeding site management in the Carpathian Basin. Animal Conservation, 15(6): 648–657.

Fehérvári, P., Lázár, B., Palatitz, P., Solt, Sz., **Nagy, A.**, Prommer, M., Nagy, K., Harnos, A.2014. Pre-migration roost site use and timing of post-nuptial migration of Red-footed Falcons (*Falco vespertinus*) revealed by satellite tracking. Ornis Hungarica, 22(1): 36–47.

Fülöp, T., Márk-Nagy, J. 2012. New occurrence of the Eurasian beaver (*Castor fiber* Linnaeus, 1758) on the Someş River. Satu Mare – Studii si Comunicări Seria Stiintele Naturii, 13: 35–41.

Fülöp, A., Bărbos, L., Bóné, G. M., Daróczi, J. Sz., Dehelean, L. A., Kiss, R. B., Kovács, I., Nagy, A., Papp T. 2012. Autumn migration of soaring birds in North Dobrogea, Romania: a study with implications for wind farm development. Ornis Hungarica, 20(2): 73–85.

Fülöp, A., Kovács, I., Baltag, E., Daróczi, J. Sz., Dehelean, A. S., Dehelean, L. A., Kis, R. B., Komáromi, I. S., Latková, H., Miholcsa, T., Nagy, A., Ölvedi, Sz. Z., Papp, T., Sándor, A. K., Zeitz, R., Kelemen, M. A. 2014. Autumn migration of soaring birds at Bosporus: validating a new survey station design. Bird Study, 61(2): 264–269.

Galván, I., Aguilera, E., Atiénzar, F., Barba, E., Blanco, G., Cantó, J. L., Cortés, V., Frías, Ó., **Kovács, I.**, Meléndez, L., Møller, A. P., Monrós, J. S., Pap, P. L., Piculo, R., Senar, J. C., Serrano, D., Tella, J. L., Vágási, Cs. I., Vögeli, M., Jovani, R. 2012. Feather mites (Acari: Astigmata) and body condition of their avian hosts: a large correlative study. Journal of Avian Biology, 43: 273–279.

Hartel, T., **Sos, T.**, Popescu, V. D., Băncilă, R. I., Cogălniceanu, D., Rozylowicz, L. 2014. Amphibian conservation in traditional cultural landscapes: the case of Central Romania. North-Western Journal of Zoology, 10 (Supplement 1): S51–S61.

**Hegyeli Zs.** 2008. Az északi szöcskeegér, *Sicista betulina* (Rodentia: Dipodidae) újabb jelzése Romániából. Acta Siculica, 2008: 115–120.

**Hegyeli, Zs.** 2011. Data on the herpetofauna of the southern part of Giurgeu Depression. In: Markó, B. & Sárkány-Kiss, E. (eds.). A Gergyói-medence: egy mozaikos táj természeti értékei. Kolozsvári Egyetemi Kiadó, 2011, 175–182.

**Hegyeli, Zs., Kecskés, A.** 2014. The occurrence of wild-living American Mink *Neovison vison* in Transylvania, Romania. Small Carnivore Conservation, 51: 23–28.

**Hegyeli, Zs.**, **Kecskés, A.**, Korbut, Z., Banaszek, A. 2015. The distribution and genetic diversity of the common hamster *Cricetus cricetus* in Central and Western Romania. Folia Zoologica, 64(2): 173–182.

**Hegyeli, Zs., Sos, T.** 2015. Distribution and population size of the moor frog (*Rana arvalis*) in the Râul Negru/Feketeügy River Basin. Acta Siculica, 2014–2015: 95–104.

Imecs, I., Nagy, A. A. 2012. Ihtiofauna râului lara și a afluenților săi în special cu privire la situl Natura 2000 ROSCI0263

- Valea Ierii. Satu Mare Studii și Comunicări Seria Științele Naturii, 12: 15-21.
- Imecs, I., **Nagy, A. A.** 2016. Data concerning the fish fauna of the Moldova River based on surveys of ROSCI0321, ROSCI0365, ROSCI0363, ROSCI0364 natura 2000 sites. Analele Ştiinţifice ale Universităţii "Al. I. Cuza" Iaşi, s. Biologie animală 62: 89–104.
- **Kecskés, A.**, Kun, A. 2006. Preliminary results of brown bear food composition in an autumn agglomeration area. Acta Scientiarum Transylvanica Múzeumi Füzetek 14(1): 93–106.
- **Kecskés, A.** 2008. Some questions regarding wolves in Romania. In Kutal, M. & Rigg, R. (eds.): Perspectives of wolves in Central Europe: Proceedings from the conference held on 9th April 2008 in Malenovice, Beskydy Mts., Czech Republic. Hnuti DUHA Olomouc, Olomouc, CD-ROM, 27–34.
- **Kelemen, A. M.**, Parragh, K. 1997. Năpîrlirea post-juvenilă și relația acesteia cu schimbarea greutății la Aușelul cu cap galben (*Regulus regulus*). Múzeumi Füzetek, 6: 178-182.
- Komáromi, I., Kovács, I., Hegyeli, Zs., Kiss, R. B. 2009. The Status of the Peregrine Falcon in Romania, in Sieliczki, J., Mizera, T. (ed.): Peregrine Falcon Populations, Turul Publishing, Warsaw, 2009.
- Kósa, F., **Papp, T.** 2007. Distribution, population size and dynamics of the white stork (*Ciconia ciconia L.*) in the Hârtibaciu River Basin (Transylvania, Romania). Transylvanian Review of Systematical and Ecological Research, 4: 169–178.
- Kósa, F., **Papp, T.**, Pap, P. L. 2005. Distribution, population size and dynamics of the white stork (*Ciconia ciconia Linnaeus*, 1758) in the Târnava Rivers Basin (Transylvania, Romania). Transylvanian Review of Systematical and Ecological Research, 2: 155–166.
- Kovács, I. 2008. Preliminary ornithological survey in the Maramureş Mountains Nature Park (Maramureş, Romania).
- Transylvanian Review of Systematical and Ecological Research 5: 201–206.
- Krištín, A., Latková, H., Sándor, K. A. 2011. Orthoptera and Mantodea in foraging territories of the Scops Owl *Otus scops* in Central Romania. Linzer biologische Beiträge, 43(2): 1483–1491.
- Latková, H., Sándor, K. A. 2010. Another record of *Pipistrellus kuhlii* in Dobrogea (Romania). Vespertilio, 13-14: 149-150. Latková, H., Sándor, K. A., Krištín, A. 2012. Diet composition of the scops owl (*Otus scops*) in central Romania. Slovak Raptor Journal, 6: 17–26.
- Marosi, B., **Sos, T.**, Ghira, I. V., Damerti, A., Popescu, O. 2010. Identification of COI partial sequences in two closely related frog species, *Rana dalmatina* and *Rana temporaria*. Herpetologica Romanica, 4: 1–6.
- Marosi, B., Ghira, I., **Sos, T.**, Popescu, O. 2011. Identification of partial MHC class II B exon 2 sequences in two closely related snake species: *Natrix tessellata* and *Natrix natrix*. Herpetologica Romanica, 5: 1–6.
- Marosi, B., Zinenko, O. I., Ghira, I. V., Crnobrnja-Isailović, J., Lymberakis, P., **Sos, T.**, Popescu, O. 2012. Molecular data confirm recent fluctuations of northern border of dice snake (*Natrix tessellata*) range in Eastern Europe. North-Western Journal of Zoology, 8(2): 374–377.
- Marosi, B., **Sos, T.**, Ghira I. V., Popescu, O. 2013. COI based phylogeography and intraspecific genetic variation of *Rana dalmatina* populations in the vicinity of the Carpathians. German Journal of Zoology Research, 1(1): 7–16.
- **Nagy, A. A.**, Imecs, I. 2011. Date din literatura de specialitate privind ichtiofauna ariilor naturale protejate de pe cursul inferior al râului Tur, având în vedere în special speciale Natura 2000. Satu Mare Studii și Comunicări Seria Științele Naturii, 10–11: 91–102.

- **Nagy, A. A.**, Imecs, I., **Hegyeli, Zs.** 2011. A Maros halfaunája a Gyergyói-medencében az utóbbi évtizedekben bekövetkezett változások és védelmi javaslatok. In Markó B. & Sárkány-Kiss E. (eds.). A Gergyói-medence: egy mozaikos táj természeti értékei. Kolozsvári Egyetemi Kiadó, 2011, 161–174.
- Németh, A., **Hegyeli, Zs.**, Sendula, T., Horváth, M., Czabán, D., Csorba, G. 2016. Danger underground and in the open predation on blind mole-rats (Rodentia: Spalacinae) revisited. Mammal Review, 46: 204–214.
- Németh, A., Homonnay, Z. G., Krízsik, V., Csorba, M., Pavlíček, T., **Hegyeli, Zs.**, Hadid, Y., **Sugár, Sz.**, Farkas, J., Csorba, G. 2013. Old views and new insights taxonomic revision of the Bukovina blind mole rat, Spalax graecus. Zoological Journal of the Linnean Society, 169(4): 903–914.
- Németh, A., Révay, T., **Hegyeli, Zs.**, Farkas, J., Czabán, D., Rózsás, A., Csorba, G. 2009. Chromosomal forms and risk assessment of *Nannospalax* (superspecies *leucodon*) (Mammalia: Rodentia) in the Carpathian Basin. Folia Zoologica, 58(3): 349–361.
- Nowak, C., **Domokos, Cs.**, Dutsov, A., Frosch, C. 2014. Molecular evidence for historic long-distance translocations of brown bears in the Balkan region. Conservation Genetics, 15(3): 743–747.
- Pap, P. L., Osváth, G., Sándor, K., Vincze, O., **Bărbos, L.**, **Marton, A.**, Nudds, R. L., Vágási, C. I. 2015. Interspecific variation in the structural properties of flight feathers in birds indicates adaptation to flight requirements and habitat. Functional Ecology, 29: 746–757.
- Pap, P. L., Osváth, G., Aparicio, J. M., **Bărbos, L.**, Matyjasiak, P., Rubolini, D., Saino, N., Vágási, C. I., Vincze, O., Møller, A. P. 2015. Sexual dimorphism and population differences in structural properties of barn swallow (*Hirundo rustica*) wing and tail feathers. PLoS ONE 10(6): e0130844.
- Šálek, M., Spassov, N., Anděra, M., Enzinger, K., Ottlecz, B., **Hegyeli, Zs.** 2013. Population status, habitat associations, and distribution of the steppe polecat *Mustela eversmanii* in Europe. Acta Theriologica, 58(3): 233–244.
- **Sos, T.**, Herczeg, G.2009. Sexual size dimorphism in eastern slow-worm (*Anguis fragilis colchica*, Reptilia: Anguidae). Russian Journal of Herpetology, 16(4): 304–310.
- **Sos, T.** 2010. Evaluating the accuracy of morphological traits used in *Anguis* (sub)species differentiation. Herpetologica Romanica, 4: 29–44.
- **Sos, T.** 2011. Spot polymorphism in *Anguis colchica* Nordmann, 1840 (Reptilia: Anguidae): inter-size class variation. North-Western Journal of Zoology, 7(1): 171–175.
  - Sos, T. 2012. Two extreme cases of regeneration in *Testudo graeca ibera* Pallas, 1814. Biharean Biologist, 6(2): 128–131.
- Sos, T. 2013. Conservation activities for European pond turtles (*Emys orbicularis*) in Romania. Herpetology Notes, 5:
- 147-148.
- **Sos, T.** 2015. Further data on the distribution of Transylvanian smooth newt (*Lissotriton vulgaris ampelensis* Fuhn, 1951) in Romania. Acta Siculica, 2014-2015: 91-94.
- **Sos, T., Hegyeli, Zs.** 2011. Morphotype of *Vipera berus nikolskii* Vedmederja, Grubant & Rudaeva, 1986, present in the Buzău Subcarpathians, Romania. Herpetozoa, 24(1/2): 91–95.
- **Sos, T., Hegyeli, Zs.** 2014. Characteristic morphotype distribution predicts the extended range of the "Transylvanian" smooth newt, *Lissotriton vulgaris ampelensis* Fuhn 1951, in Romania. North-Western Journal of Zoology, 11(1): 34–40.
  - Sos, T., Tóth, A., Tanţău, I. 2011. New reptile fossil records from Corund (Eastern Transylvania, Romania) and their

- paleoenvironmental significance. Carpathian Journal of Earth and Environmental Sciences, 6(2): 173-181.
- **Sos, T., Daróczi, Sz., Zeitz, R.**, Pârâu, L. 2008. Notes on morphological anomalies observed in specimens of *Testudo hermanni boettgeri* Gmelin, 1789 (Reptilia: Chelonia: Testudinidae) from Southern Dobrudja, Romania. North-Western Journal of Zoology, 4(1): 154–160.
- Sos, T., Kecskés, A., Hegyeli, Zs., Marosi, B. 2012. New data on the distribution of *Darevskia pontica* (Lantz and Cyrén, 1919) (Reptilia: Lacertidae) in Romania: filling a significant gap. Acta Herpetologica, 7(1): 175–180.
- Strugariu, A., **Sos, T.**, Sotek, A., Gherghel, I., **Hegyeli, Zs.** 2009. New locality records for the adder (*Vipera berus*) in the Carpathian Corner, Romania. Advances in Environmental Sciences 1(2): 99–103.
- Strugariu, A., **Sos, T.**, Gerghel, I., Ghira, I., Sahlean, T. C., Puṣcaṣu, C. M., Huṭuleac-Volosciuc M. V. 2008. Distribution and current status of the herpetofauna from the Northern Măcin Mountains area (Tulcea County, Romania). Analele Ştiinţifice ale Universităţii "Al. I. Cuza" Iaşi, s. Biologie animală, 54: 191–206.
- Szabó, D. Z., Benkő, Z., Csősz, I., Fenesi, A., Gábos, E., Imecs, I., Kiss, I., László, Z., Macalik, K., **Nagy, A. A.**, Nagy, H. B., Sárkány-Kiss, E., Sike, T., Szabó, A., Szodoray-Parádi, F. 2012. Măsuri minime de conservare pentru speciile de interes conservativ din Ariile Proteiate Râul Tur. Satu Mare Studii și Comunicări Seria Stiintele Naturii, 12: 15–21.
- Vágási, C. I., Vincze, O., Pătraş, L., Osváth, G., **Marton, A.**, **Bărbos, L.**, Sol, D., Pap, P. L. 2016. Large-brained birds suffer less oxidative damage. Journal of Evolutionary Biology, 29: 1968–1976.
- Väli, Ü., Dombrovski, V., Treinys, R., Bergmanis, U., **Daróczi, J. Sz.**, Dravecky, M., Ivanovski, V., Lontkowski, J., Maciorowski, G., Meyburg, B.-U., Mizera, T., **Zeitz, R.**, Ellegren, H. 2010. Widespread hybridization between the Greater Spotted Eagle Aquila clanga and the Lesser Spotted Eagle *Aquila pomarina* (Aves: Accipitriformes) in Europe. Biological Journal of the Linnean Society, 100: 725–736.
- Vincze, O., **Daróczi, J. Sz., Kelemen, A. M., Kovács, I.**, Pap, P. L., **Papp, T.**, Sándor, D. A., **Zeitz, R.** 2011. The avifauna of the Giurgeu Depression. In: Markó, B. & Sárkány-Kiss, E. (eds.). A Gergyói-medence: egy mozaikos táj természeti értékei. Kolozsvári Egyetemi Kiadó, 2011, 183–213.
- Vincze, O., Vágási, Cs. I.., **Kovács, I.**, Galván, I., Pap, P. L. 2013. Sources of variation in uropygial gland size in European birds. Biological Journal of the Linnean Society 110(3): 543–563.

### 74 Milvus Group's publications

**Asociația "Grupul Milvus"** 2008. Miniatlasul viețuitoarelor – speciile caracteristice zonei deluroase din Ardeal. Az élővilág miniatlasza – az erdélyi dombvidék jellegzetes növény- és állatfajai. Asociația pentru Protecția Păsărilor și a Naturii "Grupul Milvus", Târqu Mures, 2008, 84 pp.

**Domokos, Cs.**, **Kecskés, A.** 2005. Ragadozók és emberek. Lehetséges békésen együttélniük Romániában? Milvus Csoport Madártani és Természetvédelmi Egyesület, 2005, 91 pp.

**Domokos, Cs.**, **Kecskés, A.** 2005. Carnivore și oameni. Este posibilă conviețuirea lor pașnică în România? Asociația pentru Protecția Păsărilor și a Naturii "Grupul Milvus", 2005, 91 pp.

**Domokos, Cs.**, **Kecskés, A.** 2005. Carnivores and humans. Can they peacefully coexist in Romania? "Milvus Group" Bird and Nature Protection Association, 2005, 91 pp.

Kala, B., **Kelemen, A. M.**, Kepel, A. 2007. CEETES Trade in Endagered Species in Central and Eastern Europe, publicat cu ocazia Conferinței Părților a convenției de la Washington (CITES).

Kecskés, A., Papp, J. Nyomkeresők kiskönyve. "Milvus Csoport" Madártani és Természetvédelmi Egyesület, 14 pp.

**Kelemen, A. M., Papp, T.** 2003. Romania in "Evaluating the implementation of the Pan-European Biological and Landscape Diversity Strategy in Central and Eastern Europe" raport pregătit pentru conferința ministerială de la Kiev din 2003.

**Kelemen, A. M., Papp, T.** 2003. Romania in "Implementation of international commitments in Central and Eastern Europe" raport pregătit pentru conferința ministerială de la Kiev din 2003.

**Kelemen, A. M.**, **Papp, T.**, Hajdu, Z. 2003. Romania in "Safeguarding biodiversity in National Development Plans" raport pregătit pentru conferința ministerială de la Kiev din 2003.

**Kelemen, K.** 2008. Madarakkal a fenntarthatóságért – módszertani útmutató óvónőknek és tanítónőknek a fenntartható fejlődés tanításához. "Milvus Csoport" Madártani és Természetvédelmi Egyesület, 2008, 58 pp.

**Kelemen, K., Kelemen, A. M.** 2008. Miniatlasul vieţuitoarelor. Speciile caracteristice zonei deluroase din Ardeal. Az élővilá miniatlasza. Az erdélyi dombvidék jellegzetes növény- és állatfajai. Asociaţia pentru Protecţia Păsărilor şi a Naturii "Grupul Milvus", 84 pp.

Kelemen, K., Papp, D. I., Sos, T., Nagy, A. A., Kiss, R. B. 2012. Natura – dascăl pentru dascăli. Metode educative pentru promovarea rețelei Natura 2000. Asociația pentru Protecția Păsărilor și a Naturii "Grupul Milvus", Târgu Mureș, 2012, 159 pp.

**Papp, D. I., Kelemen, K.** 2013. Copiii și Natura 2000. Colecție de jocuri în natură. Asociația pentru Protecția Păsărilor și a Naturii "Grupul Milvus", Târgu Mureș, 2013, 84 pp.

**Papp, T.**, Fântână, C. (ed.) 2008. Ariile de importanță avifaunistică din România. Important Bird Areas in Romania. Publicație comună a Societății Ornitologice Române și a Asociației "Grupul Milvus", Târgu Mureș, 2008, 319 pp.

**Papp, T., Daróczi, Sz., Zeitz, R., Hegyeli, Zs., Komáromi, I.,** Proca, C., Nicoară, A., Proca, M., **Sos, T.**, Fântâna, C., Matis, A., Bugariu, S., Pop, M., Popa, R. 2013. Útmutató a békászó sas (*Aquila pomarina*) élőhelyének megfelelő kezeléséhez Romániában. LIFE08 NAT/RO/000501 A békászó sas védelme Romániában projekt, 64 pp.

Papp, T., Daróczi, Sz., Zeitz, R., Hegyeli, Zs., Komáromi, I., Proca, C., Nicoară, A., Proca, M., Sos, T., Fântâna, C., Matis, A., Bugariu, S., Pop, M., Popa, R. 2013. Ghid pentru managementul corespunzător al habitatului acvilei ţipătoare mici în România (*Aquila pomarina*). Proiectul LIFE08 NAT/RO/000501 "Conservarea acvilei ţipătoare mici în România", 64 pp.

Papp, T., Daróczi, Sz., Zeitz, R., Hegyeli, Zs., Komáromi, I., Proca, C., Nicoară, A., Proca, M., Sos, T., Fântâna, C., Matis, A.,

Bugariu, S., Pop, M., Popa, R. 2013. Lesser Spotted Eagle friendly habitat management guidelines. LIFE08 NAT/RO/000501 "Conservation of Aquila pomarina in Romania" project, 64 pp.

Papp, T., Daróczi, Sz., Zeitz, R., Hegyeli, Zs., Komáromi, I., Proca, C., Nicoară, A., Proca, M., Sos, T., Fântâna, C., Matis, A., Bugariu, S., Pop, M., Popa, R. 2013. Plan National de Actiune pentru specia Aquila pomarina. Proiectul LIFE08 NAT/RO/000501 "Conservarea acvilei tipătoare mici în România", 53 pp.

Sos, T. 2011. În obiectiv: Testoasa de apă europeană, Emys orbicularis. Asociația Ecouri Verzi, Cluj-Napoca, 1-110. Szabó, D. Z., Kelemen, A. M., Miholcsa, T., Daróczi, Sz. 2014. Románia gyakori madarai: mezőgazdasági területek, települések és erdők. Exit, Cluj-Napoca, 2014, 111 pp.

# Milvus Group's Periodicals

milyus 1994-1998

I. évfolyam, 1997: 1., 2., 3., 4., 5., 6. szám, II. évfolyam, 1998: 1., 2., 3., 4., 5. szám, III. évfolyam, 1999: 1. szám, IV. évfolyam, 2000: 1. szám, V. évfolyam, 2003: 1., 2., 3., 4. szám, VI. évfolyam, 2004: 1., 2-3., 4. szám, VII. évfolyam, 2005: 1., 2., 3., 4. szám, VIII. évfolyam, 2006: 1-2., 3-4. szám, IX. évfolyam, 2007: 1-2., 3-4. szám, X. évfolyam, 2008: 1., 2., 3-4. szám, XI. évfolyam, 2009: 1., 2-4. szám, XII. évfolyam, 2010: 1-4. szám.

Kolompszo I-III évfolyam, 2006-2008



# 76 Content

Foreword	3
A Brief History of Our Organizations	5
Natura 2000	6
Natura 2000 Sites Designation	7
Protected Area Management	9
Research, inventory, monitoring	12
Bird Ringing	13
National Surveys and Monitoring Programmes	15
Censuses and Local Monitoring Programmes	17
Raptor Migration Research	18
OpenBirdMaps: An Open Acces Online Database	19
Conservation projects	20
Raptor Research and Conservation	21
Golden Eagle	21
Lesser Spotted Eagle	23
Red-footed Falcon	24
Saker Falcon	26
Great Bustard	27
White Stork	28
European Roller	31
Brown Bear	32
Blind Mole-rats	34
Eurasian Otter	35
European Ground Squirrel	36
European Wildcat	37
Owl Pellet Analysis	37
Birch Mise	38

Large Carnivores and Eurasian Otter Study in Natura 2000 Areas	39
Carnivores and Humans: Can They Peacefully Coexist in Romania?	40
Carnivores and Humans: Improving Human-Wolf Coexistence	40
Hungarian Meadow Viper	41
European Pond Turtle	42
Fish	43
Education, Milvus Scholarship	44
Ecological Education	45
Milvus Scholarship	47
Wildlife Rehabilitation	48
Wildlife Rehabilitation Center	49
Ecosystem Services	50
Studies on Ecosystem Services	51
CITES, watchdog, policy	52
Wildlife Trade Regulations - CITES	53
Policy	54
National and International Partnerships	55
Agriculture and Nature Conservation	56
Birds and Electricity Power Grids	58
Watchdog	59
Wind Farms	59
Mountain Rivers and Green Energy	60
Poisoning	61
Roadside Trees	62
Grassland Conservation	63
International "Milvus" Nature Photography Contest	64
Grand Prizes 2009-2016	66

Scientific Articles, Publications	68
List of Scientific Articles	69
Milvus Group's Publications	74
Milvus Group's Periodicals	75
Content	76



Milvus Group Bird and Nature Protection Association

Headquarters: Crinului str. 22, 540343 Tîrgu Mureş Postal Address: 540600 Tîrgu Mureş OP1 Cp40

Tel/Fax: +40 265 264726 E-mail: office@milvus.ro CUI/CIF: RO 14198928

ING BANK RO12INGB0000999901703336

