

URBAN WILDLIFE: CONFLICT OR COEXISTENCE?**MIKLÓS HELTAI**

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ABSTRACT

Urban wildlife management is a specific discipline within wildlife biology, focusing on management and research of species in inhabited areas. Urban wildlife management has become business. Numerous companies operate in this field all around the world, while the growing number of conflicts also demonstrates the urgent need to establish such enterprises in Hungary as well. In agriculture, and more specifically, in wildlife management, each and every new opportunity is important and has to be taken advantages of. Urban wildlife management provides such opportunities principally for well-educated wildlife management professionals. In Hungary we first of all need to establish and clarify the legal background. In this process responsibility should be removed from the game managers working outside the inhabited areas. Legal instruments should be offered for the management, and even for the trapping of both the game- and the protected species. Possibilities for protection have to be provided for the aggrieved parties. Nevertheless, the residents affected by these conflicts have to understand that they are the ones to defend their own private properties.

Keywords: urban wildlife, conflict, coexistence, wildlife management

INTRODUCTION

The growing direct and indirect effects of mankind on natural habitats and communities have been known for a long time. The general belief is that there is not much chance for their survival given the proximity of humans. However, this general opinion does not take into account the importance of natural adaptability of species (DARWIN, 2003), and most importantly the fact that those species that are able to adapt to changes in the environment dominated by humans, are also able to proliferate there, as long as the environment is stable (CROOK AND SOULE, 1999). One form of adaptation is that certain species can find all their life conditions even in the near proximity of humans (ADAMS ET AL., 2006). Moreover, new species (or more precisely species new to inhabited areas) have often been reported to appear in inhabited areas. This process has been accelerated by the urban sprawl, which is the disproportionately greater growth of built up areas compared to the increasing number of inhabitants. This in return means faster decrease in size of natural habitats in the proximity of urban areas (WRIGHT, 2004)

Apart from the adaptability, urban areas offer a few further advantages too, which makes it easier for certain species to settle (ADAMS ET AL., 2006; HELTAI AND SZŐCS, 2008):

- beneficial microclimate, especially in the winter: the higher than average winter temperatures help quite a few songbird species to survive;
- suitable shelters: attics, spires, abandoned buildings offer a suitable shelter for several species like pigeons or bats, for example;
- availability of nutrition: apart from the general waste containing a lot of organic

waste (edible for animals) and humans directly or indirectly feeding the animals, invertebrate species collected in the traps of urban living (proximity of street lamps, puddles) also count as food resource;

- lack of predators: this especially helps the settling of small-sized prey species.

The municipal structure and the changes in architecture also help the migration of certain species to the urban areas. Highways and train tracks leading to the city centres offer a green corridor to a number of species. Many people feeling deprived of nature try to reconnect with it by keeping pets. Pets that escape, or are let go by their human companion, often find their living conditions away from their natural habitats, too, even if it means being continents away (ADAMS 2005; ADAMS ET AL. 2008; HELTAI AND SZŐCS 2008). Species living around humans in the cities are evaluated rather differently. This depends on several things: for how long a certain species has been living with us, how dangerous it is commonly considered and what damages it is capable of making (HELTAI AND SZŐCS, 2008). Being unknown to people, (rightfully or unrightfully) being regarded as dangerous and damages directly caused to humans all lead to more and more significant conflicts between urban wildlife and human societies. This was first noticed in North America in 1967, where the first conference focusing exclusively on managing species living in the cities was held for wildlife management professionals (HADIDIAN, 2003). In the history of urban wildlife management, this is considered the first milestone. In Europe – especially in the UK, Holland, Germany and Poland – the first projects relating to urban wildlife management began in the early '90s (ADAMS, 2005).

Urban wildlife management is a specific discipline within wildlife biology, focusing on management and research of species in inhabited areas. Among the studied species we can find all the vertebrate ones that have always lived around human communities, and those habitat- and trophy generalist species that newly appeared in this peculiar environment during the last centuries. This means that animals regarded as pests (rat, house mouse), as game (wild boar, red fox), as protected (bats, reptiles) or as desirable curiosities (songbird species) all are the subjects of this particular discipline (HELTAI AND SZŐCS, 2008). Urban wildlife managers thus work primarily for the survival of species appearing in cities and urban areas, and for easing conflict between wildlife and humans (ADAMS ET AL., 2006). Urban wildlife management becomes especially important if (VANDRUFF ET AL., 1994):

- the species settling in proliferate;
- exotic species turn up;
- appearing animals prove to be dangerous directly or indirectly to humans;
- the level and volume, or the location, or the type of the damage they make is not tolerable to humans.

Urban wildlife management – as a profession – has become business. Numerous companies operate in this field all around the world, while the growing number of conflicts also demonstrates the urgent need to establish such enterprises in Hungary as well. In agriculture, and more specifically, in wildlife management, each and every new opportunity is important and has to be taken advantages of. Urban wildlife management provides such opportunities principally for well-educated wildlife management professionals. My purpose is to show the most frequent conflicts arising in Hungary, and on the basis of these, to present the opportunities urban wildlife management has in store.

RESULTS

In the case of many potentially problematic species living in urban areas several solutions have been known – or have evolved, in order to ease conflicts - for a long time. In the case of animals considered as pests (e. g. mice, rats), various traps, poisons, or even pest controlling companies are available for everyone needing help. As for bats, usually causing fear, annoyance or minor inconvenience, civil organisations, national parks and zoos are capable of giving assistance (<http://www.zoobudapest.com/denevermentes;> <http://www.natura-alapitvany.joomlaportal.hu/index.php/deneveres-zold-szam>). Against the colonies of the rook, however, several local governments have applied definitely questionable methods. The reason for this is the garbage and noise these protected, but colonially nesting birds cause and make. People used water cannons in Kecskemét (<http://www.edenkert.hu/vilagos-zold/termeszeti/vetesi-varju-kecskem-et--vizagyu/1958/>), while in Pécs they tried to prevent nesting with sawing machines (http://hvg.hu/tudomany.termeszeti/20120229_pecs_varjak). Both solutions display the escalation of the conflict. It is a protected species, thus no such solutions should be allowed in the case of agricultural damage. The woodpecker – capable of destroying the insulation of houses – is lucky enough to avoid such dramatic, and actually illegal, interventions, probably due to the rarity and peculiarity of the damage they make. The recommended solutions, however, prove to be rather ineffective (<http://mme.hu/napi-madarvedelem/problema-madarakkal/harkalyok-rombolasa.html>). This is partly true in the case of the most frequently suggested ways of protection against pigeons in the cities as well. The acidity of their droppings can destroy buildings and metal structures to a great extent. But in the case of the stone marten, and of the wild boar, we have even less possibilities.

Living together with the stone marten

Stone martens have long been living in the villages and the buildings of the countryside, as easily available food resources (domesticated animals, various fruits) and warm attics are fairly attractive factors for this species. Its appearance in urban areas started in the 20th century, when massive urbanization of human societies also began. The urban presence of the stone marten is widely known and observed everywhere within its European occurrence area (Tóth et al., 2010), and so it is in Hungary. We have a lot of collected data on the damage it makes and has made in Budapest, Gödöllő, Sopron, Érd, Pécs and many other Hungarian cities. Plenty of scientific articles and news have been published (Heltai et al., 2005; Szócs and Heltai, 2007; Tóth, 1998; Tóth, 1999; Tóth, 2003; Tóth and Szenczi, 2004; Tóth et al., 2007a; Tóth et al., 2007b; Bárány et al., 2008; Tóth et al., 2009).

Most of the damage it makes derives from curiosity: the marten chews everything it is interested in. There are basically three reasons of this kind of damage (Heltai and Szócs, 2008):

- Chewing for acquiring information: the reason of chewing is getting to know more of the object of their interest. Humans take unknown objects in their hands out of the same curiosity, touching it to get information about it; martens do the same by chewing.
- Playing: young animals perform chewing also as a play, and to strengthen their jaw, their teeth and their muscles while practising.
- Territorial behaviour: especially true to territorial males. These animals may chew anything that has the smell of another male. This is probably the origin of most of

the damages in cars. It is enough to have the car parked in another street, which happens to be inside the territory of another stone marten. Some cars are reported to have been destroyed by martens eight times in six weeks (SCHUSTER 2004, HERR ET AL. 2009).

Martens can cause damage, disturbance or inconvenience even by their everyday presence, their moving and normal daily activities. They can, for instance, push aside tiles on the roof while playing or running, and thus causing wet walls and mouldiness in the house. They very much like using insulation materials for their nests, by which they destroy the insulation of the house. They make unpleasant and loud noises when they are chasing each other around in their mating season, which can mean sleepless nights for the human residents. Playing of the cubs is again a very noisy activity, performed mainly at night. Their droppings piling in the attic, the rotten remains of their preys and urine flowing down on the walls are not only aesthetic-, but also financial and health problems.

Protection against stone martens can be built on the four pillars of prevention, alerting, excluding and trapping. We cannot, however, just arbitrarily choose one solution most appealing to us from these four activities (with the logical exception of the process of prevention). Once the marten's appearance is observed, everything has to be done in order to succeed. The basis of protection is to notice its presence as soon as possible. Most of the times it is its typical dropping, or the noises it makes that shows its being around. In this case all the openings and holes, and all the ways it can get into the house have to be closed or blocked. Branches of trees hanging onto the roof need to be cut so that the marten could not jump over to the top of the house. "Collars" or umbrella-shaped equipments are advised to be put along the trunks of lonely big trees likely to be used for climbing up and down. It is important to terminate the availability of all the attractants for the marten (food, undisturbed shelter). The best solution would certainly be trapping and then translocating them from the area. The efficiency of trapping, however, is low, it most of the times works just as alerting.

Living together with the wild boar

The wild boar is known predominantly for its agricultural damage (BLEIER ET AL., 2012), but its occasional appearance in rural settlements is not rare, either. In recent years conflicts have risen in Budapest, too, residents of the capital feel helpless rage towards the uninvited guests (<http://vadmalaok.blog.hu/>). This phenomenon, however, is only new in Hungary. In 2003 Cahil et al. reported that a considerable wild boar population lived in the surrounding areas of Barcelona with 3 million residents. Wild boars living in Berlin do not only destroy private gardens, but also football grounds and city parks (KOTULSKI AND KÖNIG 2008). Their evaluation is also rather contradictory. 59 % of the people with negative attitude towards the presence of wild boar consider the species as "modern plague", 44 % demand population decrease, and 41 % are definitely afraid of these animals. According to the majority of the people accepting the presence of wild boar, this species does not cause any trouble (52 %), its presence can and should be tolerated (86 %), it is a positive thing to see wild boar in a city (77 %), though 67 % are also aware that population decrease should be carried out even with guns, if necessary. 9 % of the respondents even feed the animals. They would probably have given different answers, should they know that 18 % of the wild boar living in Berlin is infected with leptospirosis (JANSEN ET AL., 2007). At the 8th Vertebrate Pest Management Conference held in 2011 (JACOB AND ESTHER ED., 2011) an entire symposium was dedicated to the problems caused

by wild boar. At the symposium BOBEK ET AL. (2011) reported damages made in urban areas of Poland.

In the case of the wild boar, protection and the possibilities of management are sharply different from the ones with the stone marten. The marten does not make damages in public areas, contrary to private houses, which are very difficult to protect. Considering the wild boar, it is just the opposite: protecting private gardens is simple and easy, while its presence in public areas is a source of continuous conflicts. Actually it means that suitable and sufficiently strong fences can protect private gardens from wild boar. But public places or an entire city itself cannot be fenced around. Significant decrease or extirpation of the species from the urban areas is practically impossible.

Legal problems of urban wildlife management

In Hungary the species causing conflicts in inhabited areas belong to three legal categories: pests (e.g. rat, mouse); protected species (e.g. woodpecker, bats) (Act No. LIII. of 1996 – Nature Conservation Act); and game species (e.g. wild boar, stone marten) (Act No. LV. of 1996 – Hunting Act). These legal categories also define the potentials and possibilities of management and treatment. Practically anyone can use any instrument against the species regarded as pests. In the case of the damages made by protected species, however, owners are almost helpless, because the only way it is possible to disturb, trap, or maybe even kill the individual of a protected species causing damage is by getting the permission of the locally responsible Nature Conservation Authority. Protection therefore is strongly limited; moreover, according to the Hungarian legislation it is not possible even to claim for compensation in these cases. As for game species, in the sense of the Hunting Law, one can claim for compensation in the case of the wild boar, but not in the case of the stone marten, as the category of “damages caused by carnivore species” does not exist in the Hungarian Hunting Act. Their shooting can only be carried out with the permission of the police (Implementing regulation No. 253 of 2004. (31st of August)), and the legal possibilities of their trapping is also controversial and unexplained. The compensation defined by the law is rather questionable as well, because according to the law the game managers responsible for the damage are not allowed to hunt or to manage in inhabited areas. Moreover, they cannot even affect the most important factors attracting wild boar (shelter, food resources) in human settlements.

CONCLUSIONS

Urban wildlife management provides inexpensive solutions to questions, problems, necessities and opportunities concerning the management of certain wild animal species, taking into consideration the interests of all the affected parties involved as much as possible. In our case it means decreasing the abovementioned problems, while at the same time giving a chance for the conflict-species to survive in urban habitats, but making sure that their damages remain at a manageable level. This issue emerges in the case of a growing number of species moving into urban areas, or already proliferating there. Suitable solutions are being developed and worked out with the help of urban wildlife management (ADAMS 1994; ADAMS ET AL, 2005). Urban wildlife management is a specific discipline within wildlife biology, focusing on management and research of wild animal species in inhabited areas (ADAMS, 2005; HELTAI AND SZÓCS, 2008). Its primary field of research is managing and possibly improving the urban habitats of these species, reducing or preventing the damages they make, and taking part in creating or developing the necessary

legal regulations (McIVOR AND CONOVER, 1994; DECKER AND CHASE 1997). Managing populations, occasional rescuing, increasing the density of some highly valuable species and decreasing the populations of others are all among the most crucial goals of urban wildlife management.

In Hungary we first of all need to establish and clarify the legal background. In this process responsibility should be removed from the game managers working outside the inhabited areas. Legal instruments should be offered for the management, and even for the trapping of both the game- and the protected species. Possibilities for protection have to be provided for the aggrieved parties. Nevertheless, the residents affected by these conflicts have to understand that they are the ones to defend their own private properties. It is their duty and their expense, too. They cannot expect and demand compensation from organisations that are not responsible for this situation.

These conditions all need to be fulfilled for the establishment of urban wildlife management companies. Because the conflict has already arisen...

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