Reducing bird mortality caused by human illegal activities

Bird crime

What is bird crime?

Bird crime is a part of environmental crime. It involves various human activities the law prohibits that have an adverse impact on bird species. Among the most common types of bird crime that have been encountered are both intentional and unintentional poisoning of protected species; illegal hunting; birds caught in folding traps, nets and branches coated with glue; chicks taken from their nests; and trafficking in protected species.

Why people do it?

The reasons people perpetrate bird crimes are varied. Most often because some people consider birds to be pests or, conversely, consider their sale to be an important source of financial income. In Central Europe is mainly encountered the intentional and unintentional poisoning of raptors and killing them either with firearms or by traps. On the basis of court decisions from the Czechia, Slovakia and Hungary, it can be concluded that the perpetrators who have been convicted so far are persons who were also involved in hunting, fishing, pigeon, poultry and cattle breeding. Whatever the background of the people who have committed bird crimes, there is one feature they share and that is an incredible hatred of animals, which from their point of view cause harm. Therefore, they have no hesitation about turning to illegal methods that nonetheless put not only raptors at danger, but expose even other people to the risk of injury or death as well.

Deliberate poisoning of wild animals

This is an illegal activity where poisoned bait is manufactured and left on the ground to kill raptors and other animals, most commonly foxes, martens and badgers. The type of bait and where perpetrators leave it indicate what animals they wish to poison. For instance, foxes and badgers would appear the more likely target were pieces of meat placed near burrows where such creatures might live. If the bait is lying on an open field easily visible from above, birds of prey will appear the more likely target, and when the method involves poisoned eggs, the intention is to kill crows, ravens and martens. Yet the moment these people put out poisoned bait and then disappear from the scene, they lose control of what or who will come into contact with it. The poisons they use are as dangerous to humans as they are to animals.

Most commonly used poisons

In Central Europe, the most often used poison is carbofuran, one of the carbamates. Products containing carbofuran had been previously used in agriculture as an insecticide to protect crops against damage by pests. It used to be sold on the market under the name e.g. FURADAN, Carbodan, Yaltox, etc.. Carbofuran acts as an inhibitor of the acetylcholinesterase. Simply put, it hinders the transmission of nerve impulses throughout the body, producing neuromuscular paralysis followed by a series of uncontrolled convulsions that end in suffocation. It can enter the body through a number of different routes, whether ingested, inhaled or absorbed through the skin and mucous membranes. Even accidental contact without wearing gloves to protect against exposure poses a significant risk. To better illustrate, it only takes an average two grams of pure carbofuran to kill an adult human being. It even has properties reminiscent of the effects from nerve-paralytic warfare agents.

Due to the risks, pesticides and other formulations containing carbofuran have been prohibited throughout the European Union since 2008. Certified farmers could legally purchase and use them before they were banned. When the licence for use of carbofuran products expired in 2008, they were supposed to be handed over for safe disposal. But as practice has shown, this has not always been the case and products containing carbofuran continue to reach the public. Today mere possession of carbofuran is a criminal offence. Carbofuran is still legal in vast parts of the world (mainly Africa and SE Asia) and black market with this substance exists.

Carbofuran products come in various states (liquid or solid) and colours. Most often deep pink to purple, they can also be white or blue. It frequently happens that poisoned meat will be coloured the same.

Risks to humans

Intentional poisonings expose more than just populations of protected species to the risk of death. Because poisoned baits are left out in the open, even pets and people can come into contact with them. All it takes is for a dog on a walk to lick or taste the bait. When the first clinical signs appear, namely convulsions and vomiting, trying to save the dog the owner's hands will become contaminated with dog's saliva or vomit and the poison will also enter to the owner's body through the skin. In the worst case scenario, a child attracted to the pink colour may also come into contact with the poisoned bait. The consequences from such a case would be disastrous. The deliberate poisoning of protected species has thus become a serious social problem, too. So it is in everybody's interest to take such attempts at poisoning birds and animals seriously and to roundly condemn them.

Unintentional poisoning of wild animals

There have also been cases where unintentional poisoning of wildlife was encountered. These came from farmers who did not use pesticides, mainly rodenticides properly or used prohibited products. Rodenticides are substances used in agriculture to reduce the population of voles that live in the fields and cause farmers significant crop damage. Instructions on their use recommend that the granules or immersed grain be inserted in occupied vole burrows with a dispenser and the permitted dosage per hectare of agricultural land should never be exceeded. Similarly, rodenticides are not allowed to be applied near water sources and streams. Voles that have not died in their burrows, but whose corpses remain on the soil surface, are supposed to be collected and safely disposed of. Unfortunately, many farmers do not obey the prescribed rules for using rodenticides. Worse still, they are also using unauthorised chemicals in an attempt to save money and especially second-generation anticoagulant rodenticides. These are chemicals that keep blood from clotting and cause extensive internal bleeding. Because of the high risk that other animals besides rodents will be poisoned, there is a ban on the use of anticoagulant rodenticides outside buildings, on the field. Yet some farmers ignore the prohibition and every year there have been localised cases of widespread poisoning where dozens of Brown hares, pheasants and Roe deers have been killed. The poisoned animals themselves pose a risk to other animals that feed on the carcasses. Brodifacoum, as a second generation rodenticide, has also caused numerous severe and sub-lethal poisoning of Imperial eagles in Hungary in 2019-2021. Although this rodenticide can be purchased in small portion for indoor use legally, farmers scattered kilograms of this product illegally which caused mass-poisoning in the local ecosystem. Brodifacoum and bromadilone have also been measured in non-lethal concentrations in raptors which potentially can weaken their fitness and decrease breeding success.

What poisoned animals and baits look like

Anybody can come across a dead animal while they are walking outdoors. But how can they learn whether it was poisoned? There are a number of outward signs that tell if the animal had not died naturally.

☠ **Anybody that finds a dead raptor should be alert for the following:**
- Whether its claws are spasmodically clenched
- If the claws are grasping blades of grass, leaves, or soil
- If there is meat residue in its beak
- Whether it is lying in the prone position with its wings semi-extended
- Whether its head is turned to the side

☠ **In the case of a fox, badger, marten or cat:**
- It is lying on its side with its legs and tail outstretched
- The fur is bristling
- There are burrowing marks around the feet
- There is a sardonic smile or spasmodic grin on its face
- There is food residue in its mouth
- There are fresh droppings or vomit around it.
- The claws are extended if it is a dead cat

☠ **Nearby the dead bird or animal:**
- Is meaty bait
- Are dead insects around the carcass
- Are other dead animals or birds

In unintentional "agricultural" poisonings involving anticoagulant rodenticides, bleeding from body cavities will also be evident on the bodies. There would simultaneously be several dead animals or birds lying in the field since rodenticides tend to be applied over a wide agricultural area.

☠ **Indications of poisoned bait:**
- Various meat scraps, animal parts or offal placed in the open
- Meat bait with traces of chemicals that had been applied
- Eggs with needle marks evident on the shell
- Poisoned eggs that may have been stamped with the words "Caution: poison"
- Holes on the shell sealable with wax
- Dead insects on or near the bait
- Dead animals or birds near the bait



Where poisoned bait is most commonly placed

Poisoned bait is most often put near dirt or forest roads, at windbreaks, or around burrows. Frequently, perpetrators have beforehand tracked the behaviour of the animals they seek to poison and will then place the bait where these animals are most likely to find it. In practice, there have also been cases where poisoned meat has been found on rock cliffs or close to a major road.

Collisions with traffic and power lines

Cases of bird and animal mortalities caused by humans that would never be considered bird crime can be found in the countryside, too. The most common occurrences are collisions with cars and power lines, including electrocution on 22-kilovolt high tension lines. It is crucial to be aware of the characteristics of these mortalities in order not to classify them as bird crime.

☠ **When a bird or animal has collided with a car:**
- ➢ It is close to a road with lots of traffic
- ➢ It has visible impact injuries like open wounds or fractures
- ➢ The claws of raptors and birds of prey are not spasmodically clenched

☠ **When a bird has collided with power lines:**
- ➢ It is found near them
- ➢ It has visible impact injuries like open wounds or fractures
- ➢ Body parts may be missing

☠ **When a bird has been electrocuted:**
- ➢ It is mainly a bird of prey
- ➢ Its claws are spasmodically clenched (as if it had been poisoned)
- ➢ It is found near power lines
- ➢ Many more dead birds may be under the pylon or pole
- ➢ The leg or wing often has a burn mark caused by an electric shock
- ➢ The fresh carcass has a burnt odour

Getting the public involved

What to do if you find a dead animal with evidence of poisoning

If you find a dead animal while walking in the countryside that has any of the signs earlier mentioned of poisoning, you need to take action. The first rule is:

- **Touch nothing so you neither put your health at risk nor damage evidence**

This is because powerful poisons could have been used that are even dangerous to humans. Therefore, keep a safe distance away unless the situation requires otherwise. Likewise, if you have a dog or child with you, keep them a safe distance away, too.

Document the suspicious finding. Carefully, so as not to disturb the crime scene, take a photo or make an image of the wider area around the suspected finding and take another that shows details such as body position, claws, beak, and the bait. If you can't see any of those body parts, it doesn't matter. What matters is not to handle the dead animal and not to trample on the evidence. Feel free to use your mobile phone to make images from distance. Another necessary detail is to write down the location as accurately as possible. Ideally, note the GPS coordinates of the suspected find. If this is not possible, remember the location of what you found using characteristic landmarks in the surrounding area such as solitary trees, water channels, buildings and roads so that you can subsequently guide the police or experts involved in detecting bird crime to the site.

Contact the police at 158 (SK), 158 (CZ), 112 (HU) after you had made a cursory documentation of the suspicious find. Tell the police operator your name, what and where you have found and under what circumstances you found it, along with what you suspect, such as the illegal poisoning of a protected species. Follow instructions the police give you and wait until a police patrol arrives. In the meantime, keep other animals or people away from the dead animal or bait. Try to avoid disturbing the scene as much as possible, do not trample on the ground or around the suspicious find, and do not litter or throw away garbage or cigarette butts.

If you are not certain whether the death was caused by poisoning or other forms of bird crime, you can still document the finding and send the information to the local State Nature Conservation Agency or National Park, or to experts that specifically deal with bird crimes.

- Czech Society for Ornithology (ČSO): hlubocka@birdlife.cz, +420 606 412 422 (phone + Whatsapp)
- Raptor Protection of Slovakia (RPS): dravce@dravce.sk, +421 911 882626
- Hungarian Ornithological and Nature Conservation Society (MME): mme@mme.hu, +36202514404

Specially trained dogs searching for poisoned bait

Dogs are helping a lot. Targeted training has taught them to look for anything that leaves a scent. In recent years, countries in Central Europe have introduced the use of specially trained dogs to search for high-risk substances criminals incorporate in the production of poisoned bait. They have also been trained to look for dead animals. The first dog that was taught to do this was Falco, a German Shepherd working with MME/BirdLife Hungary as part of LIFE Helicon, a project that specifically focused on bird crime. Thanks to a subsequent project, LIFE Pannon Eagle, the use of specially trained dogs gradually spread to the Czechia, Austria and then to Slovakia. While professional non-governmental organisations in Hungary, Czechia and Austria dedicated to nature conservation train and use sniffer dogs, in Slovakia the police themselves have taken on this responsibility.

As a precautionary measure, dog handlers take their dogs to check areas where cases of intentional poisoning have been recorded in the past. They also check locations at the request of the police, national authorities and to follow up on information provided by the public about suspected findings. In addition to checking suspicious cases in the field, the dogs are also accredited for use in police house searches of suspects. All the dogs undergo rigorous training before they are ever put into service and not every dog successfully completes training. Only the best will ever go into action. The dogs are trained never to physically touch bait or a dead animal. They can also detect the odour of dead animals that have been buried underground or thrown in water. Their skills have likewise been put to the test in regular examinations conducted by a professional cynological commission.

The use of sniffer dogs has rapidly upped the probability of successfully uncovering deliberate poisoning. Because perpetrators now equally perceive the greater risk of detection due to them, these canine heroes each year save the lives of many birds.

Landscape is the key

Many cases of bird crime are preventable. Raptors are wrongly blamed and persecuted for the decline in the population of small game species such as hares and pheasants. Breeders also blame them for the damage they supposedly cause to pigeon raising and livestock farming. But the solution to a significant part of the problems lies in the rural environment, and in how the land is farmed. The marked reduction in unproductive features, especially bordering lanes, fallow land, wetlands and windbreaks, has rapidly reduced biodiversity in agricultural landscapes. Two extreme seasons now occur in intensively farmed landscapes with monoculture fields. The first is an excess of food just before the harvest and the second is a severe shortage of food afterward. Species living in such agricultural landscapes struggle to cope with these quick changes in food supply. The low fertility of the environment is one of the main factors behind the significant drop in small game species. Restoring these previously disappearing landscape features; creating grass strips, borders, and windbreaks; and keeping some land fallow are all making it possible to increase biodiversity while creating adequate natural food resources for birds and animals after the crops have been harvested. Below are a few examples of the landscape features that have been created.

Hare roads

In the agricultural habitats of the Jászág SPA , MME Birdlife Hungary and Hortobágy National Park Directorate, in cooperation with the local municipalities, carried out interventions across the dirt-road network. In the first step a land surveyor marked the true boundaries of the municipality-owned dirt-roads, which were in a heavily degraded state and often ploughed illegally beforehand. In this way, natural vegetation could be preserved in the habitats bordering the dirt-roads, providing a potential habitat for hares, pheasants, all farmland birds and pollinating insects. Planting 1500 tree saplings and 9000 shrubs helped further improvement of the ecological state of Jászság SPA. Hare monitoring and bird monitoring showed an increase in number and biodiversity along these micro-habitats.

Restoring habitats in corridors under high voltage power lines

The law requires power companies to maintain corridors formed by the buffer zones around their high-voltage overhead lines in such a condition so vegetation does not endanger the functionality and operation of the lines. Because a substantial amount of financial resources is spent each year on removing tall trees that encroach on this protective zone, energy companies have been looking for a solution.
A pilot project started by Východoslovenská distribučná, a.s.. During the LIFE Pannon Eagle project was able to restore a 29-hectare of corridors. Traditional corridors are U-shaped, which means that the edges are formed by tall trees and no shrubs are growing where the buffer zone borders a forest. Yet entire areas are frequently overgrown with encroaching plants and trees. A new way to manage these corridors under overhead electrical lines has been to remove them and, subsequently, a clearing of shrubs and low-growing trees would be created at the edge to suppress or prevent the growth of unwanted tall trees threatening the power lines. The shape of the corridor thus changes from a "U" to a "V" and creates a twenty-metre herbaceous strip in the centre of the corridor that either would be mown or cattle would graze on it. Besides cutting maintenance costs, the corridors have also created a valuable refuge for a number of animal species, serving also as biocorridors for small game and agricultural landscape species.

Biological pest control

Secondary poisoning of raptors and other predators also takes place when rodenticides are incorrectly spread in fields. Biological protection of agricultural crops can lower the need for rodenticides and reduce the quantity used. This step involves encouraging local populations of owls and other birds of prey to settle and hunt here. Boxes for Common kestrels and Long-eared owls have been installed at suitable locations. These are species for which voles provide a major part of the food spectrum and they tend not to build their own nests, so they prefer the boxes that have been set up for them.
Artificial T-shaped perches have also been installed in agricultural areas to allow raptors and owls to hunt and capture voles more easily, while also providing them with a resting place as they watch for prey. The wooden perches are scattered five per a hectare and placed in appropriate sections of a field where, because of the highest concentration of occupied burrows, vole populations are most likely to congregate. They can be later moved to another part of the field as needed or even temporarily removed during the harvest season. These perches likewise serve a purpose outside of the breeding season, such as during winter.

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