

DAMAGE CAUSED BY CORMORANTS IN HUNGARY AND THE EUROPEAN UNION

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Abstract: *This article focuses on the theme chosen is a problem that even the animal and environmental experts also strongly divided. This is none other than the cormorant (*Phalacrocorax carbo*) damages in our country and the European Union as well as the possibilities of remedying the problem. The choice of topic is primarily motivated by the number of times that anglers have come across this issue. It is not uncommon, anglers argue, there is no fishing, because cormorants prevent them. Unfortunately, solving the problem is far from simple. Devastates, or may slow an animal of another species protection? Can we say that the laws of nature in order to protect fish stocks in our waters? Is it possible to distinguish between natural waters and to protect the pond farms, since the latter is a significant financial loss? These are the questions we are trying to find answers in our study, which are described at the end of the current resolution on the European Union as well.*

Key words: *cormorant, environmental protection, fish, tourism and cormorants, nature*

Introduction

The cormorant (*Phalacrocorax carbo*) average 72-96 cm long, weighing 2.5 kg diving bird, which has a great fishing skills. Even able to walk under water and the other half a minute prey submerge twenty meters depth as well. Every day an average of half a kilograms of fish to eat, which is easy to calculate that a single bird consumes about 170 kilograms of fish per year. Just for information: an average the Europeans eat 18 kilos a year, while the Hungarians around 4 kilograms of fish in a year to eat.

The biggest problem, however, is not this, but the large number of wounded during the hunt for fish. The cormorants hunt in hunting teams, which is not uncommon for groups of ten or more chasing the fish. The aforementioned half a kilogram of fish consumed 150-200 g – even 3-400 g of fish in pond fish farms – a wounded fish also finds that

survival is significantly reduced; in addition, they are an easy target for pathogens. Furthermore, the fish size may not alarm or problem for a cormorant, even ones make large wounds (Picture 1). Injuring the fish by the abortive predation should open a door for bacterial or virus infections. (BENKO-KISS A. 2015)



Picture 1, Wounded fish

Source: http://www.mohosz.hu/kormoran_kara.html 24. 3. 2015

In addition, a major difficulty to 20-60 kilometres per day up to be able to wander for food, so from the cormorant nest within this distance water area is not safe.

Cormorants have proliferated throughout Europe. In 1979 data is just 50,000 bird reported. By 1995 (about fifteen years later) 650,000 swollen from the stock until it has roughly one and a half million cormorant besieged the waters. (<http://www.mohosz.hu/cikk53.html> 24.3.2015). It lives in Hungary at least 35,000 individuals, but some sources of fifty thousand not considered excessive.

The fish are trying to protect themselves in their own way: researchers found that densely populated by cormorants water areas the fish – if the fish can – try to escape, or migratory species. Natural waters this part could be a solution, but the pond farms, where in addition to higher stocking density of fish are still in danger.

Moreover, in the long run lead to the destruction of a water area complete extermination. A field crops, orchards, or a loss of the ability of a year to compensate for the next year. But in the case of fish, the cormorant kills are capable of growing stock, next year will be less than the population growth. Assuming that the number of (mostly appetite), the birds do not fall from year to year will be worse, until the water is completely deserted area.

IMPACTS OF CORMORANTS FOR NATURE AND TOURISM

As a consequence of the enormous devastation is beyond the injury, is also natural. In fish pond million for losses may occur.

The cormorant can also have an impact on tourism in the long run. If the popular fishing tourism-established settlements (e.g. Bekesszentandras, Rackeve, Lake Tisza region) rears its head in the phenomenon and cormorants begin (continue?) Destruction of their fishing trips involving fewer results reveal that it is the fishermen in other waters looking for so that the tourism industry is worth a serious loss.

Let's take a concrete example: today is an average cost of guest recreation day in Bekesszentandras formed around 10-15000 Forint, so after each frustrated anglers seeking entertainment elsewhere (and his family), such a loss to the entrepreneurs.

Given that many families in these areas and the company's livelihood is fishing tourism, however strange it may sound, but the cormorant or endangering jobs.

The problem is therefore an urgent need to remedy it! But how? What are the possibilities to reduce the cormorant stock?

PROTECTIVE POTENTIAL OF POND FARMS

In Hungary, according to 2009 data from about 400 businesses were some more than 27,000 hectares of land deals in fish production. The annual fish production was more than 28,000 tons, of which about 21,000 tones of edible fish. Already you can see from these numbers that a major concern of the cormorant case.

The main fish farms has carp (over 50%), and importance has grass carp, silver carp and predator of the catfish, pike and walleye production as well. However, as we presented earlier, the cormorant species and in respect of any size selection, so that nothing is safe.

Below, we would like to present a specific example, how much to damage the pond farms.

The prices of fish pond farms studied concluded that the market price of the common carp roughly 900 Forint/kg. If you are performing a simple calculation based on this, you can see the potential loss. Suppose that cormorants are staying in a water area where fish are placed in the market for. As we know, the bird eats about half kilograms of fish per day. If a colony count fifty pieces, the mean daily 25 kg fish, which is 22,500 Forint per day loss for the company. This 675,000 Forint a month, on an annual basis is slightly more than 8 million. And

you just met with, and does not include the wounded fish that can cause a loss of up to twice the number of bird is also a relatively low population needs. In this example, in addition to just talking about the carp, but the production of certain fish pond – and therefore "due to the" potential loss of cormorants and – even more expensive. (BLASKO B., CEHLA B., KISS I., ET AL. 2011) It can clearly be seen that there is a great need for a solution!

Having previously learned about the bird's diet, the special features of fishing, we may establish some objectivity, which should take into account a lake-keeper.

Given that the bird is able to navigate the vast areas for food, it can be said that the larger the fish pond, the more difficult to defend. Therefore, it is appropriate to at least the winter breeding stock winter stock place, but this greatly increases the cost and because of the crowded population numbers greater the health risk of the economy as well.

Prevention is based on continuous monitoring of bird populations. If cormorants are detected, seek to deter before larger numbers appear in the area. Typically, an audible and visual alarm is used, but where there is a firearm license alarm - possibly thinning - is out of the question. However, due to high demand in Hungary cost is rarely used, but it is theoretically possible to wire fencing, net of the defense. The latter, of course, only a minority of water is can be mentioned.

Available in the Hungarian National Fishing Association (MOHOSZ) study site interesting observations for the cormorant damage-reducing, unfortunately almost speak of difficulties. According to the alert and launch represents are only a temporary solution and much more likely to mean postponing the problem as the solution. The bird will continue to be discouraged and the alarm just achieved that other water areas will beat farm and feed hungry. Pond owners are naturally happy about this, because he saved his own stock, but from the global problem has not been solved.

Need to know what the state represent a position on the matter. Hungarian law, cormorants since 2001, the European Community, is considered one of significant species conservation concern. Accordingly, the value of intangible a thousand forints, and the cormorant conservation authority must treat as if it were a protected species. According to the law, in some cases give permission for killing a limited number of copies. The state does not want to take the bird for the damage caused by the liability for damages; the experts are working to alleviate as to enable the alarm / thinning, as far as possible in compliance with EU standards. The position is similar in Lithuania,

where a large and increasing number of the population Neringa National Park. On the isthmus, nests in coastal areas cause – similar big – damages (Picture 2 and Picture 3).



Picture 2, Increasing number of cormorants in Neringa National Park (Lithuania)



Picture 3, Cormorants' nests in Neringa National Park (Lithuania)

Source: author's pictures 2014

Source: author's picture 2014

FUTURE OF NATURAL WATERS

While protecting the interests of the pond farms livelihood component stocks, while the natural waters are facing much bigger problems.

The extension of the natural waters substantially larger farms, thus guarding is much more difficult, almost impossible. If you want to be involved parallel, the illegal fishermen, poaching example can be raised, because of his "trade" is usually aimed at the large, hard verifiable natural waters. In their case, the number of fish lack of guards, hide, or even aggressive action against the official bodies of the assets difficulty. Cormorants are unlike them apart from fishing and spend most of their time in a permanent colony easily detected, as the great team. (JAMBORNE DANKO K., BARDOCZ T. 2011) We can feel the problem close to Szeged on called Feher-to (white lake) as well (Picture 4).



Picture 4, Cormorants on Feher-to at Szeged (Hungary)

Source:

http://www.delmagyar.hu/szeged_hirek/szazmilliok_csusznak_le_a_kormoran_torkan/2048284/ 24.3.2015

These places can be easily identified. Generally, waterfront, water overhanging trees are resting. The trees are typical of the lack of foliage or heavily covered with bird droppings. If you are a regular alarm the birds access to other place for their discussions.

Conclusions

The EU is the first time in 2007, dealt with more seriously, the cormorant issue, but there was no concrete solution. All that happened was that the representatives of the European Parliament signed by Markus Pieper motion representing that specific solution plan is needed in the EU, "as local initiatives have so far failed" The goal was to make the controlled hunt permit the European Parliament has adopted a position, cormorants stock should be kept at an acceptable level, and you need to find the ecological balance in everywhere Europe but in different regions in different form. http://www.delmagyar.hu/szeged_hirek/szazmilliok_csusznak_le_a_kormoran_torkan/2048284/ 24.3.2015) 2008 has also been effective steps, which determined the possibility of thinning the herd, although strong limits tightened.

A concrete example of Csongrad County, where the thinning can do the hunters within the following framework: A key conclusion that thinning the scene at the same time be more than 30 adult birds and have to pay attention to it, near the nesting sites forbidden to make thinning - thus replication is not limited to birds. It is also forbidden to fire the rifles in the vicinity of the cormorant other protected birds are. The hunt near populated areas is prohibited. The thinning only be carried out by professional hunters, whose contract has to be connected to the fishing guild, and they can be seen to perform the task. (http://huntingpress.eu/magazin/vadaszok_allithatjak_mega_kormoranin_vaziot 10.10.2014)

As you can see, and significant solution to the problem can not be delayed! But despite the attention of the questions in the European Union, the current regulations is difficult to imagine that the fish farmers, water managers, fishermen may know their fish safe.

The EU will continue to deal with as a matter of priority, the cormorant issue, but the result is a much more stringent measure need to be!

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