

CAVIAR MARKET SURVEYS IN BULGARIA AND ROMANIA

INTRODUCTION

According to the most recent IUCN assessments (carried out in 2009), the status of sturgeon species has significantly declined, such that they are considered to be among the most critically endangered group of animals worldwide (IUCN, 2010a). According to the Action Plan for the conservation of sturgeons (Acipenseridae) in the Danube River Basin, sturgeons are especially vulnerable to overfishing (Bloesch *et al.*, 2006). Owing to their long life cycles and late maturity (eight to 20 years), stocks take many years to recover. In addition, periodic spawning migration enables targeted fishing of aggregating mature animals (Bloesch *et al.*, 2006). Caviar (the unfertilized eggs of the female sturgeon) has a very high value which has led to over-exploitation throughout the species' range. Since 1998, all species of sturgeons and paddlefish (Acipenseriformes) have been listed in the Appendices of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in order to regulate international trade (whether of live fish or in the form of products, such as caviar) through a system of permits. In addition to the requirements for CITES documents, CITES has prescribed further measures, which, among others, includes the labelling of each sturgeon caviar container with a CITES label bearing a specific code. Such a requirement applies to both domestic and international trade, and regardless of whether the caviar originates from the wild or from aquaculture. The labelling requirements in the European Union (EU) are set down in the EU Wildlife Trade Regulations, which are directly applicable in each EU Member State and for which detailed rules are specified in domestic legislation.

This paper summarizes the results of a survey carried out by WWF and TRAFFIC examining the availability of caviar in Romania and Bulgaria, which are key range States for sturgeon species within the EU: Beluga *Huso huso*, Stellate Sturgeon *Acipenser stellatus*, Russian Sturgeon *Acipenser gueldenstaedtii* and Ship Sturgeon *Acipenser nudiiventris* (all classified as Critically Endangered (IUCN, 2010b), and Sterlet *Acipenser ruthenus* (classified as Vulnerable, IUCN, 2010b). (The European Sturgeon *Acipenser sturio* is believed to have become extinct in the Danube (Bloesch *et al.*, 2006)).

The EU has traditionally been one of the main consumer markets of caviar globally. With the accession of Bulgaria and Romania to the EU in 2007, two important sturgeon range States joined the Union thereby making the EU's role in caviar trade more complex. With no internal Customs controls, the inclusion of these caviar-producing States has also resulted in facilitated trade between the traditional caviar consumer States in Western Europe and the recently joined range States.



Russian Sturgeon *Acipenser gueldenstaedtii*

ANDREY NEKRASOV / WWF-CANON

Until some years ago, Bulgaria and Romania were among the world's top-10 caviar exporting countries (TRAFFIC, 2009) with Romania (where the Danube Delta, a key fishing area, is located) reportedly exporting approximately 1144 t of caviar in 1940 (Novadura *et al.*, 1999). The catches, however, significantly declined to less than eight tonnes in 1995. Since the CITES listing of sturgeons in 1998, a further decline of exports of caviar of wild origin from the region (between 1998 and 2008) could be observed (Kecse-Nagy, 2011). During the same period, the overall exports from Bulgaria, however, increased due to the increase of the proportion of caviar in trade from reportedly aquaculture origin as wild taken caviar exports were decreasing (Kecse-Nagy, 2011).

In response to the drastic decline of sturgeon stocks, Romania introduced a 10-year ban on the fishing of and trade in wild sturgeons in 2006. Bulgaria followed with a similar annual ban in 2011 which was extended in 2012 for a further four years, until 2015, the same year as the Romanian moratorium ends.

In spite of the fishing and trade ban in both countries, the difficult economic situation of local people and the few alternative sources of revenue are thought to have resulted in continuing sturgeon poaching and caviar trade.

AIMS

In order to substantiate any claims of illegal activities relating to sturgeon fishing and the sale of caviar, the aim of the surveys was to look for evidence of illegal caviar trade in Bulgaria and Romania.

METHODS

Undercover surveys were carried out by a team of two nationals in each of the target countries. The surveyed sites (shops, restaurants, markets, street vendors and sturgeon farms) were located in big cities, holiday

resorts along the Black Sea coast, and in areas along the Danube where sturgeons used to be fished. The surveys took place between April 2011 and February 2012, with a particular focus on the periods with the highest probability of finding caviar for sale (i.e. spring and autumn sturgeon migrations, Christmas and New Year). DNA analysis was carried out on the samples obtained in order to determine the species from which the caviar was produced.

Obtaining samples for DNA testing was only possible through purchases (only four samples were obtained directly from Bulgarian sturgeon farms and were donated to the study free of charge). However, to limit any negative impact, the project designers took care to limit the number of purchases to a minimum and to ensure that the surveyors purchased only small quantities of caviar.

RESULTS

Caviar was available at 29 out of 79 sites that were visited in the two countries surveyed. In Romania, 38 sites were visited and 14 caviar samples were purchased (see Table 1). In Bulgaria, 41 sites were visited and 14 samples obtained. An additional two samples of caviar labelled as originating in a Bulgarian farm were bought at a fish shop in Vienna, Austria.

As the CITES labels were not visible on 15 samples (of a total of 30), the origin and the source of these caviar samples could not be verified or checked against the DNA test results. The caviar samples without a CITES label were obtained:

- from restaurants (two in Bulgaria, five in Romania);
- from fish shops (two in Bulgaria, three in Romania); and
- from fishermen or street vendors selling caviar (in three different sites in Romania, all close to traditional sturgeon fishing sites).

DNA analysis has determined five of these samples as *Beluga Huso huso*, four of which the vendors claimed had been harvested from the wild.

The DNA analysis has also revealed that six of the 15 unlabelled samples (three from Bulgaria and three from Romania) did not contain sturgeon eggs, despite being offered as sturgeon caviar; these were found to be from other fish or synthetically made from sturgeon meat (or from other material).

Of the labelled samples, some cases of mis-labelling were found, for instance:

- The DNA analysis of caviar labelled as “Sevruga caviar” from a Bulgarian farm and bought in Vienna indicated that the caviar was from Siberian Sturgeon *Acipenser baerii* or Russian Sturgeon *A. gueldenstaedtii* and not from Stellate Sturgeon *A. stellatus*, as displayed on the CITES label.
- The other sample purchased in Vienna was labelled as “Beluga caviar” from Bulgarian aquaculture and did not appear to contain Beluga Sturgeon *Huso huso* as displayed on the label. DNA analysis could not provide a definitive result to identify the species but showed indications that this sample was also from Siberian Sturgeon *Acipenser baerii* or Russian Sturgeon *A. gueldenstaedtii*.
- For five samples, the DNA analysis found that the caviar contained a mix of species, even when (as in two cases) the caviar label sealing the tin indicated the presence of a single sturgeon species only.

The internet was also surveyed to look for offers of caviar for sale. Caviar was found to be on sale in both target countries. While companies appeared to be selling mainly farmed caviar with appropriate CITES labels, the offers by individuals (and the caviar being offered by the street vendors) would warrant further investigation as some of the caviar offered might be harvested from the wild.

| Sites | No. of sites visited | | | No. of sites claiming to have caviar available | | | No. of samples obtained | | |
|---------------|----------------------|-----------|-----------|--|-----------|-----------|-------------------------|-----------|-----------|
| | Bulgaria | Romania | Sub-total | Bulgaria | Romania | Sub-total | Bulgaria | Romania | Sub-total |
| Fish shops | 6 | 1 | 7 | 4 | 1 | 5 | 3 | 3 | 6 |
| Russian shops | 2 | 1 | 3 | 2 | 0 | 2 | 2 | 0 | 2 |
| Other shops | 18 | 7 | 25 | 2 | 5 | 7 | 3 | 3 | 6 |
| Farms | 3 | 5 | 8 | 3 | 0 | 3 | 4 | 0 | 4 |
| Restaurants | 8 | 12 | 20 | 3 | 6 | 9 | 2 | 5 | 7 |
| Street | 4 | 12 | 16 | 0 | 3 | 3 | 0 | 3 | 3 |
| Total | 41 | 38 | 79 | 14 | 15 | 29 | 14 | 14 | 28 |

Table 1. Sites surveyed and caviar samples acquired in Bulgaria and Romania.

Note: An additional two samples of caviar labelled as originating in a Bulgarian farm were bought at a fish shop in Vienna, Austria.



◀ Tins of caviar

In addition to obtaining caviar samples, the surveyors also attempted to strike up conversations with traders and fishermen in order to provide a more subjective impression about the caviar trade in Bulgaria and Romania. According to the surveyors, buying caviar which did not meet legal requirements

was not easy for a person who was not familiar to the seller. Vendors reportedly only sell caviar or provide information to people they know.

Unknown players are often treated with suspicion and sometimes caviar is not delivered in spite of a positive initial reaction to an order or of its apparent availability. This may demonstrate that many traders are aware of the regulations in place. In spite of this, surveyors also found that caviar that was claimed to originate from the wild is still used as a sales pitch. In some restaurants in Romania, for example, waiters advertised their caviar as a delicacy from wild sturgeons from the region.

CONCLUSIONS

Some of the key conclusions of the survey are presented here.

Illegal fishing

In spite of the regulations in place banning sturgeon fishing in both countries, poaching appears to be occurring. The survey found indications of Bulgarian fishermen still catching sturgeons in the Danube and allegedly wild-caught specimens of Sterlet *Acipenser ruthenus* have been found for sale in both target countries.

Availability of illegal caviar for sale

Unlabelled and therefore illegal caviar was offered for sale in the target countries, with several such samples obtained in Romania, where the vendors claimed they had been obtained from the wild.

Caviar labelling/enforcement

DNA analysis of caviar samples, has shown that some of the caviar found during the survey was incorrectly labelled. In three samples, species (or hybrids) other than those specified on the CITES labels were found. With indications of illegal fishing going on in spite of the fishing ban, these cases of mis-labelling are cause for serious concerns. An investigation carried out in Germany in 2009 (Kecse-Nagy, 2011) points to wild-harvested caviar having been laundered and sold as if derived from aquaculture operations in Bulgaria. Although the current survey did not find clear evidence of such claims, the finding of several mis-labelled caviar tins warrants further research and action by the relevant enforcement agencies in the range States. Random

controls with genetic techniques are essential to monitor caviar trade.

No security features are prescribed or present on CITES caviar labels in Bulgaria and Romania and, as in most countries, the labels are produced by the companies involved. As a result, CITES labels can be falsified relatively easily and it should therefore not automatically be presumed that caviar tins bearing CITES labels are legal. A major Bulgarian caviar producer claims that he has found his labels on caviar tins that were not produced by his company. Such cases need to be examined by the competent authorities and if warranted, relevant security features on labels should be introduced (either by law or by the producing companies).

In summary, the true volume of illegal caviar trade may be considerably higher than is documented by this survey. It appears that enforcement of controls on caviar trade need to be enhanced in both Bulgaria and Romania. Illegal caviar trade is not merely a form of wildlife crime, it also involves contraband, tax evasion with lost tax revenues for the countries involved, and could pose a health risk. Taking all these factors into consideration, provision of adequate resources (both human and financial) must take high priority if the illegal trade in caviar is to be addressed.

The full survey report "Illegal Caviar Trade in Bulgaria and Romania" will be published in April 2013 and will be available at www.danube-sturgeons.org.

ACKNOWLEDGEMENTS

This joint WWF-TRAFFIC project was led and managed by Jutta Jahrl of WWF Austria and was undertaken with the support of WWF Austria, the Mohammed bin Zayed Species Conservation Fund (project no. 10251197), WWF Germany and Deutsche Bundesstiftung Umwelt.

REFERENCES

- Bloesch, J., Jones, T., Reinartz, R., Striebel, B. (2006). *Action Plan for the conservation of sturgeons (Acipenseridae) in the Danube River Basin*. Nature and environment No. 144. Council of Europe Publishing.
- IUCN (2010a). Sturgeon more critically endangered than any other group of species http://www.iucn.org/iyb/about/species_on_the_brink/?4928/Sturgeon-more-critically-endangered-than-any-other-group-of-species. Viewed on 11 March 2013.
- IUCN (2010b) <http://www.iucnredlist.org>. Viewed on 11 March 2013.
- Kecse-Nagy, K. (2011). *Trade in sturgeon caviar in Bulgaria and Romania—overview of reported trade in caviar, 1998–2008*. A TRAFFIC report for WWF Austria, Budapest, Hungary.
- Novadura, I., Staras, M., and Banks, R. (1999). In: Reinartz R. (2002) *Sturgeons in the Danube River—Biology, Status, Conservation. Report for the International Association for Danube Research*, 150pp.
- TRAFFIC (2009). *Black gold: The caviar trade in western Europe*. Fact Sheet. TRAFFIC Europe. Brussels, Belgium.

Jutta Jahrl, Project Manager, Danube Sturgeons, WWF Austria. E-mail: Jutta.Jahrl@wwf.at
Katalin Kecse-Nagy, Senior Programme Officer, TRAFFIC Europe. E-mail: Katalin.Kecse-Nagy@traffic.org