

STURGEON FISH &
CAVIAR DREAMS

By John Tidwell

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A great fish moves slowly through the murky water of the Caspian Sea, her vast, scaleless body bristling with prehistoric-looking bony plates reminiscent of sea monsters. She is enormous, fully 10 feet long and weighing nearly a ton. But hidden deep within her huge, golden brown body she carries a rare and coveted treasure, something that human beings will pay thousands of dollars for, risk their lives and even kill for: millions of tiny grey eggs that we call *caviar*. She is a beluga sturgeon, (*Huso huso*) one of the largest freshwater fish on earth and among the oldest living vertebrates, first evolving some 250 million years ago. Beluga is one of 27 known species of sturgeon scattered across the Northern Hemisphere, all of which are now threatened or endangered.

It is springtime. As the great female noses about the sea floor for crabs, she scents a current of fresh water flowing in from Russia's Selak river and instinctively heads for it. For hundreds of millions of years the six sturgeon species of Central Asia's Caspian Sea have spawned in its tributaries, seeking out their particular birth-river like salmon. Other sturgeons join the great female as she heads upriver; stocky Osetra (*Acipenser gueldenstadtii*) and smaller, thin-snouted Sevruga (*A. stellatus*) moving like massive herds. They will seek out mates and release their masses of sticky dark eggs on the rocky riverbed, and then head back to the brackish waters of the Caspian. The old female's eyesight is poor and she doesn't notice a ghostly line of nylon netting wafting in the current like grass – until it catches around her head and hooks behind her gills.

In the night stillness two men in a small skiff haul in their nets. They are unemployed local truck drivers poaching sturgeon for roughly \$5 a fish. The men quickly bring the thrashing female beluga close to the boat and stun her with a heavy wooden club. Then they haul her to shore and open her belly, scooping out the precious caviar while she is still alive. As other fishermen do the same, a bald man arrives with several large trucks

which the poachers load up with sturgeon. This is the “Owner”, a local businessman who has claimed several miles of Dagestan coastline as his territory. The poachers sell him their fish and he protects them from paying bribes of up to two thirds of their catch to corrupt local officials who are supposed to make sure all sturgeon catches are legal. The Owner’s trucks then take the beluga female’s carcass and the rest of the night’s catch to a nearby camp where the fish are crudely processed. Sturgeon eggs are washed, sieved and lightly salted what Russians call *malossol*, to preserve them. Smaller illegal camps would then put what is now caviar, into 3-litre jars for the long truck-ride to Moscow, hidden under sacks of potatoes. But this is a larger operation, equipped with vacuum packing, bar-code machines and labels in English. Most smuggled caviar goes North to Astrakhan, where the bulk of Russia’s caviar business – legal and illegal, originates. Smaller shipments head south through Azerbaijan to Turkey and Dubai in the United Arab Emirates, two important gateways to Western trade.

According to TRAFFIC, the world’s largest wildlife trade monitoring program, scenarios like this fictional one are repeated hundreds of times since the early 1990s along the Caspian Sea, as the impoverished people of this giant lake legally and illegally catch the last of these giant, ancient fish. In fact, experts are becoming increasingly alarmed that Caspian sturgeon species are dwindling so fast their populations there could crash, driven literally to the edge of extinction. With a ravenous multi-million dollar international trade in caviar and a lawless atmosphere throughout most of the Caspian region, the situation has become so dire that governments around the world may vote to ban the international trade of Russia’s three most famous caviar sturgeons, bringing a multimillion dollar global industry to a halt.

Black Gold

Caviar has been synonymous with good eating for thousands of years. Aristotle wrote that at the end of Greek banquets great platters of caviar garnished with flowers were brought in amid trumpet fanfare. 10th Century Chinese fishermen plied the Yangtze and Amur rivers for sturgeon, and believed they possessed great wisdom, because they would eventually mature into dragons. To the Persians of what is now Iran, sturgeon eggs had

curative powers and were called “*Chav-jar*” or “cake of power” which is believed to be the origin of the word *caviar*. England’s 12th Century King Edward II declared sturgeon to be a “*Royal Fish*”; any sturgeon caught in British territory had to be offered to him. For early American colonists sturgeon meat and caviar were the New World’s greatest cash crop, before they discovered tobacco. Writers from Shakespeare to Dostoevsky have rhapsodized about, and indulged in the precious roe that would later come to be called *Black Gold*.

But sturgeon and their eggs have always held a special, almost mystical place in the Russian soul going all the way back to 8th Century B.C. Scythians of Southern Russia. Moscow’s infamous tsar Ivan the Terrible seized the Northern Caspian region from Muslim Tatars in the 16th Century, and began a tradition of regular caviar tribute from conquered territories of the Azov, Black and Aral seas as well. Russians used words like *Beluga*, *Osetra* and *Sevruga* to denote large, medium and small size caviar. But it wasn’t until 1860 that caviar was first brought by train to Western Europe and became one of Russia’s most renowned and cherished exports. It was an honor that heralded the end of the great sturgeon schools, as caviar became a lucrative industry in Europe and North America. What no one knew was that because sturgeon take so long to mature, wholesale netting of adult females (and their eggs) was biologically catastrophic to the fishery. “It was more like mining than fishing” explains Dr. Vadim Birstein, an independent Russian biologist who has been at the forefront of efforts to save Caspian sturgeon, “By 1910 sturgeon populations around the world were so depleted that they were nearly gone.”

In Russia the caviar industry was a state monopoly since Peter the Great in the 17th Century, but by the early 1900’s most of it was private hands. After the Bolshevik Revolution sturgeon fishing returned to the state again, centered almost entirely in the old Tatar city of Astrakhan, near the Caspian Sea. However, sturgeon catches continued to drop, partly because Stalin’s government was building hydroelectric power dams on many Russian rivers. Dams not only constricted water flow and diverted millions of gallons to agriculture and industry, but they also effectively closed off 85% of sturgeon’s upriver spawning grounds. Some areas of the Volga delta, which supplies the majority of

water to the Caspian Sea, actually became dry. During the 1960s fishing remained a major industry shared by Soviets to the North and Iran at the southern end of the sea. The only way to keep sturgeon populations going, the powerful Soviet Ministry of Fisheries reasoned, was to create scores of artificial sturgeon hatcheries along the Volga, Ural, Kura and other Caspian tributaries. Their eggs from gravid females were mixed in tanks with sturgeon sperm and fertilized. When resulting fry became several inches long, known as 'fingerlings', they were released into the Caspian to grow and mature. Tens of millions have been freed each year since the late 1950s and today many biologists believe that most of the sea's sturgeon were spawned in hatcheries.

In the early 1970s the Ministry of Fisheries took other unilateral conservation measures, forbidding trawling in the open Caspian with large, bottom-scraping nets (which destroyed sturgeon's sea floor food sources), restricting sturgeon fishing to spring and autumn with rigid catch limits. Seven huge floating fish factories were launched in the Caspian, churning out Russian Caviar and smoked sturgeon meat. The Ministry of Fisheries' tactics may have been iron-fisted, but it allowed sturgeon stocks to rebound and kept bootleg caviar to a minimum.

The Caviar Mafia

Everything changed when the Soviet government collapsed in 1991 and the colossal USSR shattered into 15 pieces. Soviet provinces that once supplied sturgeon products suddenly became the independent 'littoral' states of Kazakhstan, Turkmenistan and Azerbaijan. Even territories that technically remained part of Russia, like Chechnya and Dagestan, claimed autonomy. The collapse of the Soviet regime also brought widespread unemployment and poverty to the breakaway republics. Factories closed and once plentiful resources suddenly belonged to foreign countries. The leaders of Kazakhstan, Turkmenistan and Azerbaijan began to behave more like feudal monarchs, holding absolute power over their supposedly democratic countries. All prior treaties, including the shared monopoly on sturgeon fishing between the USSR and Iran, no longer existed. The Caspian, previously the nearly exclusive sturgeon preserve of the Soviet Ministry of Fisheries became divided among the Caspian's nations. Today Kazakhstan claims any

sturgeon that swim by their shores. With Russian caviar selling for as much as \$1000 a pound in Western countries, all of the littoral states are trying to catch as many sturgeon as possible. “Under the USSR everything was centralized and controlled,” says Willem Wijinstekers, Secretary General of the U.N.’s Convention on the International Trade in Endangered Species of Fauna and Flora (CITES), “Maybe sturgeon were somewhat over-exploited, but nothing like the uncontrolled fishing we have now. Its just chaos.”

The only nations that retain organized fishery management programs are Iran’s government-run ‘*Shilat*’ fishery organization and the Russian Federation’s re-named State Committee for Fisheries, which remains nearly identical to the old Ministry. Its estimated that 90% of the world’s caviar comes from the Caspian Sea, and more than 70% of that is from Russia. In Astrakhan, 12 teams of federally licensed sturgeon fishermen squat in small tents called *Tonyas* on the Volga delta, setting their nets each day exactly as they did during Soviet times. They are monitored by the Fish Guards, special squads of local police working for the still monolithic Committee for Fisheries, with the power to arrest or make commando raids on regional poaching gangs, who are known as ‘*The Caviar Mafia*’. But by the mid-1990s it was clear that the Fish Guard were no match for organized crime. “The Mafia have got boats that are five times faster than the government inspector’s boats.” Explains Mr. Wijinstekers, “They’ve got bigger guns than the inspectors have ever seen in their lives, so they don’t dare to stop a boat. And if inspectors do catch them, the poachers just pay them off.”

In 1993 Russian president Boris Yeltsin decided to assign military troops from several different government agencies to protect not only the Fish Guards, but also federal sturgeon hatcheries and fishing grounds. However, in Russia having more militia around doesn’t mean you’re safer. “There are 6 different military structures supposedly guarding the official fishing in the Volga river,” Dr. Birstien says, “Border guards, local police, local militia all standing around with Kalashnikovs while these guys fish. But they are really like 6 different gangs. When the fishermen catch a fish, guess who he has to give it to? The guys with the guns.” With cash scarce, ordinary villagers in the former Soviet Republics have been left to fend for themselves. Many turn to the Caspian for food and

trade, doing what they have done for centuries under Khans, Commissars and Presidents for Life: surviving. For many, used to the Soviet system of bribery and extortion, poaching sturgeon probably feels like entrepreneurship. Chronically underpaid Fish Guards and local militia also turn to bribes and smuggling to make ends meet.

But according to TRAFFIC and the Russian press there is an even greater incentive to work for the Caviar Mafia. *Everyone* is in it: The police, the local government, the military, even the agency that controls all sturgeon fishing, caviar production and sturgeon exports: The Russian Federation State Committee for Fisheries. In 1997 Russian border guards, representing the Committee, halted the merchant ship 'Camilia' carrying a huge load of sturgeon up the river Sulak in Dagestan. When the border guards started unloading the fish onto enormous *Kamaz* trucks, the Dagestani Water Police arrived, and, with Kalashnikovs cocked, ordered the fish to be put back on the boat. A month later several bombs went off in the Russian apartment complex where border guards and their families lived, killing 67 people; an apparent act of revenge by the Dagestan Caviar Mafia.

Giant trawling ships with great bottom-sweeping nets have returned to the open Caspian Sea, even though the USSR banned them in 1959. A TRAFFIC report from last year states that many of Dagestan's trawlers are owned by the Republic's Attorney General, the Minister of Internal Affairs and the head of the Water Police, remaining unchallenged on the Caspian's dark waters. During the 1990s the Russian government said it had arrested thousands of poachers, fining them and imprisoning them for years. However, TRAFFIC reports that while the amount of illegal caviar seized has steadily increased since 1992, the number of poachers arrested has remained exactly the same, a clear indication, it says, that most poachers behind bars are poor fishermen who failed to pay their protection money.

Twilight of a Legend

But while the looming threats from pollution, oil and the 'killer' jellyfish are making it hard for sturgeon populations in the Caspian, the effect of over 10 years of unrestricted

fishing has been the most devastating. In 1978 it was estimated that there were 142 million adult sturgeon in the Caspian. The estimate for 2001 is less than 300,000. The population drop in the Caspian was so steep that in 1998 CITES placed Caspian sturgeon on its Appendix II list, requiring any international trade in these species have official CITES permits which supposedly guarantee the fish were caught legally and wouldn't damage wild populations. Caspian sturgeon numbers continued to fall precipitously and in May 2000 Vladimir Izmailov, the Deputy head of the Russian State Committee for Fisheries announced that that year's harvest was so small that it would fall far short of the catch quota of 560 tons set by CITES. Legal Russian caviar exports had dropped to 40 tons in 2000, less than half the amount of the year before. There weren't even enough adult sturgeon to supply fertilized eggs to hatcheries. Iran's *Shilat*, which still uses many of the same fishery management techniques that the Soviets did, dropped their number of exports from 90 to 70 tons, in order to 'conserve sturgeon'. The illegal catch for the region remains estimated to be 10 times the official one. But given the mafia-style activities of most of the governments in the region, Dr. Birstein argues that there is no real 'legal' catch. "The government agencies that are supposed to fight against sturgeon poaching are doing the opposite – they are part of the whole deal." he says, "So how can you trust their 'official' figures? You are asking the cat to guard the cream."

The man who ostensibly has ultimate power over these committees, President Vladimir Putin, has shown himself to be no friend of conservation. In late May last year, Putin abolished the Russian State Committee on the Environment and the Russian Forest Service. He placed their responsibilities in the care of the Ministry of Natural Resources, the government agency that among other things oversees land development, logging and mining. Experts say this was an act of economic triage, which it may indeed be, but in one swipe of his pen, Putin has eliminated all regulatory oversight of the Committee for Fisheries. A Committee that he has told to raise its own funds. Certainly Russians must realize, Western conservationists say, that by systematically destroying their natural environment they will ultimately destroy not only their sources of income, but their food and water as well. Mats Engstrom is an American caviar distributor who has done business with the Russians for decades. "There is no tomorrow in Russia." He says, "All

the Russian entrepreneurs I know never invest in their own country. So the money that goes to export is not going to come back to Russia at all. Russians don't plan for the future because tomorrow the government may change the rules or put you in jail. That's the mentality."

Buffalo of the Water

It all began with a label that started to peel away from its jar. This caught the attention of customs agents at John F. Kennedy Airport because legitimate caviar labels always stay stuck. But what appeared to be a routine imported shipment of Caspian caviar for a well-known American trading company launched an international federal investigation that exposed a caviar smuggling ring of beluga-sized proportions. "We called it an octopus because every arm of the company was some type of illegal activity" recalls U.S. Fish & Wildlife Special Agent Sal Amato, who led the probe, "It was by far the most dramatic experience with caviar smuggling that I have ever encountered."

Starting in 1995, two Iranian Americans, Hossein Lolavar and his brother-in-law Ken Noroozi began importing large amounts of poached Russian caviar to their Maryland based company, U.S. Caviar & Caviar. During the course of its investigation, the U.S. government found that Lolavar had brought to the U.S. nearly 20 tons of caviar each year, for clients including American Airlines and gourmet grocery stores like Fresh Fields and Sutton Place Gourmet. Even when CITES began requiring international permits for sturgeon products in 1998, the flow of now illegal caviar continued.

According to U.S. Department of Justice reports, the caviar was smuggled into Dubai by Al Raquiat, a local trading company, who then bribed Dubai CITES officials with prostitutes to get the necessary permits. Noroozi's Dubai-based Company Kenfood then bought both the permits and the caviar from Al-Raquiat and exported them to Maryland.

Back in Rockville, Lolavar was also committing fraud by mixing the roe of Tennessee Paddlefish (*Polyodon spathula*) in with real Russian caviar and selling to clients as authentic Sevruga. Lolavar even went so far as to create fake certificates and seals from a

fictitious Russian supplier to provide authenticity. The scheme worked until customs agents at Kennedy Airport sent samples of Lolavar's 'Sevruga' to the National Fish & Wildlife Forensics Lab in Oregon, where the true, and endangered, nature of the caviar was identified. During the investigation agents seized nearly \$3 million in illegal caviar from the company, and found that in the 1998-99 season alone Lolavar had smuggled more Caspian caviar than the entire year's quota for Russia. Noroozi and Lolavar went to jail and had to pay criminal fines of \$10.4 million, the largest sum ever for a wildlife case. For Agent Amato this case reveals the scope of caviar smuggling today for an estimated \$125 million international appetite that ranks second only to illicit drugs in scale and profits. "We've already seen that people will go to the same lengths to sell caviar that they do to sell illegal drugs." He says, "We've seen couriers paid just like drug couriers, we've seen shipments with false-bottoms just like what you see in narcotics. And I'm talking tons and *tons* - not pounds."

It was cases like U.S. Caviar & Caviar that helped bring representatives of CITES 152 member nations together in a meeting last December in Shepherdstown, West Virginia. At issue was whether to ban the international trade of some of the most coveted species of sturgeons, including beluga, osetra and sevruga. A final decision is not expected until this June, but the dire situation of Caspian sturgeon species have made a ban on Caspian caviar a real possibility. The Russian Committee for Fisheries has even hinted at an official sturgeon fishing moratorium of their own next year, though experts believe it would not stop the poaching entirely. But would a ban really save the Caspian Sea's sturgeon? Opinions seem to break cleanly between conservationists and supporters of the now threatened legal caviar trade. Conservationists say a ban would send a strong message to nations like Russia and Iran to straighten up and manage their fisheries properly. Caviar traders retort that such a move would be disastrous for the teetering economies of the Caspian nations and halt all conservation efforts there. "Who will pay for sturgeon hatcheries if there is no trade allowed?" asks Armen Petrossian, president of Petrossian Paris, one of Europe's largest caviar traders. "The only source of sturgeon conservation is from export of caviar and meat. If there is no export there will be no sturgeon."

In fact many international conservation programs for the Caspian have already begun, including a \$20 million pledge from the World Bank to help Azerbaijan build hatcheries and clean its coastline. Members of the caviar trade have been conspicuously absent in these efforts. Another issue that arises is the fact that while CITES can list species and call for a ban among its members, the organization itself cannot regulate such a ban – or risk violating a nation’s sovereignty. With enforcement squarely in the hands of each member nation, critics argue, a ban would only be truly effective in countries like the U.S. where environmental law is strict. Then there is the fear that if a ban forbids legal trade, it will only drive the caviar market underground and fuel even greater illegal activity. Ronald Orenstein, president of Canada’s International Wildlife Coalition says that depends on the nature of the product, and likens the caviar trade to an earlier illicit trade: ivory. “With ivory the the commodity wasn’t ivory – it was *legal* ivory.” He says, “In that case the only way the illegal market could thrive was because it was piggy-backed on the legal trade and smugglers could disguise it as legal. But as it turns out there wasn’t a big market for hot ivory, so with the cloak of legality removed from it, the illegal ivory market collapsed.”

Caviar, like ivory, Ornstien muses, would seem a luxury item that few will be willing to seek out in dark alleyways. Because CITES only applies to *international* trade, a ban would have no effect on Russia’s domestic caviar market, for example, which seems to be insatiable. There, Ornstein asserts the sturgeon market is doomed because they will simply run out of sturgeon. Russia’s native conservation organizations, which are many and dedicated, nevertheless are powerless (and penniless) to stop what appears to be an inexorable march toward the commercial extinction of Caspian sturgeon species. In the South Caspian, Iranian sturgeon hatcheries, the conservation poster-child of the region, diligently toil away producing and releasing as many fingerlings as they can. Prof. Wirth of Berlin’s Institute of Freshwater Ecology and Inland Fisheries says most experts agree you need at least 150 million baby sturgeon released each year. So far Iran has only produced about 50 million per year, and the other littoral states even less. But Dr. Birstein points out that there has never been any scientific data on how many of these babies

actually survive to adulthood, raising the question of whether these official releases are more political gestures than efficient aquaculture.

But all is not completely lost. Even if the Caspian fishery collapses and all the smugglers pack their nets and try greener pastures, remnant beluga and osetra populations may still survive here and there. Tiny groups are also being raised on a handful of equally tiny fish farms in places like Hawaii, Canada and Florida. The Ojibway of British Columbia hunted North American White Sturgeon (*A. transmontanus*) for centuries and revered them so they called them “*Buffalo of the Water*”, a name that now seems poignantly apt for this species of ancient, swimming cornucopia. Even Birstein holds out hope that Caspian sturgeon will not go the way of their dinosaurian contemporaries – just yet. “These fish have survived for 250 million years.” He says, “They have lived through a lot of disasters, and I think they will survive this one too – *barely*.” Z

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