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## An organic fish farm that produces caviar

By Claire Wrathall

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Close to the surface of the waist-high water of the Frio River, high in the Sierra Nevada in southern Spain, the sturgeon lay quietly on her back, her armoured body, which weighed perhaps 30kg, supported by a sort of cradle. This ancient-looking fish, her species unchanged in 100m years, was attended by three men in dungaree-like waders. These were staff of the Riofrio fish farm, one of whom – let us call him the sturgeon surgeon – wielded an ultrasound scanner, connected to a laptop on the edge of the pool, which he ran over her belly.

He was searching for caviar, and he was in luck. This was a mature 18-year-old, almost ready to spawn but not quite, 10 to 15 per cent of whose body weight looked to be eggs: a potential haul of up to 4.5kg.

The timing is crucial. Harvest too early and the eggs may be dry because they haven't yet absorbed fat from the fish's belly; too late and they may lack definition and structure. This fish's optimum condition was good news for us; less so for her. She was ready to be "sacrificed".



Opening the sturgeon

Although caviar farming is not new – there are farms across Europe, the US, as well as in Abu Dhabi, Israel, Uruguay and China – it is more necessary than ever, as wild sturgeon are facing extinction. According to the Geneva-based Convention on International Trade in Endangered Species, the number of beluga sturgeon has declined by 90 per cent in the past 20 years, and this year it reduced the export quota from countries bordering the Caspian Sea to zero.

Not that Riofrio farms beluga. Its 98,000 fish are Adriatic sturgeon (*Acipenser naccarii*), the only species indigenous to Europe. But it is exceptional in other ways too. First, it is the only certified organic sturgeon farm in the world. Most farms use hormones to make females mature faster (allowed to develop in their own time, female sturgeon can't be told apart from males until they are eight or nine years old and reach maturity some time between 15 and 20). Here they are prepared to wait.

Then there is the quality of the water that feeds the pools in which the fish live, segregated by age rather than size, which is fed from a natural spring and maintains a year-round temperature of 13 to 15 degrees. Finally, there is the caring way in which the staff seem to treat the *animales*, as they refer to the fish. Stress, says Keith Jaggard, the one British member of staff, is very bad for sturgeon: a terrible thunderstorm last year caused more than 700 of them to die of fright.

Had our sturgeon not been ready, she would have slipped back into her pool. But she was taken away, stunned with a pallet gun and brought into a kind of operating theatre staffed by men in hooded sterile scrubs and facemasks, for a clinical extraction. A deft incision down the centre of her belly with a scalpel, and the eggs, tens of thousands of glistening dark silvery spheres, are revealed. They are removed by hand, passed through a sieve to remove the membrane and any tissue, and washed in salted spring water.



The finished product

Founded as a trout farm in the mid-1950s, Riofrio began to diversify into sturgeon in the late 1980s, and is one of the few farms to use every part of a sturgeon. Its meat is smoked, marinated or tinned; its oil and cartilage is used by a pharmaceuticals company in the production of food supplements and cosmetics; and its thick, grey-black skin goes to Italy where it's used in handbag manufacture; sturgeon are distant relatives of sharks.

The test of all this effort is in the eating. That the village of Riofrio (population 300) now has 14 restaurants says something about its reinvention as a foodie destination. And though it may not be beluga, chefs are taking an interest in its caviar.

Michel Troisgros, who has three Michelin stars for his restaurant in Roanne and one at La Table du Lancaster in Paris, is a convert, praising the caviar's "smooth delicate taste and texture", as well as the fact "that it has only a little fat and less salt than most caviar". Indeed, he was there to witness the harvest I watched (he "marvelled at the skill of the staff") and taste the three different styles of caviar it sells, in order to prepare a special caviar menu that the Hospes Palacio de los Patos hotel in Granada, about an hour away by car, now serves as part of the two-night "caviar weekend" that I attended (and which includes a visit to the fish farm).

Our tasting began with the traditional, or Iranian-style, caviar to which salt and borax have been added, and the darkest, most robustly flavourful kind: buttery, briny, satiny and very, very good. Next there was the malossol, a more Russian style, which contains only roe and less salt: its

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texture is more defined, its flavour subtler. Then the ecologico, which is more delicate still, fresher and only minimally salted. Finally we sampled the eggs we'd seen extracted barely an hour earlier, which had only been rinsed. Oddly they seemed saltier than the malossol – because the saltwater still clung to their exteriors and hadn't been absorbed. The glory of the very freshest eggs, however, is their structure and the way they almost pop in your mouth.

Troisgros opted to use the ecologico in his menu, though he was at pains to point out that "caviar is such a gift of nature that I would endeavour to present it in its natural state. You can measure a chef's intelligence by the way he treats caviar."

His instinct was to pair it with potato – he describes the two as "amoureux" – first as a topping for the most exquisite pommes dauphines, little croquettes of potato combined with choux pastry, flavoured faintly with ginger and topped with a teaspoon of caviar and a quartered sliver of lemon. It was exquisite, though not quite so sublime as the "mezzalunas" that came next. These looked like ravioli but with thin slices of potato in place of pasta, half of them stuffed with smoked petits pois – each peeled so that it was almost the same size as a sturgeon's egg – and the rest filled with caviar that had been warmed but not cooked, over which had been scattered a few raw blanched almonds and gossamer threads of orange zest. We were instructed to eat everything together, so that "the alchemy happened in our mouths".



Michel Troisgros' pommes dauphines

I can't recall encountering a more perfect dish, a better candidate for a last supper. It may be ruinously expensive (Riofrio retails at £48 for 30g, though that is less than half the price of wild beluga). Its salt and cholesterol content may disquiet your doctor. But eaten unadorned off the fleshy part of your hand between your thumb and forefinger, which warms it up slightly because you sacrifice some of its depth and complexity if you eat it too chilled, there is surely no more intoxicating foodstuff.

#### Details

*Claire Wrathall was a guest of Hospes Palacio de los Patos (tel: +34 958 535 790; [www.hospes.com](http://www.hospes.com)) in Granada, where the two-night caviar weekend costs €815 per couple sharing a double room, including accommodation, breakfast, the caviar menu at dinner, a visit to Riofrio ([www.caviarderiofrio.com](http://www.caviarderiofrio.com)) and lunch. Caviar de Riofrio is available from Fortnum & Mason and [www.kingsfinefood.co.uk](http://www.kingsfinefood.co.uk)*

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