Clash of the titans

The battle for dominance between European sturgeon (Acipenser sturio) and Atlantic sturgeon (Acipenser oxyrinchus) during the Holocene

Level: Master
Start: Any time
Project duration: 4-6 months
Location: This desktop study can be done from home
Project form: Literature research, database construction and analysis, GIS
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Until recently, it was thought that – historically – sturgeons in Europe always related to European sturgeon, *Acipenser sturio*, a species that presently holds only one single extant population in Europe, namely in the Gironde. In 2002, however, it was discovered that the by then extirpated populations of sturgeons in the north of European in fact had belonged to *Acipenser oxyrinchus*, a species that also occurred and still occurs in eastern North-America. This discovery led to different morphological and genetic studies of archaeozoological material and museum specimens in Europe with the aim to establish which species occurred when and where in Europe. The different studies, however, were not conclusive leading to different identifications of the same specimens due to different research techniques. It also brought to light that both species interbred leading to hybrids between these closely related species that also show little ecological differentiation as far we know. Furthermore, it is certainly not the case that the distribution of both species was stable during the Holocene, but, more probably, was highly dynamic. Which factors were responsible for differences in distribution in space and time, however, is largely unknown, as are the reasons for ultimate extinction of the majority of populations in Europe. The question, however, is highly relevant since far-reaching plans are already developed to reintroduce European sturgeons in the southern river systems of Europe, and Atlantic sturgeons in the northern parts of Europe. Whether such reintroductions take place under ecologically optimal conditions, however, remains the question. Insight in the spatiotemporal dynamic of both species as well as into how both species interact is crucial. This project aims to contribute to solving this question by systematically gathering and analysing data of presence and occurrence of both species in spatiotemporal matrices.