Sturgeon genome sequenced

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Sturgeons lived on earth already 300 million years ago and yet their external appearance seems to have undergone very little change. A team of researchers from Würzburg and Berlin has now succeeded in sequencing their genome.

The sterlet (Acipenser ruthenus) belongs to the class of Sturgeons. Their genomes are an important piece of the puzzle that helps us understand the ancestry of vertebrates. (Photo: Andreas Hartl) (Image: Andreas Hartl)

Sometimes referred to as the "the Methuselah of freshwater fish", sturgeons and their close relatives are very old from an evolutionary point of view. Fossils indicate that sturgeons date back 250 million years and have changed very little during this period, at least as far as their external appearance is concerned. So it is not surprising that already Charles Darwin coined the term "living fossils" for them.

Scientists from the University of Würzburg and the Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB) with colleagues in Constance, France and Russia have now successfully sequenced the genome of the sterlet (Acipenser ruthenus), a relatively small species of sturgeon. They were able to show that the genetic material, too, has changed very little since the heyday of the dinosaurs. The scientists present the results of their work in the latest issue of the journal Nature Ecology and Evolution.

Ancestors of the vertebrates

"Sturgeon genomes are an important piece of the puzzle that helps us understand the ancestry of vertebrates. And this has been missing until now," Professor Manfred Schartl explains the reasons why scientists are interested in this fish species. Schartl is the lead author of the recently published study and is senior professor at the Chair of Developmental Biochemistry at the University of Würzburg since this year. Sturgeons are among the oldest species on earth in terms of evolutionary history. They are the ancestors of more than 30,000 species of bony fish that occur today – and thus