

# All sperm are not equal

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An experimental study from researchers at Uppsala University provides evidence that in Atlantic salmon, selection acting upon sperm phenotypes within a single ejaculate of a male affects the time until hatching in the resulting offspring. The results are now published in *Biology Letters*.

While competition between sperm of different males is recognised as a major form of [natural selection](#), selection of sperm within an ejaculate is considered to be without consequence based on the long standing assumption that sperm phenotype is unrelated to its haploid genetic content, i.e., "one can't judge a book by its cover."

"Contrary to the general assumption we have seen that selection during the gametic stage can be of importance in animals," says Simone Immler at the Department of Evolutionary Biology, Uppsala University.

The importance of variation in [sperm quality](#) within an ejaculate for the quality of the resulting offspring is much debated, particularly in the context of artificial insemination and fertilisation methods. Because artificial fertilization sidesteps many of the selective mechanisms occurring under natural circumstances it may affect offspring fitness.

**More information:** Immler S, Hotzy C, Alavioon G, Petersson E, Arnqvist G. 2014 Sperm variation within a single ejaculate affects offspring development in Atlantic salmon. *Biol. Lett.* 20131040.  
[dx.doi.org/10.1098/rsbl.2013.1040](http://dx.doi.org/10.1098/rsbl.2013.1040)

Provided by Uppsala University

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