Temperature-dependent adaptation allows fish to meet their food across their species' range - DTU Orbit (18/01/2019)

Temperature-dependent adaptation allows fish to meet their food across their species' range

In seasonal environments, timing is everything: Ecosystem dynamics are controlled by how well predators can match their prey in space and time. This match of predator and prey is thought to be particularly critical for the vulnerable larval life stages of many fish, where limited parental investment means that population survival can depend on how well larvae match the timing of their food. We develop and apply novel metrics of thermal time to estimate the timing of unobserved stages of fish larvae and their prey across the north Atlantic. The result shows that previously identified life-history strategies are adaptive in that they allow parents to "predict" a beneficial environment for their offspring and meet larval fish food timing that varies by 99 days across a species' range.

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