

— Effect of temperature on early life history in weatherfish, —

Effect of incubation temperature (range: 9–36 °C; interval: 3 °C) on artificially propagated weatherfish (*Misgurnus fossilis*) early ontogeny (during interval from egg fertilization to the finish of hatching) was investigated. Both, the amplitude of the incubation period (evaluated in four crucial moments), the total hatching period duration was inversely proportional to the incubation temperature and ranged from 17.5 days at 9 °C to 1.8 days at 24 °C (expressed at H50) or from 137 hours at 9 °C to 9 hours at 24 °C, respectively. There were no influence of rising temperature on the total length of newly hatched larvae (TL = 4.23–4.67 mm), in contrast to negative correlation with developmental stage (9–18 °C: stage 37; 21–24 °C: stage 36), i.e. the length might determine the age at hatching, rather than the age at hatching determines the hatching length. The thermal tolerance range in term of survival lies between 9 and 24 °C (the thermal optimum 15–24 °C, i.e. weatherfish is a warm-mesothermic species). Temperatures above 24 °C (in our study 27–36 °C) are considered the lethal temperatures already during embryonic period. It is highly recommended to distinguish an impact of suboptimal temperatures 9–12 °C on development during explored interval only, in contrast to possible other effect of these lower temperatures in context of the whole early ontogeny.

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