

Age validation and growth rate of larval and early juvenile pike (*Esox lucius* L.)

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Pike (*Esox lucius* L.) is one of the most valuable predatory species for fisheries and angling in lakes, rivers, and in the coastal zone of the Baltic Sea. It also plays an important ecological role in regulation of the smaller fish species populations. Despite the prevalence in occurrence, Baltic Sea populations of the northern pike have declined since the 1990s significantly. Hence the need to research the ecology of early life stages of pike and the need to find appropriate tools. One such tool is the analysis of the microstructure of otoliths, which allows to obtain the information on age, date of hatching, growth, condition, and migration of larvae and juveniles. Surprisingly, there is almost no data available on the otolith microstructure and periodicity of daily otolith increments formation for this species. The present work fulfill this gap by providing age validation results for laboratory-reared one-month-old larvae and early juveniles using both sagittal and lapillar otoliths. Additionally, the growth rate in length and weight of pike and their otoliths growth during first month of life have been described.

Keywords: otoliths, daily increments, deposition periodicity, fish growth

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