

To Spawn or Not to Spawn? Growth rate and Birth Date Comparisons in Young-of-the-Year Yellow Perch (*Perca Flavescens* Mitchill) between an inland and small Great Lakes.

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Success of temperate fish species is often predicated on synchrony of hatch and spring blooms of food resources, and maximal growth during the first year to improve size-dependent overwinter survival. During 1998, we used otolith microstructure to identify the production of two discrete cohorts of young-of-the-year (YOY) yellow perch (*Perca flavescens* Mitchill) in both a small inland lake (Lake Opinicon) and small Great Lake (Lake St. Clair). Lake St. Clair is subjected to large downstream flows from Lake Huron that could be the source of the second cohort of YOY fish, whereas Lake Opinicon is part of a chain of lakes that does not experience large downstream flows. End-of-season sizes for fish that were hatched early had a mean size greater than 80 mm whereas the fish that were hatched later in the summer had a mean size less than 65 mm. The larger fish appear to have a better chance for successful overwinter survival than the smaller fish, but the relative contributions of these fish to the age-1 cohort will not be known until sampling is completed during the spring of 1999. Our results support the hypothesis that yellow perch may have the potential for more than one discrete spawning period within temperate lakes given the appropriate climatic conditions.