

Graduate Defense Seminar

Sex Reversal in Yellow Perch (*Perca flavescens*) to Produce Functional Neomale Sperm Donors

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10:00 A.M.

333C Kottman Hall

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Yellow perch (*Perca flavescens*) are a popular game and food fish in the Great Lakes region partly due to their firm flesh, low fat content, and mild taste. This species exhibits sexually dimorphic growth, with females growing faster and to a larger final size than males, making them more valuable in aquaculture. One method of producing monosex populations of fishes is through sex reversal. Previous attempts to sex reverse yellow perch have resulted in the production of non-functional, intersex fish because it was not possible to begin treatment until after the onset of gonadal differentiation. With the development of new larval rearing techniques, the objectives of this research were (1) to determine the success of masculinization using oral and immersion treatment methods and (2) to determine its success at two initiation size classes to produce neomale sperm donors. An alternative to hormonal masculinization was attempted through prolonged exposure of the juveniles to high water temperatures. The results indicated that temperature-induced masculinization is not achieved at the temperatures used in the present study. However, hormonal masculinization may be a valid method of producing neomale sperm donors, which would then create the next generation of all-female yellow perch.



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