

Poster #12

Effects of Exposure to Paper Mill Effluents in *Lepomis macrochirus* from Elevenmile Creek, Florida

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Elevenmile Creek receives effluents from a nearby papermill in Florida. Studies of fish in this creek have shown that this contamination has androgenic effects on mosquitofish by presence of gonadopodium in female mosquitofish, which is a male morphological characteristic. Papermill effluents have been shown to induce cytochrome p450 (cyp450), and decrease steroid hormone levels in other populations. These physiological parameters have yet to be measured in fish populations from Elevenmile Creek. This study focuses on the physiology of *Lepomis macrochirus* exposed to this contamination, specifically steroid hormone levels, cyp450 induction and vitellogenesis in females. We hypothesize that there are differences in all these parameters between fish from Elevenmile Creek and a control site. Steroid hormone levels were measured by EIA. Cyp450 from microsomal preparations, and plasma Vg were separated on 6% SDS page polyacrylamide gels, detected by western blot, and concentrations were determined by densitometry. Vg was not induced in males, which demonstrates that the effects are not estrogenic, and males from Elevenmile Creek displayed higher levels of testosterone. Determination of the effects of this type of contamination may lead to further understanding of this population's adaptive mechanisms, if any, and also provide evidence of endocrine disruption in fish and possibly the humans that consume these fish that would cause limitations and changes in the papermill's practices.