Ability of Bald Cypress (*Taxodium distichum*) to enhance aquatic structure in backwater embayments of reservoirs

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Large flood storage reservoirs are often the target of habitat enhancement projects because they lack aquatic structure due to dramatic shifts in hydrology. State agencies and anglers often add artificial structures to these reservoirs to attract fish and provide cover for reproduction, spawning, and refuge from predation. However, some structures may be short-lived, costly, and unaesthetically pleasing in shallow water. Bald cypress (*Taxodium distichum*) seedlings have been successfully grown in areas that suffer from habitat loss in Kentucky Lake. The growth of these trees is tolerant of flooding. This study compared fish use of bald cypress and stake beds, which are a common type of artificial structure in the lake. Boat electroshocking was used to compare the fish assemblages among structure types. Open water areas were used as a control. Sites were sampled five times from April-July, 2016. Samples included 186 fish representing 24 species. Sunfish (Centrarchidae) comprised approximately 50% and 54% of fish collected at stake beds and bald cypress trees, respectively. Clupeids and Cyprinids comprised approximately 70% of fish caught in open water. Repeated measures ANOVA revealed no significant differences in catch-per-unit-effort (CPUE) or species richness over time among stake beds, bald cypress, and open water. A comparison of overall CPUE and species richness revealed a higher species richness at stake beds, but no difference in CPUE between the structure types. Results show that bald cypress can concentrate fish as effectively as stake beds in shallow areas of embayments, providing a cost-effective and sustainable way of enhancing aquatic habitat.