

DRY TISSUE WEIGHT AS AN INDICATOR OF MUSSEL CONDITION - A CAUTIONARY NOTE. Layzer, James B., and Lesa M. Madison. Tennessee Cooperative Fishery Research Unit, Tennessee Technological University, Box 5114, Cookeville, TN 38505. (Tel. 615/372-3032)

The spread of zebra mussels threatens the continued existence of many species of native unionids. Because it is unknown if breeding populations of native unionids can be maintained long-term (> 10 yrs) in captivity, management agencies are faced with making a decision as to if and when unionids should be brought into captivity. We examined the use of dry tissue weight as an indicator of mussel condition. We collected samples of 50 *Fusconaia ebena* each month over a 1 yr period from the same site in Kentucky Lake to determine seasonal variation in tissue weights. Samples of 50 *F. ebena* were also collected from three other sites on the Tennessee River during one month to assess among site differences. All regressions of dry tissue weight on dry shell weight or shell length were significant. Analysis of covariance indicated significant differences ($P < 0.05$) among some sites and months. Because our samples of *F. ebena* were not infested with zebra mussels, these seasonal and site differences in tissue weight reflect normal variation and may be due to reproductive activity or other factors. We recommend that potential seasonal and site differences be investigated for other methods of determining mussel condition before management recommendations are made.

ORAL PRESENTATION