

International Shade Tree Conference is a good and useful tool in appraising tree values and that it is not a hypothetical formula. We believe that trees should be considered as having individual value and that real estate appraisers are no more qualified to appraise tree values than an arborist is qualified to appraise real estate.

These regulations are not new. They have been in existence for many years and I know of no concentrated effort on the part of this or any other organization to try to correct these inequities. It would seem then that we are not

totally without blame.

At the meeting in Tampa last winter, the ASCA appointed a committee, under the able direction of Dr. L. S. Chadwick, to see if something could be done to correct this situation. It is too early to tell just how successful this committee will be but I can tell you that progress is being made and it looks very hopeful. I feel sure we shall have a favorable report to make at a later date.

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ABSTRACT

Bell, D. T., and F. L. Johnson. 1974. **Flood-caused mortality around Illinois reservoirs.** Trans. Ill. Acad. Sci. 67(1): 28-37.

The impoundment of rivers and streams imposes stresses on the streamside forest community which were never experienced under natural conditions. The streamside plant associations develop in response to the complex of environmental factors which sorts out species that are intolerant of the existing conditions. The spring and early summer floods of 1973 produced abnormally high water conditions in the Lake Shelbyville and Rend Lake reservoirs in south central and southern Illinois, respectively. Floods along the Mississippi River system prevented the reservoir managers from employing release rates sufficient to alleviate flooding conditions above the dam. Thus, many uncleared areas above these reservoir dams were inundated for most of the 1973 growing season. The objective of the current study was to determine relationships between tree mortality and the period of inundation to better understand the ecological limits of tree species in the Midwest to flood conditions.

The effects of high reservoir levels in Rend Lake and Lake Shelbyville on species of the streamside forest are described. Tolerances to growing season inundation for 24 tree species were determined from data on tree elevation and duration of flooding. A limit of 30 days of flooding during spring and summer months is suggested to insure survival of tree vegetation around reservoir margins. Inundation of trees for less than 30 days during the growing season of one year was insufficient to kill any established tree. When flood durations reached 50 days, one of three *Quercus velutina* (black oak) observed had not survived the flood conditions. Mortality among the predominately upland species became apparent when flood conditions extended to more than two months. When the period of inundation reached 110 days, marked mortality was observed in the tree species normally associated with upland areas. Increased flood duration resulted in increased mortality among upland species. Species of the flood plain, however, were found to be completely tolerant of the conditions imposed by the high water. Many trees of these species completed their annual growth cycle despite existing flood conditions throughout the growing season. At the time of the sample in late September, the bases of many of the trees were still under water.