ENDANGERED SPECIES IN THE BIG WOODS OF ARKANSAS

FRESHWATER MUSSELS

The Big Woods of eastern Arkansas is well known for its deer, waterfowl, bears, and turkeys; however, the wildlife wealth of this large block of forest, rivers, and wetlands also includes six endangered species, three birds and three freshwater mussels.

The Mississippi River basin is the worldwide center of abundance for freshwater mussels. They form “beds”, which may cover several acres and contain thousands of mussels, on gravel, sand, or mud bottoms of rivers and lakes. The White River was once one of the most productive and valuable rivers in the world for the commercial production of mussels. Before plastic took over the market, pearl buttons were the main use for mussels. Today a smaller market remains as the shell material is used as the seed for the formation of cultured pearls. Freshwater mussels have a complex life cycle that requires their larvae to live in a host fish before breaking free to settle on the bottom. This requirement focuses attention to the necessity for an overall healthy stream ecosystem. Not only must the current and bottom conditions be suitable for the mussels, but the river must also support the correct host fish for the mussel larvae. Excessive turbidity; which clogs feeding gills, covers beds, and changes bottom composition; is a major problem to mussel welfare in the Big Woods.

The three species of endangered mussels in the White River are all rare, but one, the pink mucket (Lampsilis abrupta), is widely scattered and likely occurs in most or all of the mussel beds in the lower part of the river. The pink mucket prefers medium to large rivers with moderate to fast flowing water. It never is abundant with only a few in each bed. The scaleshell (Leptodea leptodon) has only been found once in the White River near Newport. It generally prefers smaller streams so it is not expected to occur further downstream. The fat pocketbook (Potamilus capax) is found in several mud-bottomed streams in eastern Arkansas, but since 1965 has been located in the Big Woods only once in the most southern part of the White River.

How You Can Help Freshwater Mussels

The biggest threat to freshwater mussels in the Big Woods is dredging in the White River and excessive turbidity in nearly all streams. No till and other agricultural practices that reduce soil runoff contribute to turbidity reduction. Reducing turbidity will also help fish and fishing in the White River.