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1995

**EVALUATION OF VARIOUS FACILITIES FOR MAINTAINING FRESHWATER MUSSELS IN CAPTIVITY.** Dunn, Curtis S., and James B. Layzer. Tennessee Cooperative Fishery Research Unit, Tennessee Technological University, Box 5114, Cookeville, TN 38505. (Tel 615/372-3032).

Between September 1993 and September 1994, we collected about 1,200 mussels of 17 species from the Cumberland, Licking, and Tennessee rivers, and Elkhorn Creek. Mussels were brought to one of four facilities: a fish hatchery pond, raceway, farm pond, or an embayment of Kentucky Lake. Mussels were broadcast throughout the raceway; most mussels burrowed into the sand-gravel substrate within 15 hrs. At the other three locations, mussels were placed into pocket nets suspended 0.6 m below the water surface. After 1 yr in captivity, survival has ranged from 85 to 100 % for most groups of most species at all facilities; however, variable survival rates have occurred between different groups of the same species at the hatchery pond. Survival has ranged from 12 to 100 % between groups of *Elliptio dilatata*, *Lampsilis siliquoidea*, and *Lasmigona costata* collected on two different occasions from Elkhorn Creek, the water supply for the hatchery. Most mortality has occurred within the first 30 to 60 days of captivity. Although most areas of the Tennessee River no longer support reproducing populations of *Actinonaias ligamentina*, *E. dilatata*, and *Ptychobranhus fasciolaris*, survival of these species has been 85 to 98 % in pocket nets suspended in Kentucky Lake.

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