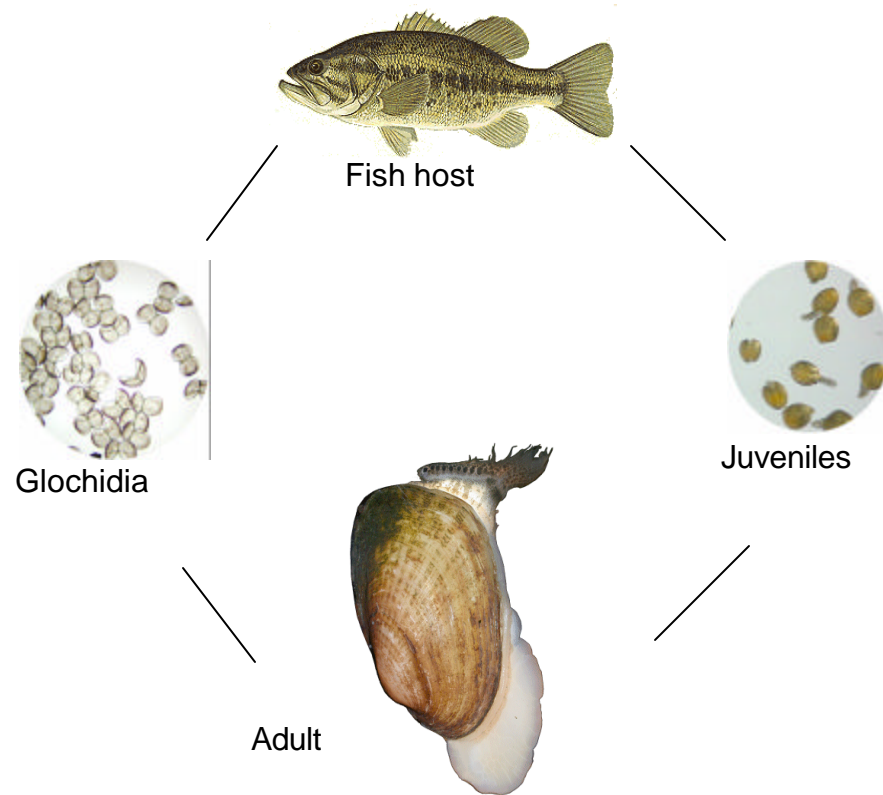


**Figure 1.** Organisms threatened in the US. After Stain et al. 2000.



**Figure 2.** Life cycle of freshwater mussels.



Photo 1. Glochidia were gently flushed from a female mussel using a syringe with water.

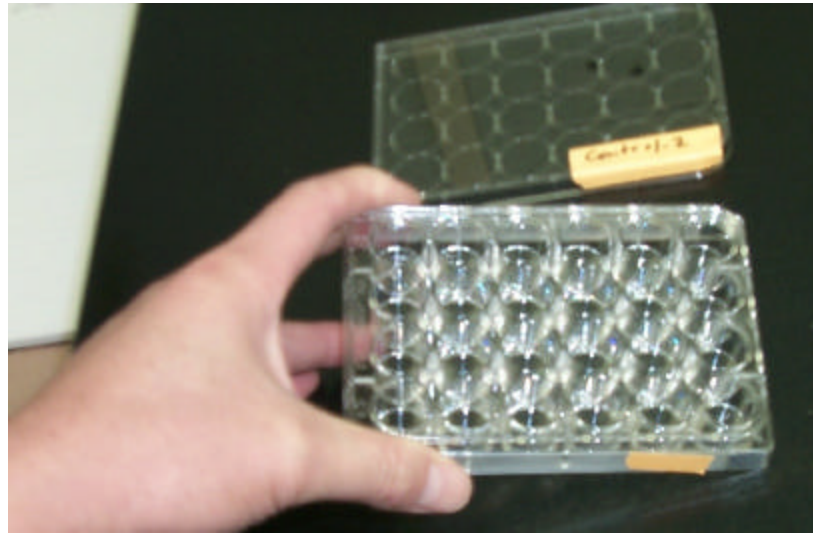


Photo 2. 24-well polystyrene tissue-culture plates and 200-ml crystallizing dishes.

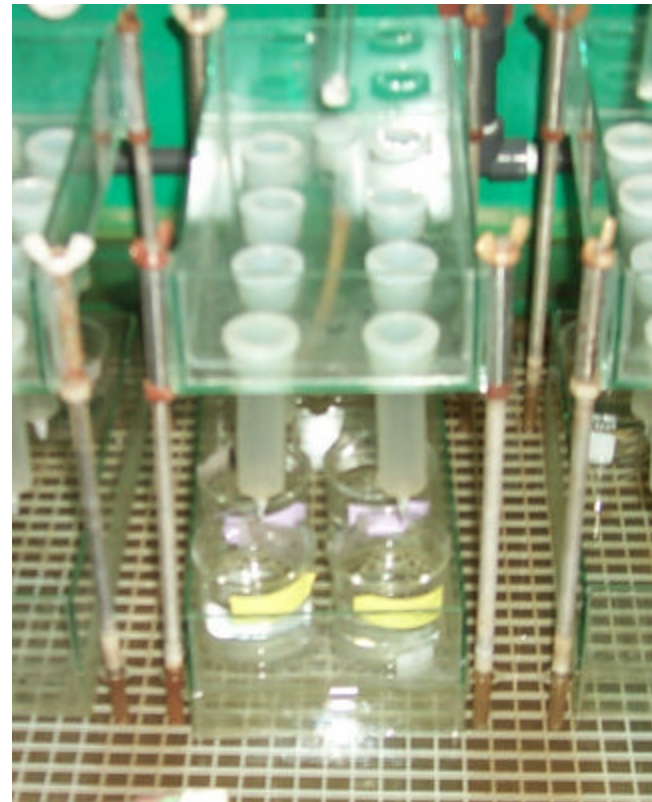
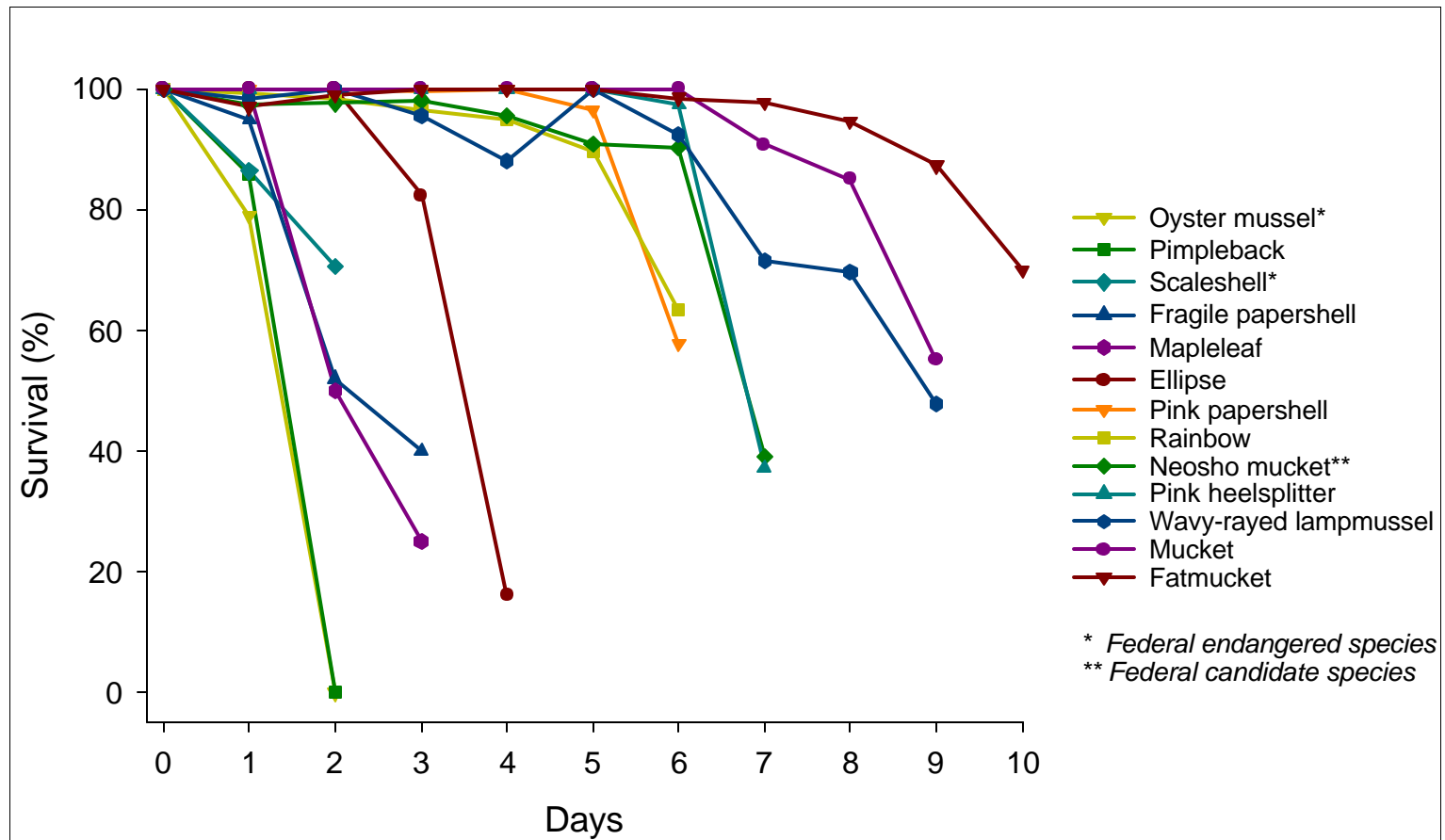
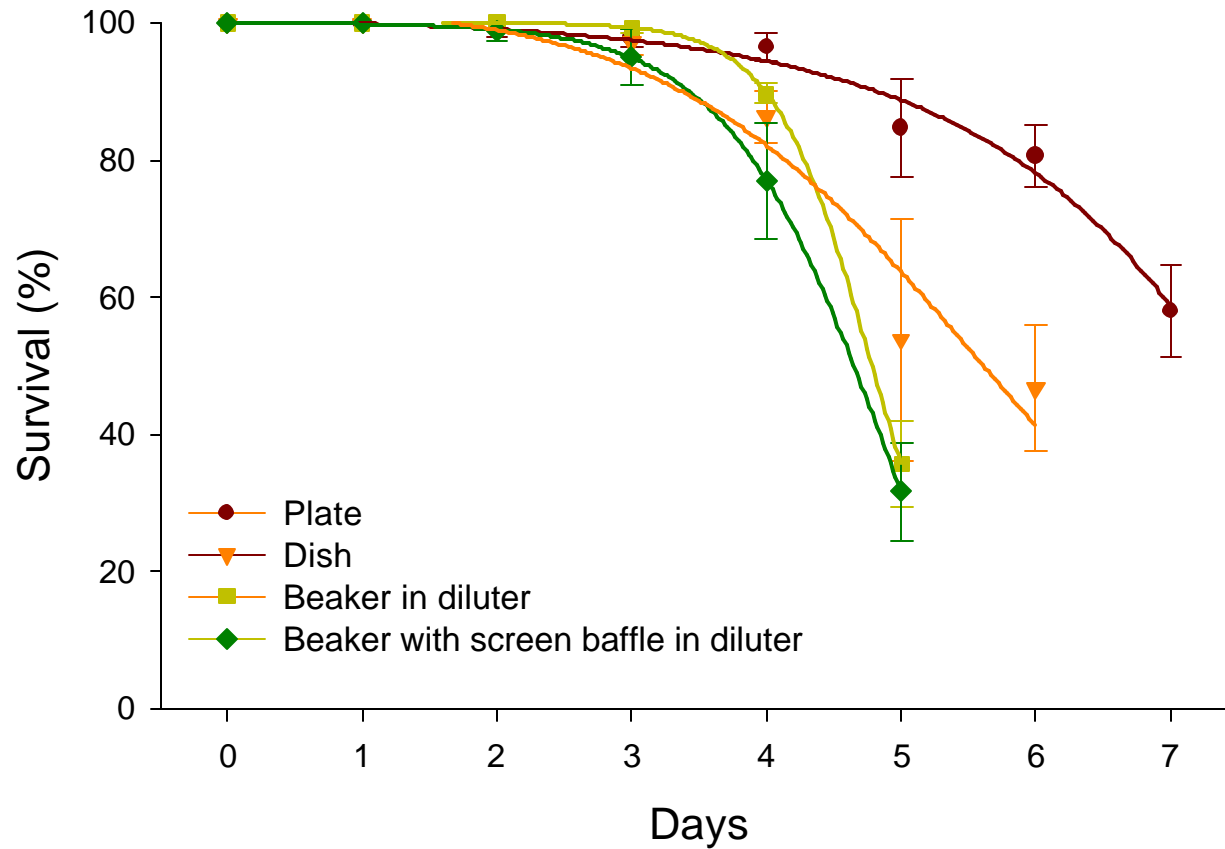


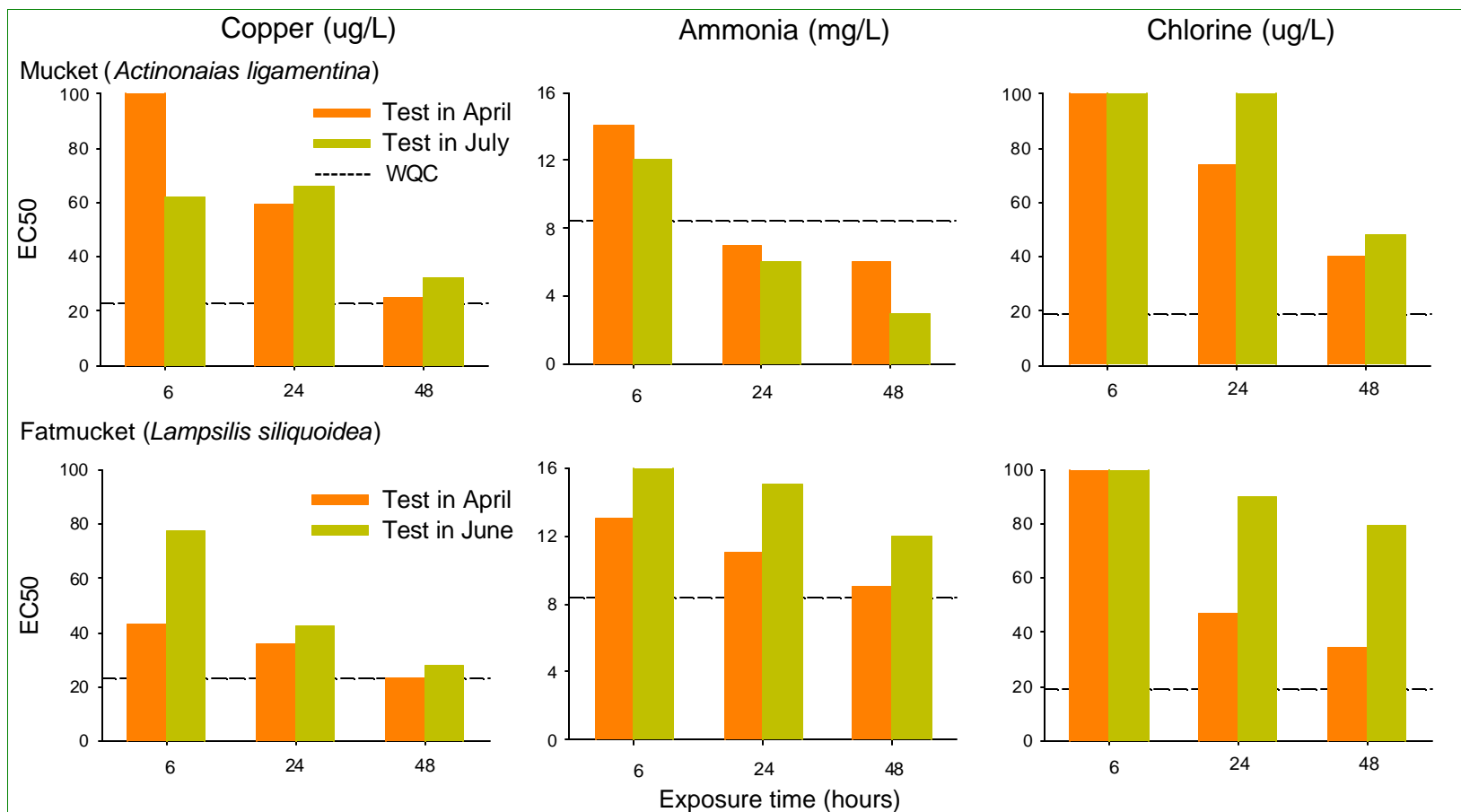
Photo 3. 250-ml beakers in an intermittent flow diluter system; 7 additional water every day.



**Figure 3.** Survival of glochidia after removal from female mussels of 13 species.

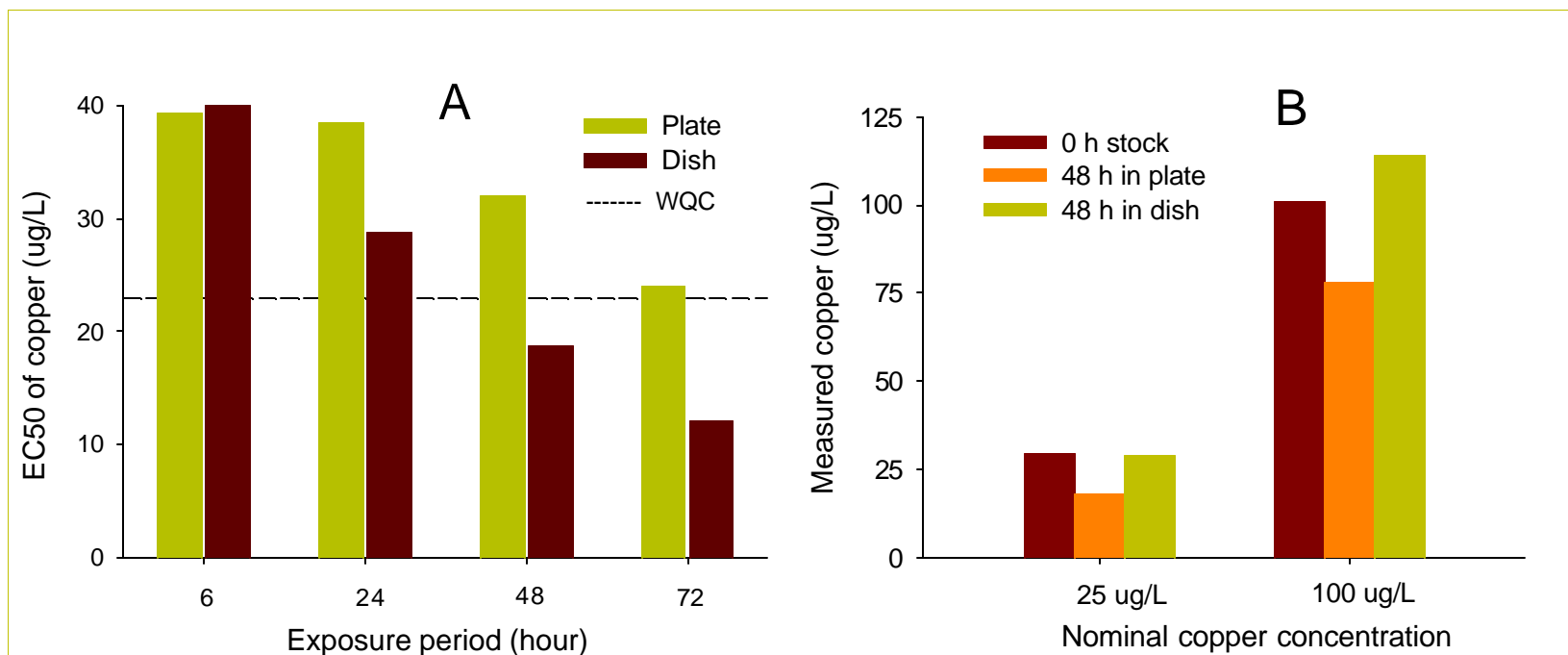


**Figure 4.** Mean survival ( $\pm$ SE, n=5) of fatmucket glochidia held in various test chambers.

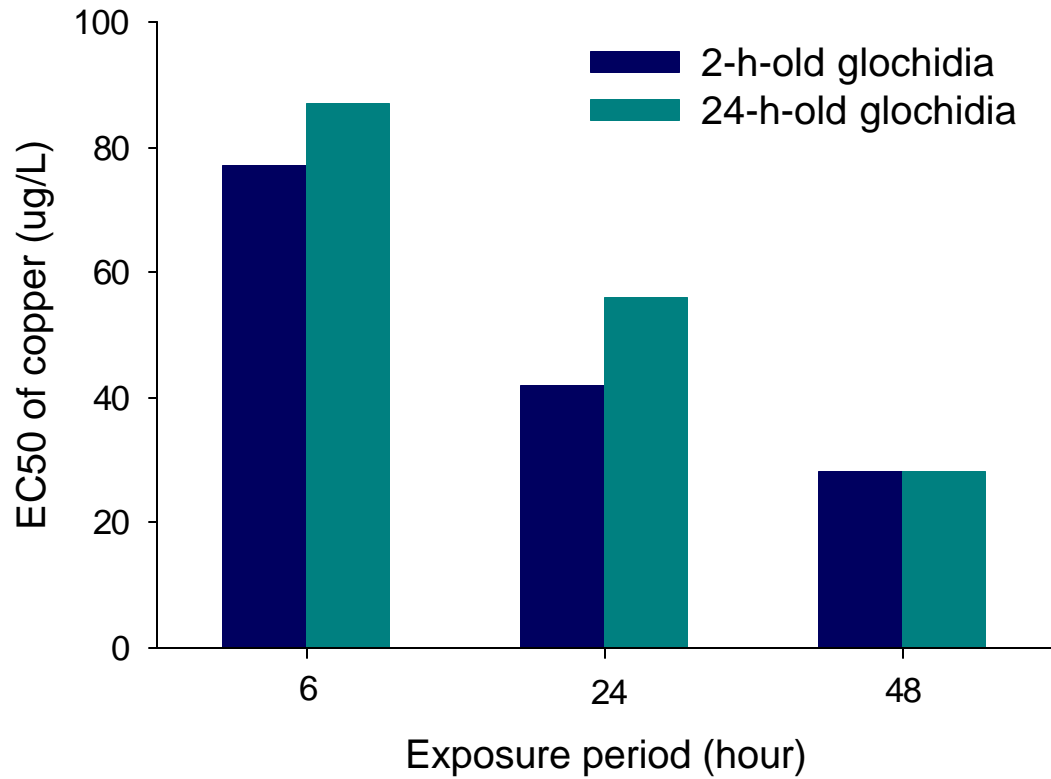


**Figure 5.** EC50s of 3 chemicals for glochidia isolated over time from two mussel species. USEPA acute water quality criteria (WQC): 23 ug copper / L (hardness 170 mg/L as CaCO<sub>3</sub>), 8.4 mg total ammonia / L (pH 8), 19 ug chlorine / L.





**Figure 6.** (A) Mean copper EC50s (n=2) for fatmucket glochidia held in polystyrene plates and glass dishes over various exposure periods. (B) Measured concentrations in plates and dishes at the start and end of a 48-h exposure.



**Figure 7.** EC50s of copper for 2- or 24-h-old glochidia of fatmucket over three exposure periods.