Can Passive Solar Heating Be Used to Control the Spread of New Zealand Mud Snails?[AFS]

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Since the first discovery of New Zealand mud snails (*Potamopyrgus antipodarum*) in Idaho's Snake River in 1997 they have spread to many waters in the West. Anglers and other recreationists are likely vectors in the transfer of this invader and all prevention programs must include public participation. Unfortunately, the public requires practical solutions before they will voluntarily change their behavior. It is known that *Potamopyrgu*s is sensitive to high temperatures. Exposures of 40 °C (104 °F) for two hours can be lethal to *Potamopyrgu*s and exposures to hotter temperatures prove lethal in shorter times. This experiment wa designed to determine if solar heated equipment storage containers could produce lethal temperatures. A variety of equipment storage containers were tested under differing conditions to determine if passive solar heating would develop and sustain temperatures that were high enough to provide sterilization. Our results show that although air temperatures inside the storage boxes exceeded 68 °C (155 °F) the insulating effects of the materials placed in the containers resulted in a failure to achieve lethal temperatures in all areas of the containers