

The Potential Use of Data-logging Light Intensity and Light On/Off Meters in Mapping Visitor Use of Wild Caves

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Abstract

The Illinois Department of Natural Resources and Illinois Nature Preserves Commission manage several caves that contain the Illinois cave amphipod (*Gammarus acherondytes*) which was recently added to the Federal Endangered Species list. One of the potential threats to the survival of the amphipod cited by the U.S. Fish and Wildlife Service is visitation.

Unfortunately, we have very little real data on the patterns of visitation for these caves. The best data is available for the most visited cave (Illinois Caverns). The main entrance to this cave is owned and managed by Illinois Department of Natural Resources. Current policy allows open visitation by groups of under 25 people with an exploration permit, issued at the cave site. Because of this permitting process we have a good estimate of the number of people entering the cave. However, we have no information on which portions of the cave are visited or on how many groups visit various areas. Three other by Illinois Department of Natural Resources /Illinois Nature Preserves Commission managed caves have poorer information on the number of visitors, but they are much less visited.

For this reason we have proposed using a series of light intensity loggers and light on/off state loggers to determine usage patterns for the caves. We are proposing using approximately StowAway Light Intensity Loggers combined with a few HOBO H6 Light on/off Loggers (both from Onset Computer Corporation) to study patterns of visitor activity in the caves. We have not yet begun this monitoring and are seeking advice and information to help us to do so successfully.