

Wildlife Surveillance Instrumentation Proposal

Project Description

Monitoring the use of tree cavities and other animal habitats (i.e. burrows) is important ecologically, but at present, the tools necessary to remotely monitor these habitats during the fall/winter months does not exist. To increase our detection of cavity use, the ideal tool would be a remote camera system that 1) takes pictures during low light conditions (i.e. dawn and dusk) using a near infrared flash standard to remote wildlife photography, 2) is continually powered, even during cold weather, 3) has high image storage capabilities, 4) is triggered by animals entering/leaving the cavities, and 5) is small enough to be mounted internally within the cavity so as not to influence use, predator interest, or vandalism by humans. Although other studies have successfully demonstrated the use of externally mounted remote camera systems to document feeding rates and diet of cavity dwelling animals, and within-cavity continuous videography has been successful using a custom-made system in a proof-of-concept study (Pechacek, 2005), there is no commercially available camera system that meets the above listed sampling requirements. Of particular importance, Pechacek (2005) noted that his continuous video system required long periods of time for analysis, which limited his investigation to a 22-day period during the breeding season. Development of a trigger-based cavity camera system would eliminate quiet periods where no animal activity occurred, and greatly facilitate data analyses.

Pechacek, P. 2005. Use of non-stop video surveillance to monitor breeding activity of primary cavity nesters in remote areas. *Acta Ethologica* 8:1-4