

****Assessing the Effectiveness of Autonomous Recording Unit Surveys for Detection of Great Gray Owls in Western Montana**

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Montana has classified the Great Gray Owl as a Species of Greatest Conservation Need (SGCN3) and a Species of Greatest Inventory Need (SGIN). Montana non-game species listed as SGIN are not sufficiently monitored by standard ecological monitoring programs, typically because they are cryptic and difficult to detect. We have completed three years of surveys in high quality habitat utilizing Autonomous Recording Units (ARU) and traditional Callback Surveys to assess occupancy of this elusive species. A total of 101 cells in western Montana have been surveyed with ARU detectors, including 30 sites with two detectors deployed simultaneously. Great Gray Owls were detected in 8 of the 101 survey cells. We'll present findings on the effectiveness of ARU surveys for the detection of cryptic owl species, as well as information about the detection of non-target species of information need, and best practices for ARU surveys of owls.