



## What will the Cuckoo Search Reveal?

By Amy Seaman

The Automated Recording Units (ARU) we worked with the University of Montana Bird Ecology Lab (UMBEL), MT, Fish, Wildlife & Parks, and Smithsonian Conservation Biology Institute to deploy this summer have sat silently waiting for cuckoo calls since early-mid June. With just a bag keeping them, simple lithium batteries for power, and a strap to keep them secure, we happily retrieved 43 of 44 deployed along the Missouri River. Now these devices' memory cards will be analyzed by a newly developed software capable of detecting both the Black and Yellow-billed Cuckoo calls captured within. With that new information, we hope to better understand what stretches of habitat are most important, when the most active times for vocalizing are, and what river stretches are used before leaving the in fall.

(Above) A simple strap allows the ARUs to remain inconspicuous in the cottonwood gallery forests. (Below) Peter Dudley removes a detector after a full season. Photo by Bo Crees



Following our initial cuckoo observations during ARU deployment, finding eight during call-back surveys in June, a handful of mid-season call-back surveys ended in silence. That means remaining data evidence of cuckoo presence will rely on the passive listening provided by the ARUs through August. We know from the flashing green indicator light that many of our ARUs were probably still recording when we picked them up, but we also know a handful met less optimal fates. One ARU looked like it had some chew marks on the battery, another was found displaced but protected by the bag, and just one vanished completely. The cottonwood galleries were still compared to the bustling activity of nest building and territorial defense we are used to, but paddling and walking along the Missouri river galleries is fun any season.



(Above Left) A simple strap allows the ARUs to remain inconspicuous in the cottonwood gallery forests. Here, the ARU is fresh for the season (Above Center) (Above Right) After a full season a handful of ARUs met unsavory fates. (Below) A cuckoo flares its tail while searching for the source of the call-back song during a play back survey in early June. Photos by Amy Seaman and Bo Crees

We owe a special thank you to Ken Keever and Jonathan Champion from the Bureau of Land Management for their help during the early part of the season deploying ARUs and showing us invasive species, and for their help retrieving ARU's along over 30 miles of the Big Muddy. Without our great partners this would not be possible; now it's the software's turn to work!

