

# *Nighttime Mammal Surveys on the Green River*

**by Lacy Smith and Julia Halverson**

Many mammal species are nocturnal and therefore are unlikely to be encountered during the day, even though they may be abundant at a given location. Examples of such species include owls, bats, mice, voles, bobcats, mountain lions, coyotes, and foxes. In order to document the presence and abundance of these nocturnal animals on the Green River, we decided to search for them on a few nights in mid-June.

We carried out our first night survey at the campsite Big Pine at river mile 279.8. The habitat there consisted of a rocky, juniper-pinyon-ponderosa woodland. The area adjacent to the river was flat with a steeper slope heading up the hill. We traversed the landscape, making a loop, with our white headlamps turned on. We encountered a cottontail as it hopped away from us into a shrub, but we did not hear or see any other animal life.

Our second night survey took place upstream of Little Canyon at river mile 267.75. The habitat was rocky with juniper and shrubs. Part of the area was flat while another area sloped downwards to the cliff edge next to the river. At this site we conducted our survey with colleagues Brett Baker and Max Agnew. We walked approximately one mile in the downstream direction along the hilly slopes with intermittent white light, red light, and no light. We observed one pair of eyes in the sagebrush, probably belonging to a rodent. On our loop back upstream we observed a large pair of eyes on the forested slope above us. The animal, which was likely perched on a rock or ledge, blinked several times before turning away. The size and shape of the eyes suggested that they belonged to a large animal such as a mountain lion. We also flushed out an unidentified owl from a juniper tree. Back at the campsite, we encountered several unidentified mice on rocks near the water's edge.

We conducted our third night survey at Crook Campground at river mile 252. Our flat survey area was comprised primarily of small shrubs such as sagebrush, with a row of tamarisk and cottonwood trees on the river bank. Colleague Heather Bowen accompanied us on this survey as we traversed the brushy plain with periods of white light, red light, and no light. Unfortunately, we did not encounter any animals during our survey. Upon returning to our campsite we came across several unidentified mice in the brush surrounding a mature cottonwood tree and the area around the bathroom.

Our final night mammal survey took place at Winnie's Rapid in the Canyon of Lodore at river mile 240.3. Since our initial technique of walking through the survey area had yielded only limited results, we decided to sit down on a branch and wait. After several minutes we turned on our white lights and spotlighted for animals. Seeing nothing, we turned them off and waited a few more minutes, during which time we noticed two bats flying about in the nighttime sky. When we returned to camp, other colleagues informed us of a recent bat exodus from the nearby cliff. By the time we arrived at the cliff, however, all of the bats had already left in search of food.

Our survey methods were unsatisfactory in determining the nocturnal species composition and abundance at our campsites. In future studies, we would suggest the following changes: restricting the use of light, limiting the number of people conducting the survey – one person may be the best number – and remaining still and silent in one spot for an extensive period of time.