

# Missouri River surveys year three: Breeding birds on Montana's Big River with the University of Montana Bird Ecology Lab

June 27- July 1 2017 by Amy Seaman



Photos by Amy Seaman  
and Boo Curry

**The Missouri River** harbors some of Montana's greatest stretches of cottonwood forest. Scrubby upland sage and pine bluffs border the riparian forest and expanses of tall grass, deciduous shrubs, and forbs blanket the riverbank. Together these habitats create a unique river corridor where Bullock's Orioles, Spotted Sandpipers, and Brown Thrashers thrive adjacent to Brewer's Sparrows and Rock Wrens. **This year** we continued our partnership with the University of Montana's Bird Ecology Lab (UMBEL) to monitor all birds along a 51 mile stretch of this critical habitat, focusing surveys on public land managed by the Bureau of Land Management.

This stretch is classified as a Wild and Scenic River, National Monument, and Important Bird Area (IBA), and its waters thread private and public land ownership.



Photo by Boo Curry

Photos: (Top) Sunset at Hideaway Campground; (Above) View of a lone cottonwood below the scenic cliffs in a stretch of river with few large diameter cottonwoods; (Below) A grazed cottonwood forest punctuated with box elder and green ash, sparse snowberry and rose. Few Russian olive trees inhabit sites likethis.



While searching hard for species of concern like the Veery and Black-billed Cuckoo we collected detailed plant information like tree species and age-class, shrub variety and coverage, and abundance of invasive plants, always noting the plants' heights and contribution to the habitat composition. A host of grasses, shrub-height annuals, and perennials cast their seeds at our feet as we recorded a measure of their invasiveness. We noted cottonwood regrowth and invading Russian olive trees, the latter nearly devoid of birdsong.

Traveling the Missouri collecting this type of data makes apparent the volumes of change occurring even in this stretch, acclaimed for its similarities to conditions 212 years ago during Lewis & Clark's journey.



(Top right) A small Russian olive grows on the left among the towering cottonwoods; (Bottom right) Invasive field pennycress in seed; (Left) Invasive reed canary grass and leafy spurge overgrowing snowberry.



Photos by Amy Seaman

The most common noxious species are leafy spurge, reed canarygrass, non-native thistles, and patches of cheatgrass. The native yellow sweet-clover and wild licorice can “behave invasively” and a few large Russian olive trees dot the public lands we visit, though there are fewer here than in other portions of the river\*. In only one location did I notice tamarisk near cottonwoods regenerating in a slough, and found just three tall shrubs for the first time in the past three years visiting the “BLM 19” site.

\*Species referred to above are: leafy spurge, *Euphorbia esula*; reed canary grass, *Phalaris arundinacea*; thistles, certain *Cirsium sp.*; cheat grass, *Bromus tectorum*; yellow sweet-clover, *Melilotus officinalis*; wild licorice, *Glycyrrhiza lepidota*; Russian olive, *Elaeagnus angustifolia*; and tamarisk, *Tamarix sp.* (Above) Young cottonwoods ~ 1.5 meters high establishing despite grazing pressure along a slough of willows; (Below) Tamarisk, (tall shrub left), in a patch of sage and regenerating cottonwood in a slough in “BLM 19”. Notice grazing on the young cottonwoods.



Young cottonwoods, and others along this 51 mile stretch have been establishing since 2012. Cottonwood regeneration requires the mature seed, carrying a namesake wisp of cotton and viable for just two weeks, to contact bare soil and the proper combination of moisture and sunlight. Post-germination survival is tough the first eight weeks, and in the following few years many seedlings are susceptible to drought and grazing by wildlife and cattle. Some were holding on with just half a dozen big glossy leaves, though most of the regenerating patches we recorded in 2016 are still intact. Adjacent to the young cottonwoods and willows defining the immediate river bank, and moving towards the large cottonwoods themselves, we often noticed small swaths of showy milkweed, a native species whose blooms the bees and butterflies savor, and whose combined scent perfumes the river-side habitat.



\*Showy Milkweed above is *Asclepius speciosa*;(Above) A carpet of showy milkweed nestled between young cottonwoods and older cottonwood forests interspersed with licorice, thistle and cottonwood seedlings; (Below left) Silver sage, *Artemisia cana*, on the upland side of the cottonwoods; (Below right) This gray Easter Screech-Owl was the last of a family of four we located amongst the cottonwood branches on day 1.



Photo by Danny Smith



Photo by Bob Curry



(Above) Danny Stark and Maya Rappaport paddling the river after points – they have been surveying the Missouri and Madison Rivers since late May; (Left) A Least Flycatcher nest in a plains cottonwood; (Below) A Yellow-breasted Chat in plains cottonwood; (Bottom) A Brown Thrasher investigating our presence.

Photos by Boo Curry



**Invasive plants found along the Wild and Scenic Missouri River**

*Yellow Mustard*  
*Cheat Grass*  
*Shepherd's Purse*  
*Knapweed sp.*  
*Thistle sp.*  
*Field Bindweed*  
*Common Hound's Tongue*  
*Russian Olive*  
*Leafy Spurge*  
*Wild Licorice\**  
*Yellow Sweet-clover\**  
*Reed Canary Grass*  
*Sowthistle*  
*Common Mullein*  
*\*native species that can behave invasively*



While our trip revealed a new story unfolding among plants, the surveying still yielded 83 bird species, including our first Peregrine Falcon. It is apparent here that the river and cottonwoods still provide for many of our 254 species of breeding birds; spectacular ones like the Ovenbird, Red-eyed Vireo, Common Yellowthroat and Yellow-breasted Chat. Unfortunately our play-back surveys yielded neither a Black-billed Cuckoo response, or a screech owl, but our speakers seemed more quiet than usual! We noted the first potential calls of Mountain Bluebirds and Red Crossbills and unique Lazuli Bunting songs, but many species were quiet as summer heat had already set in. To keep these surveys in perspective, in the western U.S, cottonwoods and associated riparian habitats along

(Top Right) Boo Curry takes the helm of our 17' canoe; (Middle Right) Danny Stark wrangles cicadas instead of snakes; (Lower Right) Maya Rappaport and Danny are a little silly from the heat; (Below) Big Muddy flows decrease from ~5.6 miles per hour near Judith to around 3.5 here, near Kipp recreation area in the CMR National Wildlife Refuge.



Photos by Amy Seaman and Boo Curry

(Below) The river crew of Danny Stark and Maya Rappaport help put the width of the Big Muddy in perspective as we move toward the lower section.



(Below) A linear patch of young cottonwoods grow along public lands within the monument.



(Below) Our campsite day two in overgrazed habitat without much shade. The Cottonwoods across the river were loud with birds though and we did see a Short-eared Owl foraging among the open vegetation.



Photo by Boo Curry



streams, rivers, and open water provide for more bird species than all others combined. This riparian section of the Missouri is hanging on to species diversity, but threatened by low spring flows, slow cottonwood regeneration, and grazing pressure. Tracking the birds here will help us follow this ongoing story.



Our team had a lucky stretch of mild weather and moderate wind, so we completed this wild section in just four days, paddling between points as we moved downstream making up for the Missouri's slow current. Please visit our website for more on riparian habitat and do not hesitate to contact me at [aseaman@mtaudubon.org](mailto:aseaman@mtaudubon.org).

Photo by Boo Curry



(Top Left) Common Grackles along the upper part of our survey; (Middle left) Last day crew photo – Boo Curry, Amy Seaman, Danny Stark, Maya Rappaport; (Left) Downstream view from our canoe; (Below) The famed badlands in the evening sun across the river from our campsite at “BLM 19”.

