

Missouri River surveys year two: Cottonwood regrowth, cuckoos, and canoes with the University of Montana Bird Ecology Lab June 19-24 2016 by Amy Seaman



Last year we partnered with the University of Montana’s Bird Ecology Lab (UMBEL) on a new project to survey birds and cottonwood regrowth by paddling 70 miles of the Missouri River. This section is classified as an Important Bird Area (IBA), as well as a Wild and Scenic river, and received heavy run-off in 2011 that led to natural cottonwood regeneration. This year we teamed up again, to ground-truth 2015 data, survey for all birds, and search for cuckoos in habitats managed by the Bureau of Land Management (BLM).

However, our main focus was tracking the comeback of a tree that provides habitat for over half of Montana’s breeding birds.

Photos by Amy Seaman



Photos: (Top) String of cottonwoods along upper Missouri close to Ft. Benton; (Left) Canoes fully loaded for the surveys; (Above top) our crew from right to left – Danny Stark, Lauren Smith, Tricia Rodriguez, and Amy Seaman; (Above) Early morning upstream from Judith campground day 1.

In addition to supporting breeding birds, cottonwoods provide habitat for migratory species (hundreds of thousands of individuals), amphibians, as well as mammals like elk, white-tailed deer, and pronghorn. In the western U.S., cottonwoods and associated riparian (stream-side) habitats, rivers, and open water that support diverse vegetation, provide for more bird species than all other types combined. In Montana riparian habitat covers <4% of the state, but support over 50% of our 254 breeding bird species; those such as Brown Thrasher, Red-eyed Vireo, Yellow Warbler, Common Yellowthroat, Gray Catbird, and many more. Though Montana has many intact riparian corridors, cottonwoods generally are declining from a number of causes including dam-caused reductions in spring flows, land development, subdivision, overgrazing, and competition with non-native species like Russian olive and salt cedar.



(Above) A lone stand of scattered cottonwoods provided a haven for over a dozen species during a point count survey; (Below left) A yellow warbler nest in red-osier dogwood; (Below right) an inquisitive adult Lark Sparrow with juveniles nearby.





To regenerate, the mature seed, (carrying a namesake wisp of cotton) must find bare soil, and the proper combination of moisture and sunlight to germinate. Seeds are only viable for two weeks. Typically, optimal conditions occur via a process that begins during spring run-off, when high water levels both scour sediment and deposit new soils along banks, sandbars, and gravel beds. Few seeds that germinate will even survive beyond the first eight weeks, after which many young cottonwoods are susceptible to drought and grazing by wildlife and cattle.

(Above) Young cottonwoods almost 2 meters high establishing behind a row of willows on the river bank;
(Below) Young cottonwoods regenerating in a patch along a low-lying slough.



For many years, UMBEL has surveyed large areas of riparian habitat along this corridor, tracking many breeding birds including species of concern such as the Veery, and Black-billed Cuckoo. Surveys during 2012 revealed that high run-off from the previous winter was sufficient for pockets of cottonwood seedlings to establish along the river's banks, sloughs, and islands. In 2015 the effort began between the BLM, UMBEL, and Friends of the Upper Missouri Breaks Monument to map these areas to inform the BLM's grazing



(Above) Black and Yellow-billed Cuckoos are surveyed with a “play-back” call. Black-billed were found near Hideaway campground this year. We also used play-backs for Eastern Screech Owls at night; (Left) A small ocean of cottonwood seedlings found in 2012; (Below left) Danny stands next to a cottonwood sapling for perspective.



management as the plants regrow. This year, as we floated between Judith and Kipp we checked ~ 40 areas of regeneration recorded in 2015, and mapped another 60 or so locations where saplings were present. In all instances we were interested in the stand's height, density, general area of coverage, and approximate number of trees. We found many sites where more than 20 saplings were growing closely together in a small area.



(Above) A female Common Merganser with five chicks; (Left) A Yellow-breasted Chat nest in a clump of snowberry and other shrubs; (Below left) A Northern Harrier nest found on Sturgeon Island in high-high rose and snowberry shrubs; (Below) House Wrens were abundant and vocal; (Below right) Wild Turkey chick found on BLM land near Woodbottom.



Photos by Danny Stark

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Saplings were mostly found near stands of mature cottonwoods, but occasionally they sprouted from the narrow band of available habitat along the river's steep cliffs.

Seventy miles of mapping kept us busy, searching banks and island edges for saplings, but as we paddled, we documented 83 bird species; a dozen Bald Eagles, a Short-eared Owl, Greater Yellowlegs, Willet, a Common Tern pair, Field Sparrows, many young mergansers and geese, and more. Our play-back surveys yielded at least one Black-billed Cuckoo response, and almost a half dozen Eastern Screech Owls.

But for one storm the weather cooperated, except wind put our paddling on hold one evening. Fortunately, this pause allowed us the opportunity to remove a gopher snake that had occupied our canoe!

(Top Right) Lauren and Tricia securing gear; (Right) Taking a break to wrangle a gopher snake from our canoe; (Below) Mackerel sky at Coal Banks landing warns us of impending rain.



(Below) Storms heading northeast frequently drop into the canyon between Ft Benton and Woodbottom. This portion passed us by, but as night drew on the sky grayed. Lightning is always a concern.



(Below) A thunderhead moves to the Northeast past camp after a late afternoon squall.



(Below) Post-storm light on cliffs and an extensive cottonwood grove between Ft. Benton and Woodbottom.





That was a new one! Some of the other wildlife we paddled aside were beaver, muskrat, white-tailed deer (we found three fawns), coyote, and spiny softshell turtles. Moving along the water really is a great way to watch wildlife in Montana, and it was clear that where cottonwood-dominated riparian habitat was intact, more birds and greater bird diversity was present. We will continue to track the future of this important tree as the 2012 seedlings attempt to establish along the Wild and Scenic Missouri River and Important Bird Area. Please visit our website for more on cottonwoods and riparian habitat and feel free to contact me with any questions or comments: aseaman@mtaudubon.org.

(Top Left) Last day crew photo; (Middle left) A mature stand of cottonwoods boarded by willow - young cottonwoods peak out above the willows; (Left) A pair of Bald Eagles with one bird wearing a metal service band; (Below) passing cottonwoods near the Charles M. Russell wildlife refuge boundary.