

**Surveys for Western Yellow-billed Cuckoos on Lands
Managed by the Uncompahgre Field Office of the Bureau of
Land Management in Western Colorado**



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In Cooperation With:



ROCKY MOUNTAIN BIRD OBSERVATORY

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***Creating** informed publics and building consensus for bird conservation needs.*

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Executive Summary

Rocky Mountain Bird Observatory conducted surveys for Western Yellow-billed Cuckoos and other bird species of interest in June and July, 2008. Surveys were accomplished by broadcasting cuckoo calls at designated points in suitable habitat on or near lands managed by the Uncompahgre Field Office of the Bureau of Land Management in western Colorado.

We completed three visits to 21 locations during the course of the season, for a total of 448 total survey minutes. Vegetation measurements were also estimated and recorded during the first visit to each survey point.

We did not detect any Yellow-billed Cuckoos on lands managed by the Bureau of Land Management. We recorded 80 bird species during our surveys, including 12 detections of Yellow-breasted Chat, a species of interest to RMBO. Even though cuckoos were not detected during surveys for this project, they were detected on private land near land managed by the Uncompahgre Field Office. Therefore, it is possible that cuckoos occupy lands managed by the Bureau of Land Management in this district and were not detected during our surveys.

Acknowledgements

This project was funded by the Bureau of Land Management through an agreement with the Rocky Mountain Bird Observatory. This report constitutes the fulfillment of the requirements in our contract with the Bureau of Land Management.

I sincerely thank Missy Siders of the Bureau of Land Management for funding this project and for support during the project. I would also like to thank David Sinton for sharing Geographic Information System from the Bureau of Land Management. I am also grateful to Jeff Birek for conducting surveys, sometime under difficult conditions. I am also appreciative of Rob Sparks for creating maps for this report and Alison Cariveau, Missy Siders, and Rob Sparks for their careful review of this report.

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Introduction

Western Yellow-billed Cuckoos inhabit riparian areas with tall trees and well-developed understory vegetation (Johnson et al. 2008). In western Colorado, Yellow-billed Cuckoos have historically occupied extensive Fremont or narrowleaf cottonwood riparian forests (Richter et al. 2004). In California, where Western Yellow-billed Cuckoos have been well-studied, research has shown that cuckoos require forested stands at least 10 hectares (24.7 acres) in size (Haltermann 1991).

The Western Yellow-billed Cuckoo has been a candidate for listing under the Endangered Species Act (Listing Priority 3) since 2001. The Bureau of Land Management (BLM) lists the Western Yellow-billed Cuckoo as a sensitive species in Colorado. The Colorado Division of Wildlife (CDOW) lists this subspecies as a species of greatest conservation need (Tier 1; CDOW 2006). Populations of the Yellow-billed Cuckoo have declined precipitously since the early 20th century in western North America (Hughes 1999). Western Yellow-billed Cuckoos have been extirpated from British Columbia, Washington, Oregon, and reduced to a small fraction of their historic range in California (Hughes 1999).

In Colorado, west of the Rocky Mountains, in the 1950s and 1960s Yellow-billed Cuckoos were found annually near Grand Junction (Richter et al. 2004). Also, cuckoos were regularly detected as recently as the mid-1980s along the Uncompahgre and Gunnison Rivers near Delta (Rich Levad, pers. comm.). However, during the first Colorado Breeding Bird Atlas (1987-1994), only three cuckoos were recorded on the western slope (Colorado Bird Atlas Partnership 1998). Of these three atlas records, one confirmed breeding on the Yampa River in Routt County. Since 1988, regular observations during the breeding season have been recorded at only two locations in the range of the Western Yellow-billed Cuckoo in Colorado. At the first location, on lands managed by the BLM in the San Luis Valley of south central Colorado (Banks and Lucero 2004), cuckoos have been detected annually since 2001. Breeding is suspected at this location but has not been confirmed. At the second location breeding was confirmed during the summer of 2008 by the Rocky Mountain Bird Observatory (RMBO) along the North Fork of the Gunnison River (North Fork) near Hotchkiss in Delta County. Cuckoos have been detected every year in the North Fork valley since 2003. The North Fork valley lies within the perimeter of the management boundary of the Uncompahgre Field Office (UFO) of the BLM; however, most of the suitable cuckoo habitat is privately owned. Besides the information that has been collected about this species at these two locations, very little is known about their current range in western Colorado. Because the health of riparian areas is of interest to the BLM, and the Western Yellow-billed Cuckoo is a BLM sensitive species, the BLM was interested in information regarding this species on their lands. Our objective in this study was to determine the presence and estimate numbers of Yellow-billed Cuckoo within lands managed by the UFO. Information about the population status of the Western Yellow-billed Cuckoo will assist managers and other conservation partners concerned with recovering viable populations of the species at the state and regional level.

Methods

Site Selection

For this project, eight locations were originally chosen within the boundaries of the UFO management area to be surveyed. All survey points were placed in cottonwood-dominated riparian habitat with well-developed understory vegetation. Points were spaced at least 200 meters apart and as many points as possible were placed in each stand. Sites were selected by consulting with BLM biologists and local bird experts and by using Google Earth to select the most extensive cottonwood galleries available. Selected sites were distributed throughout the UFO management area and placed at elevations consistent with those where cuckoos have been detected in western Colorado. After field visits were initiated, two sites that were originally chosen were eliminated because of difficulty of access (both on the San Miguel River). Another original site was eliminated after one survey because the habitat present was determined to be unsuitable (Billy Creek site). Actual surveys took place in five drainages on lands managed by the UFO: Cottonwood Creek, Dry Creek, the North Fork of the Gunnison River, the San Miguel River, and Tabeguache Creek (Figure 1). Appendices A through E show locations of survey points. Appendix F lists Universal Transverse Mercator (UTM) coordinates for all survey points and any bird species of interest detected.

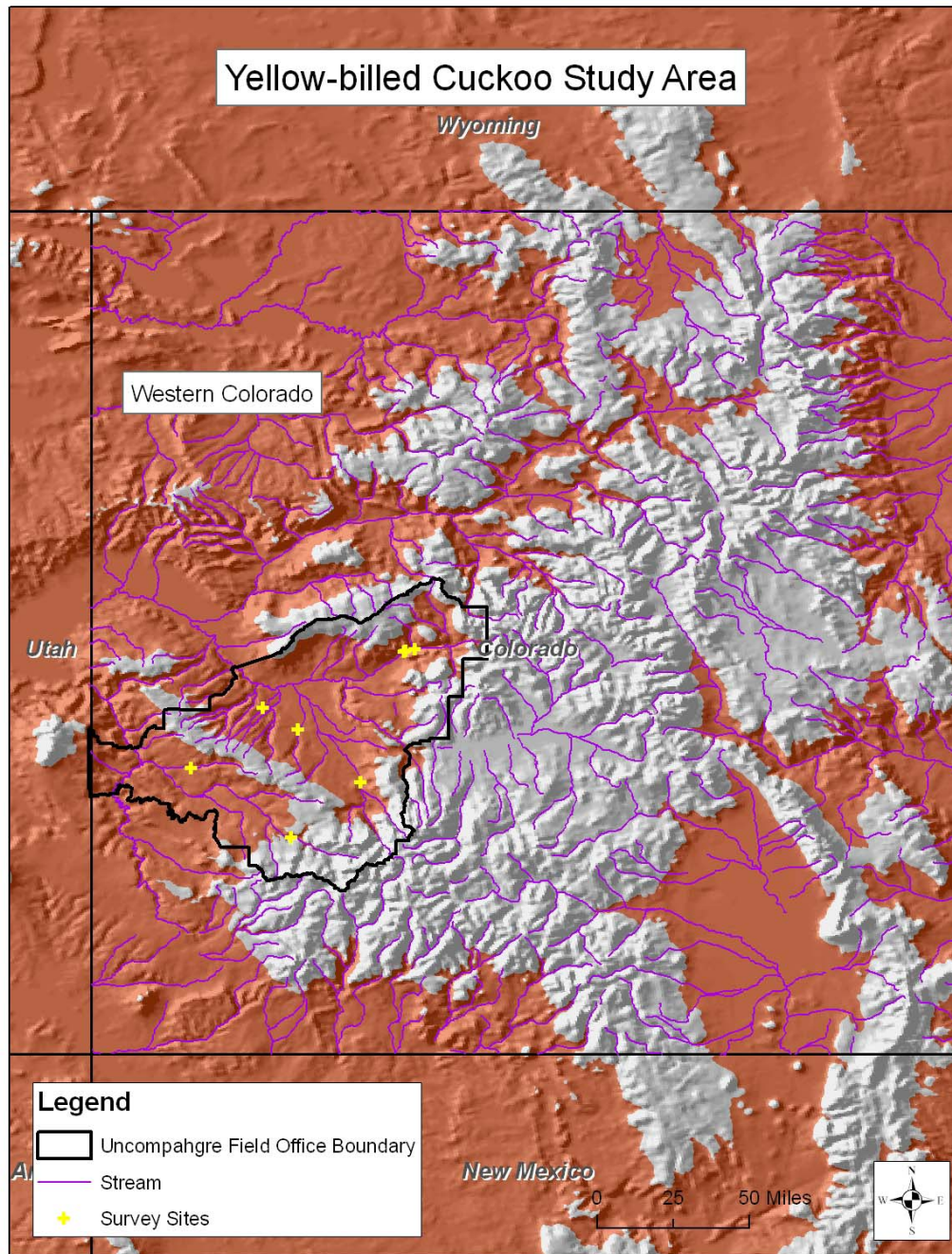


Figure 1. Sites selected for Yellow-billed Cuckoos surveys on lands managed by the Uncompahgre Field Office of the Bureau of Land Management, summer 2008.

Protocol

Surveys involved broadcasting Yellow-billed Cuckoo calls in an effort to lure cuckoos closer to the observer so that they could be seen and/or to encourage a vocal response (following Halterman 1991). We used a variation of the methodology used by U.S. Geological Survey (USGS) biologists surveying for cuckoos in Arizona, California, and Nevada (Johnson et al.

2007). Points were established in or near (within 15 m of habitat edge) appropriate habitat and spaced at least 200 m (656 ft) apart. Playback equipment projected the calls at least 100 m (328 ft) without distortion. We avoided areas of unsuitable habitat (i.e., a monoculture of young tamarisk or an extensive cobble bar) between patches (i.e., the unsuitable habitat is at least 300 m in extent). We visited each point three times between June 15 and July 31, which represents a time period chosen to minimize detections of cuckoos merely migrating through western Colorado.

We initiated surveys with a one-minute quiet period to listen for spontaneously calling cuckoos. If no cuckoos were heard in the one-minute period after arriving at the point, the surveyor played a Yellow-billed Cuckoo *kowlp*, *knocker*, or *coo* call once, followed by 1 minute of silence to listen for a response. If no detections occurred, this playback-listen sequence was repeated five times or until a cuckoo responded.

At all survey points we recorded UTM coordinates (using GPS). We estimated the percent cover by each dominant vegetative species in the understory and overstory within a 50 meter radius from the survey point. We also noted whether or not the area appeared to be grazed.

RMBO chose the following as species of interest to be recorded during surveys: all raptor species (except American Kestrel and Red-tailed Hawk), Lewis's Woodpecker, Willow Flycatcher, and Yellow-breasted Chat. Surveyors also maintained a list of all bird species seen or heard while present on lands managed by the UFO (Appendix G).

Results

We conducted 64 tape-playback surveys between the dates of 23 June and 31 July (21 points surveyed three times plus one point surveyed once). No cuckoos were detected on these surveys. However, one cuckoo was detected on private land along the North Fork of the Gunnison approximately 2.6 kilometers (1.6 miles) from one of the UFO survey points this summer (see Appendix C). Also, a cuckoo was detected near the town of Nucla, which is bordered by lands managed by the UFO, also in 2008 (see Appendix D). Therefore, some of the areas surveyed for this project are near locations occupied by cuckoos during the 2008 breeding season. We estimate that these surveys covered approximately 163 acres of land on or near lands managed by the UFO. We arrived at this estimate by multiplying the minimum area covered by our broadcast surveys (100 meter radius surrounding the point; 7.8 acres) by the number of points conducted.

We detected Yellow-breasted Chats 12 times at seven survey locations (Appendix F); see Appendix G for full listing of bird species detected.

The following plant species (and one distinguishable hybrid), listed most to least abundant, were recorded in the overstory: narrowleaf cottonwood (*Populus angustifolia*), hybrid cottonwood (Fremont x narrowleaf), Fremont cottonwood (*Populus deltoides*), box elder (*Acer negundo*), Gambel oak (*Quercus gambelii*), blue spruce (*Picea pungens*), juniper sp. (*Juniperus* sp.), and skunkbush (*Rhus trilobata*).

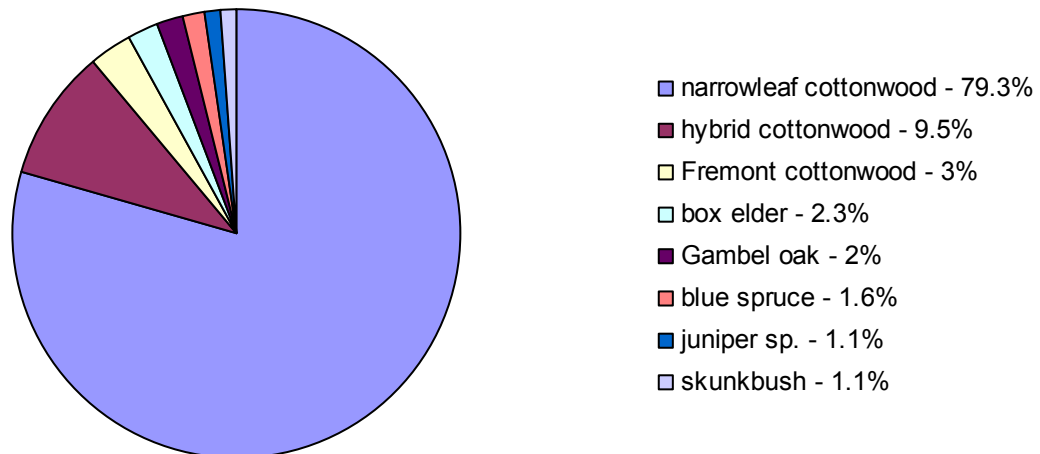


Figure 2. Species composition of overstory at survey points, summer 2008.

These plant species, listed most to least abundant, were recorded in the understory: skunkbush, willow (*Salix* sp.), Gambel oak, poison ivy (*Toxicodendron rydbergii*), box elder, narrowleaf cottonwood, wild rose (*Rosa* sp.), buffalo berry (*Shepherdia argentea*), unknown species, chokecherry (*Prunus virginiana*), juniper sp., serviceberry (*Amelanchier* sp.), hybrid cottonwood (Fremont x narrowleaf), big sagebrush (*Artemisia tridentata*), mountain mahogany

(*Cercocarpus* sp.), greasewood (*Sarcobatus vermiculatus*), tamarisk (*Tamarix chinensis*), Russian olive (*Elaeagnus angustifolia*), and rabbitbrush (*Chrysothamnus* sp.). We considered poison ivy as a part of the understory in some locations since it was large and, structurally, a shrub.

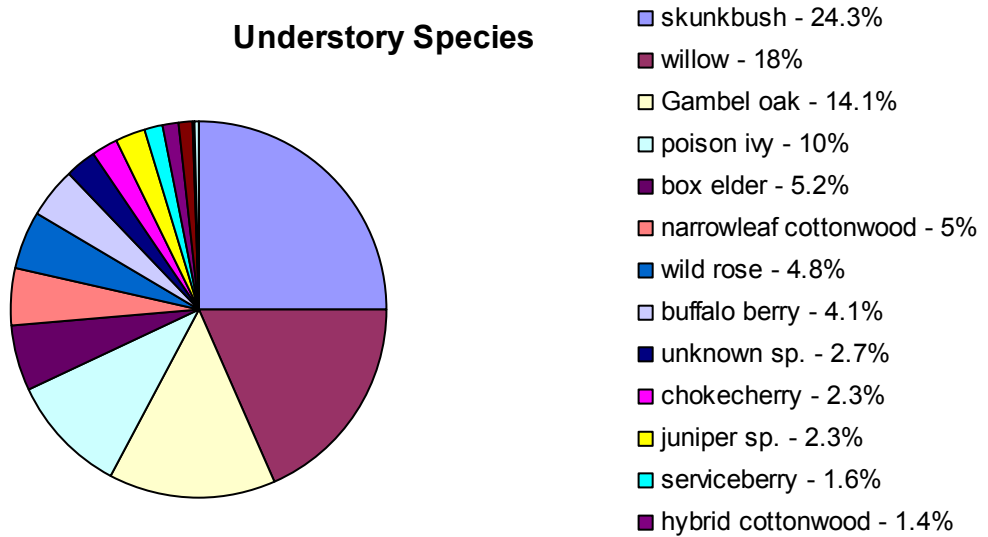


Figure 3. Species composition of understory at survey points, summer 2008.

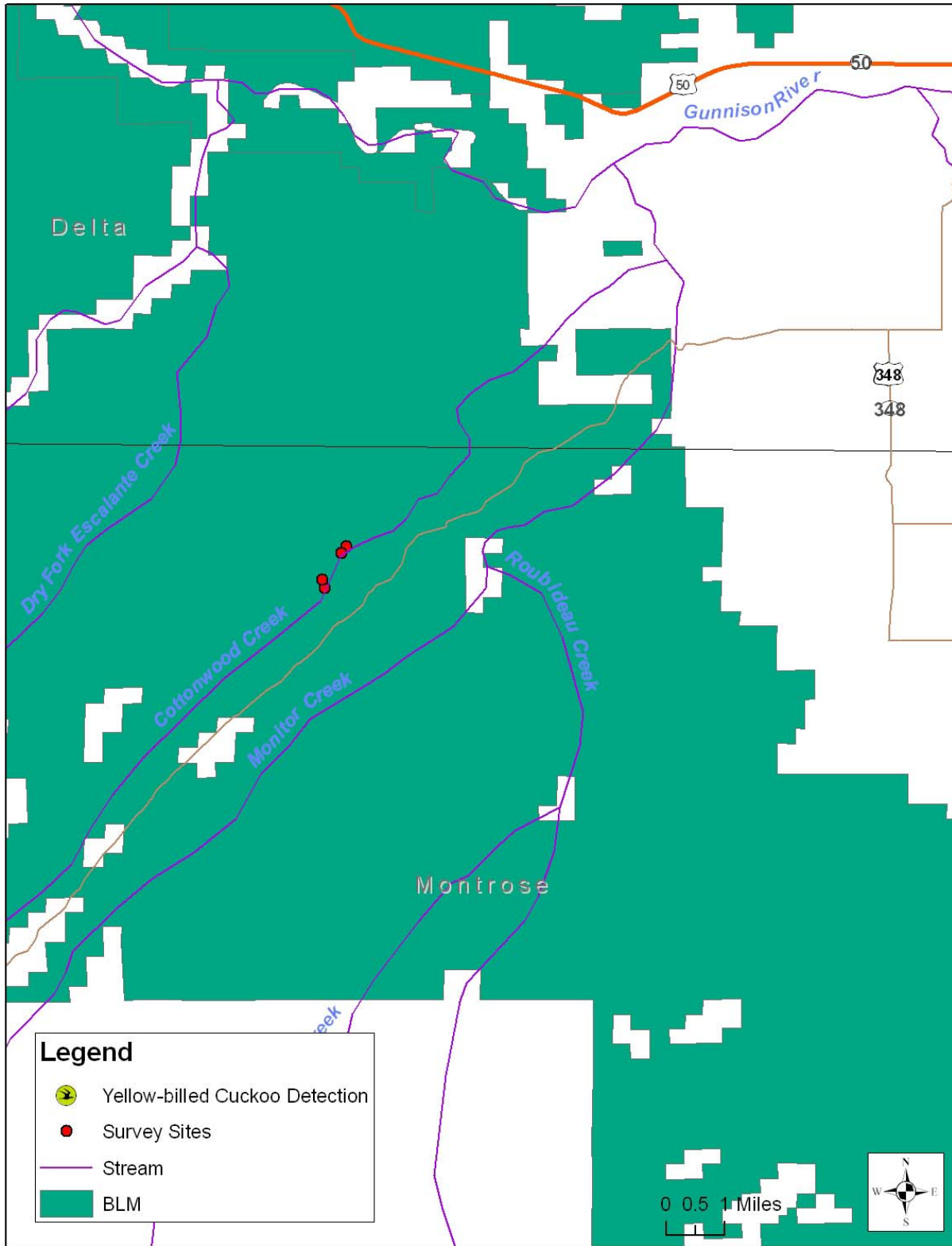
Discussion and Recommendations

Even though Yellow-billed Cuckoos were not detected during our surveys this summer on lands managed by the UFO, it is possible that they utilize riparian habitat managed by this BLM district. It should be noted that our surveys covered a small percentage of the suitable habitat and increasing the number of surveys and the area surveyed could reveal that cuckoos do occupy lands managed by the UFO. In 2008, several detections of Yellow-billed Cuckoos were recorded within the management boundaries of the UFO and breeding by the species was documented near Hotchkiss approximately twelve miles from the nearest survey on BLM lands. It is quite possible that the recent detections of this species indicate that they are increasing in this area. If cuckoos continue to be detected within the boundaries of the UFO management area in the next few years we recommend that the BLM conduct surveys again in three years.

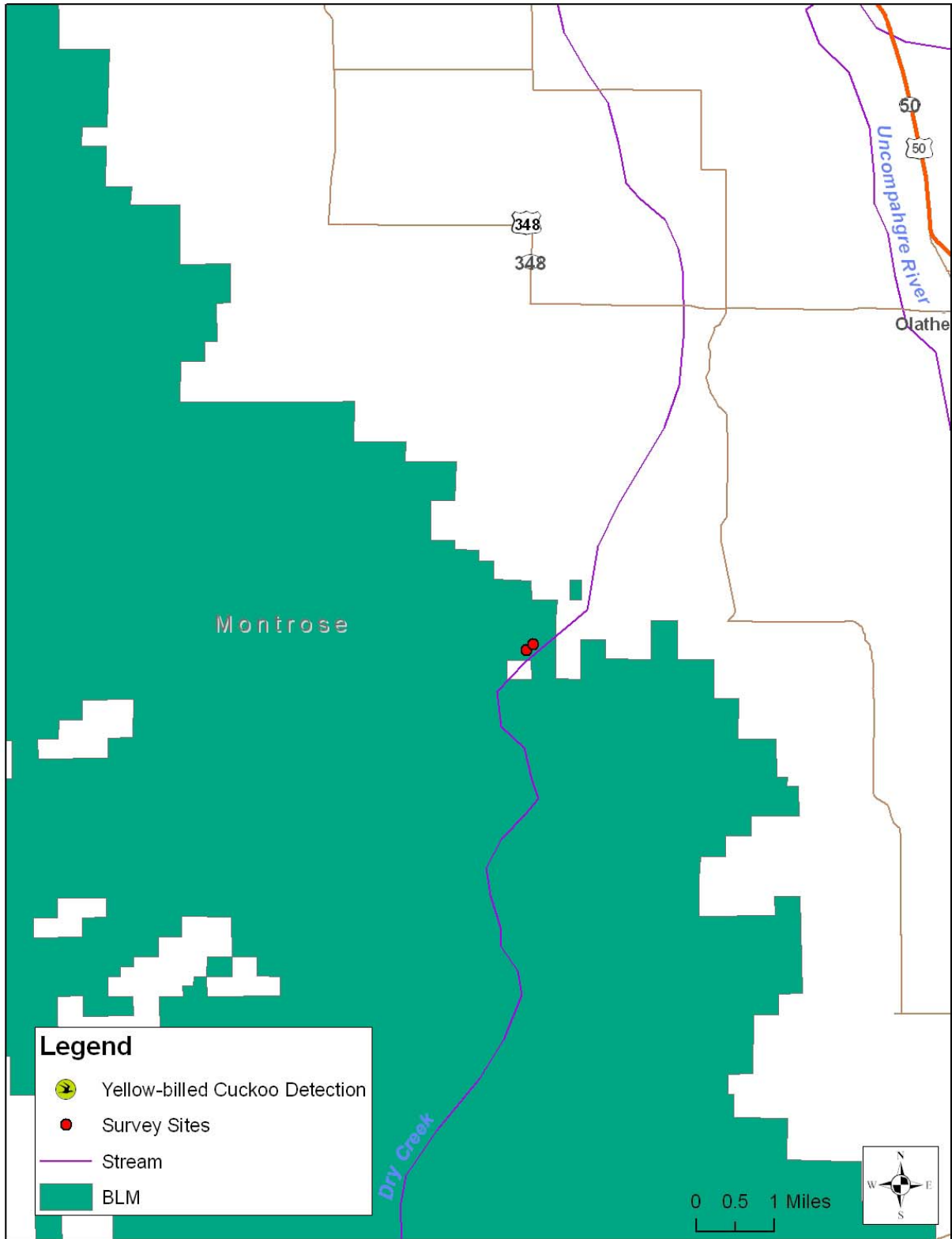
We would also like to commend the UFO on its efforts to minimize impacts of grazing in the riparian areas that it manages. We recorded no evidence of grazing at any of the survey points established for this project this summer.

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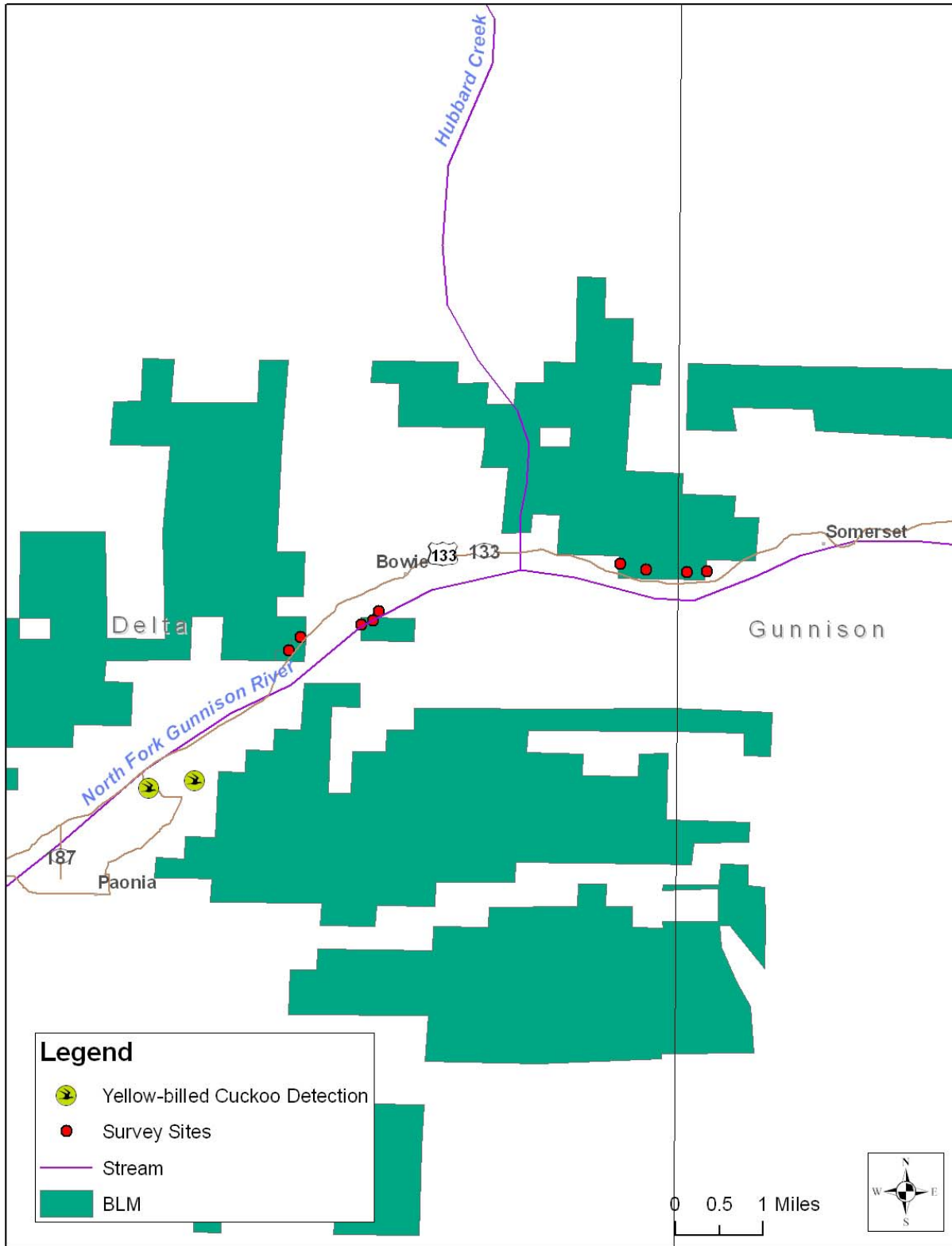
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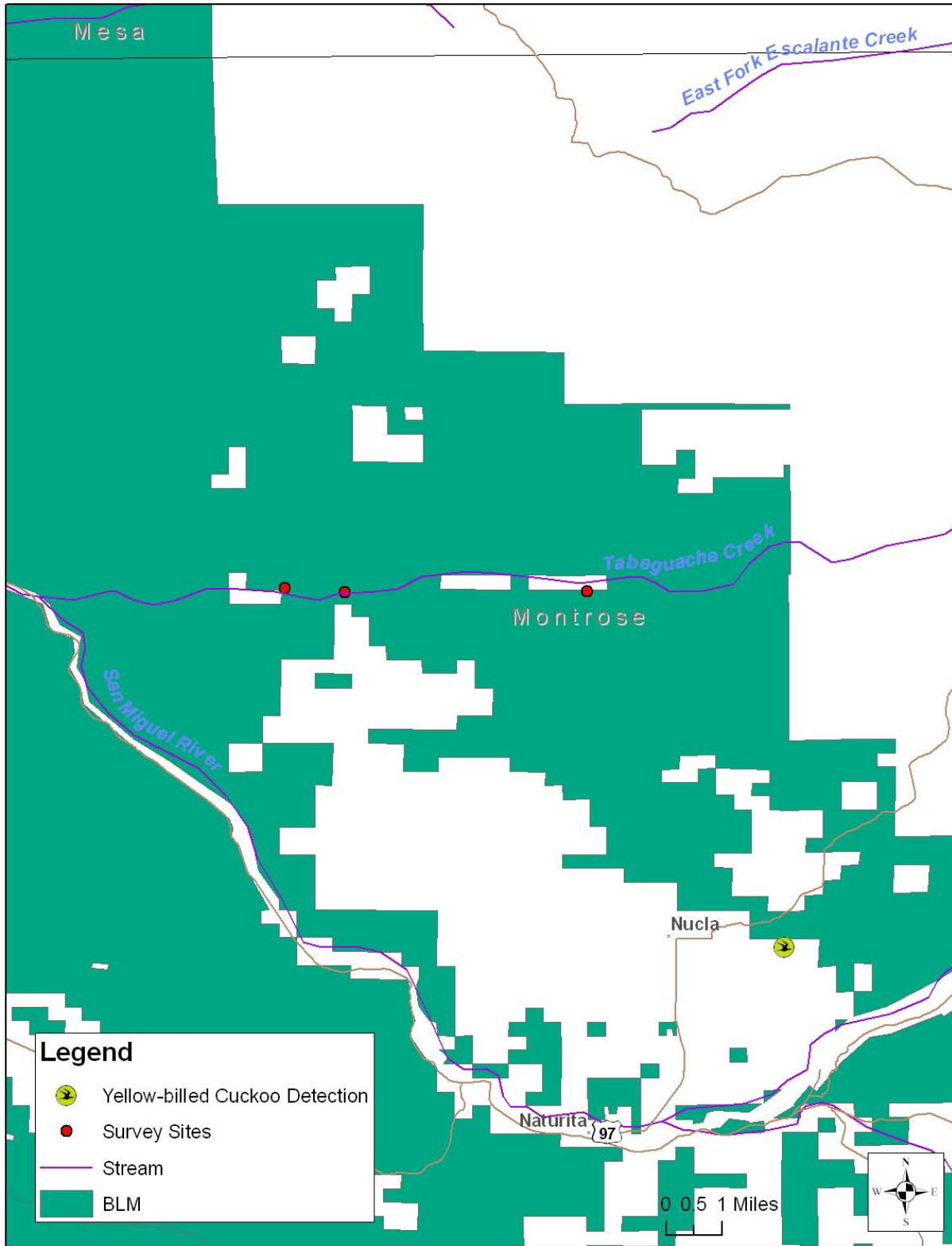
Appendix A. Locations of survey points in the Cottonwood Creek drainage, summer 2008.



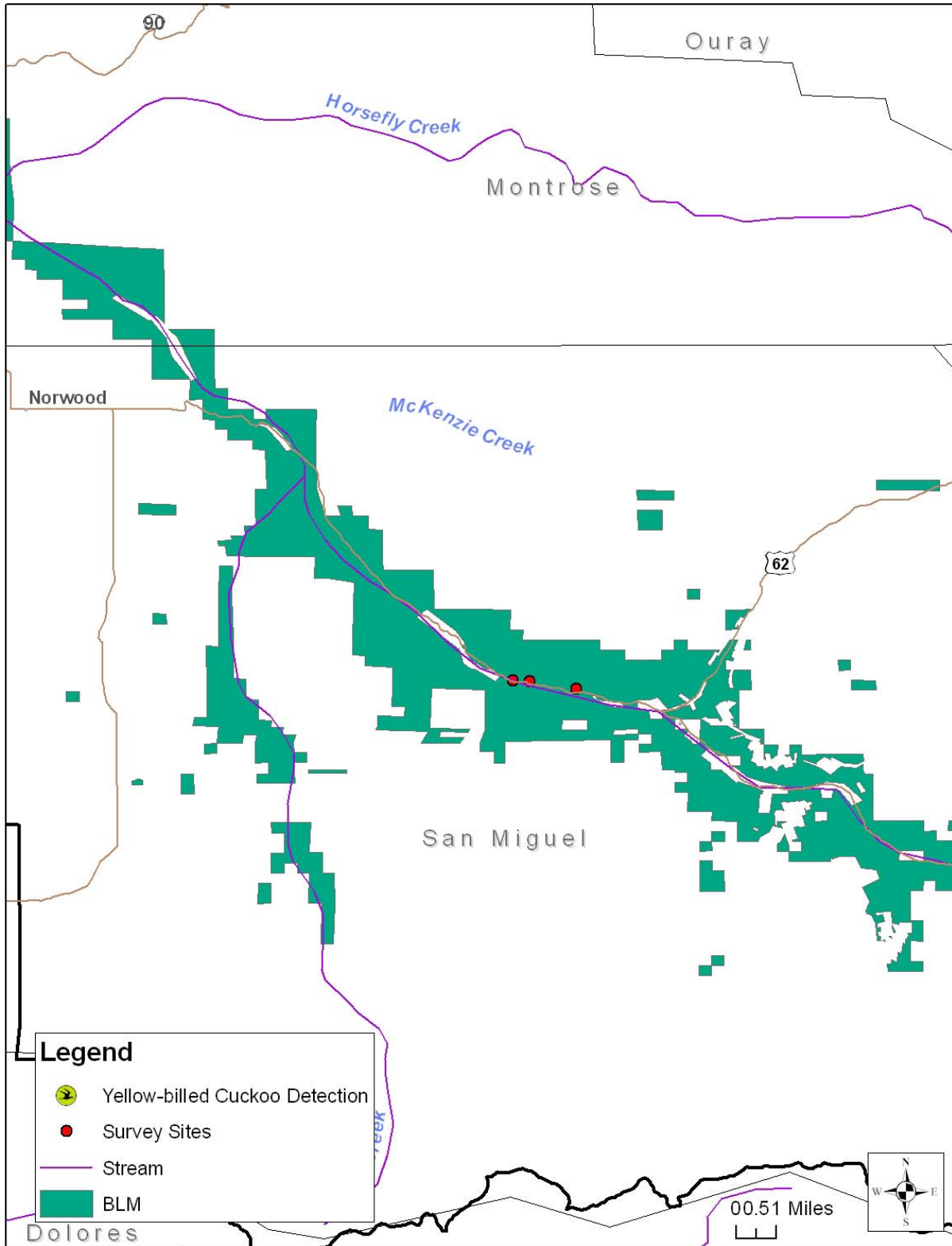
Appendix B. Location of survey points in the Dry Creek drainage, summer 2008.



Appendix C. Location of points on the North Fork of the Gunnison River drainage and nearest Yellow-billed Cuckoo detections, summer 2008.



Appendix D. Location of survey points in the Tabeguache Creek drainage and nearest Yellow-billed Cuckoo detection, summer 2008.



Appendix E. Location of survey points in the San Miguel River drainage, summer 2008.

Appendix F. List of UTM coordinates (NAD 83 projection) for all points surveyed and bird species of interest detected at each point.

Drainage	point	zone	easting	northing	species of interest
Billy Creek	1	13	258408	4241377	NONE
Cottonwood Creek	1	12	741139	4280743	NONE
	2	12	741040	4280547	NONE
	3	12	740710	4279603	NONE
	4	12	740643	4279811	NONE
Dry Creek	1	12	756280	4269889	Yellow-breasted Chat
	2	12	756375	4270015	NONE
North Fork of the Gunnison River - site 1	1	13	278181	4309785	Yellow-breasted Chat
	2	13	278008	4309542	NONE
North Fork of the Gunnison River - site 2	1	13	282805	4311004	NONE
	2	13	283177	4310893	Yellow-breasted Chat
	3	13	283756	4310831	NONE
	4	13	284045	4310826	NONE
North Fork of the Gunnison River - site 3	1	13	279058	4309995	NONE
	2	13	279233	4310070	Yellow-breasted Chat
	3	13	279320	4310235	Yellow-breasted Chat
San Miguel River	1	12	755185	4212837	NONE
	2	12	753688	4213112	NONE
	3	12	753158	4213121	NONE
Tabeguache Creek	1	12	712411	4248243	Yellow-breasted Chat
	2	12	706904	4248071	NONE
	3	12	705540	4248156	Yellow-breasted Chat

Appendix G. List of species detected on lands managed by the Uncompahgre Field Office of the Bureau of Land Management during Yellow-billed Cuckoo surveys, June and July 2008.

<u>Common Name</u>	<u>Scientific Name</u>	<u>Common Name</u>	<u>Scientific Name</u>
Mallard	Anas platyrhynchos	Bank Swallow	Riparia riparia
Ring-necked Pheasant	Phasianus colchicus	Cliff Swallow	Petrochelidon pyrrhonota
Wild Turkey	Meleagris gallopavo	Barn Swallow	Hirundo rustica
Great Blue Heron	Ardea herodias	Black-capped Chickadee	Poecile atricapillus
Turkey Vulture	Cathartes aura	Bushtit	Psaltriparus minimus
Cooper's Hawk	Accipiter cooperii	Red-breasted Nuthatch	Sitta canadensis
Red-tailed Hawk	Buteo jamaicensis	White-breasted Nuthatch	Sitta carolinensis
Golden Eagle	Aquila chrysaetos	Rock Wren	Salpinctes obsoletus
American Kestrel	Falco sparverius	Canyon Wren	Catherpes mexicanus
Killdeer	Charadrius vociferus	Bewick's Wren	Thryomanes bewickii
Spotted Sandpiper	Actitis macularia	House Wren	Troglodytes aedon
Wilson's Snipe	Gallinago delicata	Blue-gray Gnatcatcher	Poliotilta caerulea
Rock Pigeon	Columba livia	Mountain Bluebird	Sialia currucoides
Band-tailed Pigeon	Patagioenas fasciata	Hermit Thrush	Catharus guttatus
Mourning Dove	Zenaida macroura	American Robin	Turdus migratorius
Great Horned Owl	Bubo virginianus	Gray Catbird	Dumetella carolinensis
Burrowing Owl	Athene cunicularia	European Starling	Sturnus vulgaris
Common Nighthawk	Chordeiles minor	Cedar Waxwing	Bombycilla cedrorum
White-throated Swift	Aeronautes saxatalis	Virginia's Warbler	Vermivora virginiae
Black-chinned Hummingbird	Archilochus alexandri	Yellow-rumped Warbler	Dendroica coronata
Broad-tailed Hummingbird	Selasphorus platycercus	Yellow Warbler	Dendroica petechia
Rufous Hummingbird	Selasphorus rufus	Black-throated Gray Warbler	Dendroica nigrescens
Belted Kingfisher	Ceryle alcyon	MacGillivray's Warbler	Oporornis tolmiei
Red-naped Sapsucker	Sphyrapicus nuchalis	Common Yellowthroat	Geothlypis trichas
Downy Woodpecker	Picoides pubescens	Yellow-breasted Chat	Icteria virens
Hairy Woodpecker	Picoides villosus	Western Tanager	Piranga ludoviciana
Northern Flicker	Colaptes auratus	Green-tailed Towhee	Pipilo chlorurus
Western Wood-Pewee	Contopus sordidulus	Spotted Towhee	Pipilo maculatus
Gray Flycatcher	Empidonax wrightii	Chipping Sparrow	Spizella passerina
Dusky Flycatcher	Empidonax oberholseri	Song Sparrow	Melospiza melodia
Cordilleran Flycatcher	Empidonax occidentalis	Black-headed Grosbeak	Pheucticus melanocephalus
Black Phoebe	Sayornis nigricans	Blue Grosbeak	Passerina caerulea
Ash-throated Flycatcher	Myiarchus cinerascens	Lazuli Bunting	Passerina amoena
Western Kingbird	Tyrannus verticalis	Red-winged Blackbird	Agelaius phoeniceus
Plumbeous Vireo	Vireo plumbeus	Western Meadowlark	Sturnella neglecta
Warbling Vireo	Vireo gilvus	Common Grackle	Quiscalus quiscula
Western Scrub-Jay	Aphelocoma californica	Brown-headed Cowbird	Molothrus ater
Pinyon Jay	Gymnorhinus cyanocephalus	Bullock's Oriole	Icterus bullockii
Black-billed Magpie	Pica hudsonia	House Finch	Carpodacus mexicanus
American Crow	Corvus brachyrhynchos	Pine Siskin	Carduelis pinus
Common Raven	Corvus corax	Lesser Goldfinch	Carduelis psaltria
Violet-green Swallow	Tachycineta thalassina	American Goldfinch	Carduelis tristis
Northern Rough-winged Swallow	Stelgidopteryx serripennis		