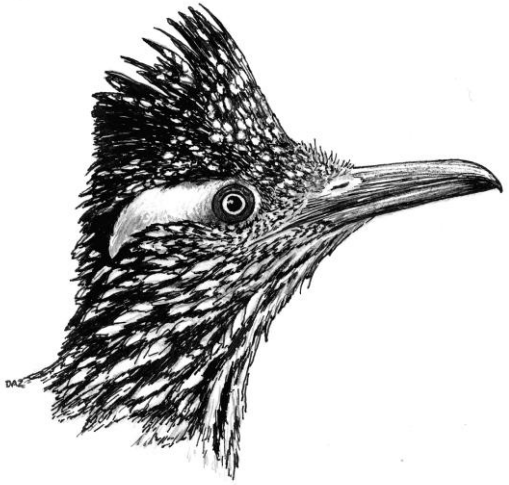
NMOS BULLETIN



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A NOTE FROM THE PRESIDENT

As your new NMOS President, I want to give you a brief background of my history with New Mexico and NMOS. I moved here in 2001 and immediately became a member of NMOS and have served the past 9 years as the Vice-President under Bill Howe and Roland Shook. I am a USFWS avian biologist with the Migratory Birds Program, working on avian issues within New Mexico and the southwest region.

As I begin my term as the President, I want to thank our immediate past-President, Roland Shook, who has guided NMOS through challenges and has provided us with tremendous leadership for the past 5+ years. I would also like to acknowledge the many contributions of Nancy Cox, our outgoing Secretary who has served the Society so well. Rob Doster has moved to California and has begun a new career with the USFWS, and will be missed as the editor of the NMOS Bulletin. Janet Bair has stepped forward to take this position and will serve admirably. I look forward to working with our new Vice-President Jonathan Batkin, our new Secretary Ashli Gorbet, our new NMOS Bulletin Editor Janet Bair, our new Rare Bird Alert (RBA) compiler Matt Baumann, and the other members of the Board including Jerry Oldenettel, Janet Ruth, Martha Desmond, Chuck Hayes, Sandy Williams, and Bill Howe. These people deserve our thanks for all that they do to make NMOS the great organization that it is.

I would also like to recognize the tremendous contribution that Pat Snider has provided to NMOS members over the past many years. As you know, Pat "Pinyon Jay" Snider has served as an officer of NMOS and has compiled the RBA for more years than I can imagine. Her efforts to keep New Mexico birders informed of recent sightings is nothing less than remarkable, and she will be missed as the twice-weekly RBA update editor. Matt, these are large shoes to fill, but I know that you will do a great job!

I look forward to serving as your President, and I always welcome comments and suggestions from our members. Please contact me at dkrueper@comcast.net or (505) 890-4083. Hope to see you in the field soon!!

— Dave Krueper

FIRST NEW MEXICO RECORD OF FAN-TAILED WARBLER (*EUTHLYPIS LACHRYMOSA)*

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While birding at the Melrose Migrant Trap in northwestern Roosevelt County, New Mexico on 18 May 2009, Froehlich (hereafter GKF) discovered and photographed a Fan-tailed Warbler (*Euthlypis lachrymosa*, Fig. 1). This article provides details on this first New Mexico record and discusses it in the context of previous US records.

DISCOVERY AND SUBSEQUENT OBSERVATIONS

On 18 May 2009 GKF arrived at the Melrose Migrant Trap at 0930. The Melrose Migrant Trap, also referred to as the North Roosevelt Trap (NRT), is located just north of US Highway 60 at milepost 354, some 16 km west of the town of Melrose and 40 km east of Fort Sumner in northern Roosevelt County. This heavily birded oasis and the birds recorded there have been discussed in detail elsewhere (Parmeter 2007). At approximately 1230 hours, GKF located the Fan-tailed Warbler foraging near the ground near the south end of the trap's main forested area. Having previous experience with this highly distinctive species, he recognized the bird almost immediately, informed the only other birder present (Gary J. Parker), and began to obtain photographs. Shortly before 1300 hours, he began calling other birders on his cell phone, and he and Parker doggedly stayed with the bird until others began to arrive at ca. 1600 hours. Several additional birders from Albuquerque and Santa Fe saw the bird that evening, including Parmeter (hereafter JEP). On the morning of 19 May several observers relocated the bird, and it was seen by others throughout that day. The last person to observe the bird was Andrew M. Kraynik of Albuquerque, who watched it on the evening of the 19th until 1950 hours, by which time it was nearly dark.

The bird was not relocated on 20 May, despite several hours of searching in this rather small area by at least 10 birders. Additional coverage of the trap through the Memorial Day weekend of 23-25 May also produced no additional sightings. A total of at least 20 observers saw the Fan-tailed Warbler, and at least 11 obtained photographs.

BEHAVIOR

The Fan-tailed Warbler exhibited behavior that is typical of this species, spending most of its time close to the ground and constantly fanning and flipping its tail. It stayed within the small forested area of the trap, never venturing into the saltbush on the adjacent open plains. It was usually within 1 m of the ground, though it was occasionally observed as high as ca. 2 m in small poplars (*Populus alba*). It particularly frequented the vicinity of a small stone structure near the south end of the forest, and seemed to be attracted to logs, foraging on them or in adjacent leaf litter. A conspicuous emergence of miller moths (*Euxoa auxiliaris*) was in progress, and the Fan-tailed Warbler captured a number of these moths as they emerged from the leaf litter (Fig. 2). The bird was generally active, though on occasions it would freeze for tens of seconds. The tail was fanned like an American Redstart (*Stetophaga ruticilla*) or flipped sideways or up and down. The bird generally allowed close approach and would try to hop away before flying. When it did fly, it usually stayed within a meter of the ground.

DESCRIPTION

This was a large warbler, approximately 15 cm long. The tail was long and graduated, broadening substantially near the tip. The bill was dark and broad-based for a warbler, looking almost like a flycatcher bill when viewed from above. The legs were dull grayish. The upperparts, including the back, wings, upper tail, and much of the face, were unmarked dark gray. There were white eye arcs above and below the eyes. There was also a small round white spot on the lores. The rest of the loral area, the forehead, and the sides of the crown were black; this black appeared to merge into the adjacent gray areas rather than being sharply demarcated. There was a conspicuous bright yellow median

FIGURE 1. Fan-tailed Warbler (*Euthlypis lachrymosa*) at the Melrose Migrant Trap on 18 May 2009 (photo by G. K. Froehlich.)

FIGURE 2. Fan-tailed Warbler (*Euthlypis lachrymosa*) at the Melrose Migrant Trap on 18 May 2009, with Miller moth (*Euxoa auxiliaris*) (photo by G.K. Froehlich.)

crown stripe. There were broad white tips to the tail feathers. The underparts were primarily bright yellow to orange, the throat being more yellow and the breast more orange. The undertail coverts were white. Many of these features are evident in Fig. 1.

The bird occasionally gave a single note call, mainly when taking flight. This note was described as a high-pitched, emphatic "tseee" (GKF). Otherwise the bird was silent.

DISTRIBUTION OF THE FAN-TAILED WARBLER AND PREVIOUS US RECORDS

The Fan-tailed Warbler ranges from northern Mexico to Nicaragua (Howell and Webb 1995). In Mexico it occurs on both the Pacific and Atlantic slopes, being resident from Sinaloa and southern Tamaulipas south. On the Pacific Slope it is also a local summer resident north to central eastern Sonora, where it occurs from mid-March to late July (Russell and Monson 1998). There is an extralimital record from Arroyo Cajon Bonita in extreme northeastern Sonora, where a male was present 23 May 1982 and a male and female were present on 29 May 1982 (Russell and Monson 1998). The species is often considered monotypic (e.g. Clements 2007, Howell and Webb 1995), though there is some subtle clinal variation in plumage and some authorities have proposed 3 subspecies, 1 from western Mexico (*tephra*), 1 from eastern Mexico (*lachrymosa*), and 1 from Chiapas to Nicaragua (*schistacea*) (Dunn and Garrett 1997).

The Fan-tailed Warbler is strictly a vagrant to the United States. There are 7 Arizona records that have been accepted by the Arizona Bird Committee (ABC), all from Cochise and Santa Cruz counties in the southeastern part of the state (Rosenberg and Witzeman 1999; Rosenberg 2001; G. H. Rosenberg, pers. comm.). The first US record was of a bird collected at Baker Spring, just north of Guadalupe Canyon, Cochise County, on 28 May 1961 (Levy 1962). The remaining 6 accepted Arizona records are of 1 in Guadalupe Canyon 25 June 1961; 1 in Scheelite Canyon, Cochise County, 19 May 1983; 1 in Garden Canyon, Cochise County, 24 May 1984; 1 in Sycamore Canyon, Santa Cruz County, 7 June to 4 July 1987; 1 in Guadalupe Canyon, 5-8 September 1990; and 1 singing male at Patagonia, Santa Cruz County, 21-27 May

1997. Another published Arizona record of a singing male in French Joe Canyon, Whetstone Mountains, Cochise County, 8 June 1995 has not been reviewed by the ABC (Rosenberg and Witzeman 1999). There is a single recent record from west Texas: 1 molting from juvenal to adult plumage was present from 13 August to 24 September 2007 in Pine Canyon, Big Bend National Park, Brewster County (Lockwood et al. 2008).

DISCUSSION

If we consider only records that have been accepted by the appropriate state bird records committee and/or documented by a specimen or unambiguous photographs, the Fan-tailed Warbler at the Melrose Trap represents the ninth record for the United States. It is also the northernmost record ever of this species, and the earliest spring record for the US by a single day, the previous earliest record being the bird from Scheelite Canyon in Arizona. The discovery date of 18 May coincides closely with dates of the previous Arizona records, 5 out of 7 of those records having discovery dates falling in the 20-day period from 19 May to 7 June.

The Fan-tailed Warbler is the 40th member of the family *Parulidae* to be recorded at the Melrose Trap. Parmeter (2007) listed 38 species recorded there, and the 39th was a Painted Redstart (*Myioborus pictus*) photographed 17-19 April 2009 (Williams 2009). The Melrose Trap is also the site where New Mexico's only Golden-crowned Warbler (*Basileuterus culicivorus*) was recorded, with a single bird present 8-10 May 2004 (Howe and Parmeter 2004). It is worth noting that New Mexico's only record of Slate-throated Redstart (*Myioborus miniatus*) also comes from the state's southeastern plains: 1 collected at Bell Lake, Lea County, on 16 April 1962 (Harris 1964). The fact that the only New Mexico records of 3 neotropical warblers come from the southeastern plains is contrary to the conventional wisdom that such Mexican species are most likely to appear in the state's far southwestern corner (the "bootheel"). Certainly it would have been logical to expect New Mexico's first Fan-tailed Warbler to appear in Guadalupe Canyon, given the Arizona records from that location and from nearby Baker Spring (which is within 2 km of New Mexico). To date, however, the only first

New Mexico record of a neotropical warbler from the bootheel is for Rufous-capped Warbler (*Basileuterus rufifrons*), a single bird having been present in Guadalupe Canyon from 2 January to 12 February 2009 (Parmeter and Baumann 2009). The geographic distribution of New Mexico records of neotropical warblers thus serves as a reminder of how records of vagrant birds can defy our expectations, and of how patterns of occurrence may reflect coverage patterns of birders as well as avian patterns of vagrancy.

The appearance of a Fan-tailed Warbler in New Mexico might be considered surprising since through 2009 Arizona had not had a record since 1997. Records of some Mexican vagrants in the US have clearly been increasing, with Rufous-capped Warbler being a case in point (Parmeter and Baumann 2009), but there is no evidence that records of Fan-tailed Warbler in the US are increasing. This observation is consistent with the field study of Flesch (2008), who in a survey of breeding landbirds in northern Sonora noted that Rufous-capped Warbler was apparently expanding its range, but saw no evidence for any similar range expansion by Fan-tailed Warbler. If we include the single published but unreviewed Arizona record, US records of Fan-tailed Warbler by decade are as follows: 2 in the 1960s; none in the 1970s; 3 in the 1980s; 3 in the 1990s; and 2, the only 2 US records outside of Arizona, from 2000 through 2009. There is thus no increase at all in records per decade since the 1980s, and no statistically significant increase since the 1960s, despite a substantial increase in birding coverage during the past 50 years.

In the absence of a specimen nothing definite can be said about whether the Fan-tailed Warbler at the Melrose Trap originated in western or eastern Mexico. However, there is some reason to believe that west Mexican origin is more probable. The absence of any records from south Texas suggests that the populations in northeastern Mexico have little tendency to stray. At the same time, the multiple records from Arizona suggest that the populations in northwestern Mexico do have such a tendency. While most Arizona records cannot be definitely identified with any population, the specimen from Baker Spring has been identified as *tephra*, the west Mexican form (Monson and Phillips 1981), as would be expected on geographic grounds. The fact that birds summering in Sonora are migratory further suggests the possibility of

vagrancy, while birds in Tamaulipas and elsewhere in eastern Mexico are apparently sedentary (Howell and Webb 1995). There also appears to be no evidence for recent range expansion of this species in northeastern Mexico (T. Brush, pers. comm. to W. H. Howe). Even so, the previous occurrence of a Golden-crowned Warbler at the Melrose Migrant Trap suggests that a Fan-tailed Warbler coming to the trap from northeastern Mexico is not out of the question.

A final question is whether the appearance of a Fan-tailed Warbler at the Melrose Trap is an isolated event or whether it can be placed within the context of a movement of Mexican birds into the state in the spring of 2009. Evidence for the latter is weak but perhaps not non-existent. There were no other comparably rare Mexican species recorded in New Mexico in the spring of 2009. The 1 possibly related phenomenon of interest was the appearance of multiple Painted Redstarts in extralimital lowland locations in the early spring. In addition to the Melrose Trap record noted above - well to the north and east of the normal range of this species - there were 5 other spring records of lowland migrant Painted Redstarts in Dona Ana, Sierra, and Socorro counties in the Rio Grande Valley (Williams 2009), the Socorro County records (2) also falling (barely) beyond the normal range of the species. Painted Redstart is quite rare in New Mexico away from suitable breeding habitat in the mountains of the southwest, and 5 lowland records in 1 spring hint at a low density "invasion" as birds wintering in Mexico moved back into the US and in some cases overshot their breeding grounds. This phenomenon could be totally unrelated to the appearance of the Fan-tailed Warbler, but it is certainly intriguing that another member of the family *Parulidae* that winters in Mexico showed a slight pattern of vagrancy towards the northeast this spring.

ACKNOWLEDGMENTS

We thank Matthew J. Baumann, Mark M. Stevenson, and Sartor O. Williams III for providing advice and information on various topics, Benjamin D. Parmeter for providing information on the 25 June 1961 record from Guadalupe Canyon, and Gary H. Rosenberg for communicating to JEP the recent acceptance of that record by the ABC.

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OSPREY PAIR NESTS SUCCESSFULLY DESPITE MAJOR KILL OF FISH AT RAMAH LAKE, NEW MEXICO

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Ospreys (*Pandion haliaetus*) feed almost entirely (>99% of prey items) on live-caught fish, rarely scavenging on dead or dying ones (Poole et al. 2002). Spitzer (in Poole et al. 2002) attributed a 20-30% decline in breeding Ospreys to inconsistent prey availability from 1996 to 2001 at Gardiners Island, New York. Osprey fledgling rates declined in at least 1 area when commercial fishing depleted local fish populations (Poole

1989). Because information of this nature is limited, we consider the response of this single pair of ospreys to a sudden reduction in local fish populations noteworthy. Herein, we report on a major fish kill at Ramah Lake, New Mexico during summer 2006 that had no apparent effect on an Osprey pair's breeding effort.

Ramah Lake (35° 08' 50" N, 108° 29' 06" W) is a 120-ha reservoir that was created by damming the Zuni River in 1902 in McKinley County, New Mexico. It is owned by a local irrigation district, but leased and managed by the New Mexico Department of Game and Fish for public fishing. A pair of Ospreys has used 1 nest at this lake annually since at least 2002. At maximum capacity, the water level is rather shallow (<10 m deep). The lake lies within a narrow canyon (≤ 300 m wide) with walls 110 m higher than water level. Steep sandstone cliffs dominate the canyon's north slope and Ponderosa pine (*Pinus ponderosa*) forest dominates the south slope. The stocked fishery included rainbow trout (*Oncorhynchus mykiss*), bluegill (*Lepomis macrochirus*), green sunfish (*L. cyanellus*), channel catfish (*Ictalurus punctatus*) and largemouth bass (*Micropterus salmoides*). During a spring 2005 electro-fishing effort, we netted 37 largemouth bass, 13 green sunfish, and 13 bluegill of all age classes; all fish were in excellent body condition.

Precipitation in the adjacent Zuni Mountains during October 2005-April 2006 totaled 14 cm, less than half the 30-cm average for 1999-2005 (USDA Natural Resources Conservation Service unpubl. data; http://www.wcc.nrcs.usda.gov/snotel/snotel.pl?sitenum =933&state=nm). Minimal spring run-off in 2006 resulted in a lake surface area of about two-thirds of the maximum. Dry, hot weather continued through May and June. On 27 June, decomposition of vegetation caused dissolved oxygen (D.O.) levels in the lake to drop below critical levels for fish survival (~4.0 mg/L, depending on fish species), resulting in a massive fish die-off. On 28 June, T. Johnson (*in litt.*) observed a 20- to 30-cm wide band of floating, dead fish along about 2 km of the southeast shore. He estimated the fish-kill comprised 200,000 individuals of mostly bluegill and green sunfish, along with many largemouth bass and rainbow trout and a few large channel catfish. On 30 June, the mean D.O. level for 4 sampling stations on the lake was 0.22 mg/L (RWC, unpublished data), 94% below critical level. We estimated that 95% of fish in the lake had died. Further, we also

observed small bluegill gulping within the 1-mm surface layer of the lake, which likely contained the most oxygen due to contact with the atmosphere. On 15 August, we captured 21 bluegill and 21 green sunfish in a single-night set of 6 gill nets. Thus the fish-kill had not been complete, but all sampled fish were in a year-1 size category (< 15 cm total length). By mid-August, the D.O. level had increased to 7.1 mg/L.

The Osprey nest was atop a live Ponderosa pine, 100 m up-slope from the south shore. Two young Osprey fledged from the nest each year (8 total young) between 2002 and 2005. In 2006 the nearest known nesting pairs of Osprey were in western Arizona, 120 km southwest of Ramah (Dodd and Vahle 1998), while the closest pair in New Mexico was 225 km northeast (Stahlecker 2010).

In 2006, an adult pair of Ospreys was present, but not incubating eggs on 27 April. Both adult Ospreys were present on 28 June, with the female standing on the nest (T. Johnson, *in litt.)*. On 15 and 22 July, we observed 2 large nestling Ospreys on the nest, shaded by the adult female. During these July visits, we also observed the decaying fish along the shoreline initially discovered by T. Johnson on 28 June. On 30 July and 12 August the nest was empty, but intermittently as many as 3 Ospreys were seen in flight during 4 hours of observation. While 2 fledglings were never seen simultaneously, it was not unreasonable that 1 fledgling remained perched, unseen by us, while the other joined the adults in flight. We viewed the nest from a higher vantage point on 12 August and found that it was indeed empty. Also on this day, we found 2 recently killed (< 3-day old), uneaten, medium-sized (15 cm) bluegill directly below the nest. We surmise these fish were dropped prior to being consumed since small prey items may be entirely consumed, and adult Ospreys perform no nest sanitation (Poole et al. 2002). No other dropped prey was found within 150 m of the nest.

Based on this evidence, the nesting pair of Ospreys at Ramah produced at least 1 flighted young in 2006 despite a sudden 95% decrease in numbers of local prey. We considered that the pair may have foraged at adjacent major bodies of water, or even small, privately-owned and stocked ponds unknown to us. We examined topographic maps and aerial photographs of the area within 30 km of Ramah Lake for other water bodies, since colonially-nesting Ospreys sometimes fly 14-20 km from their nests to major foraging areas (Greene et al., 1983,

Hagan and Walters 1990). Two large water bodies were evident during this search but we found they were dry in 2006, and we found no evidence of ponds within 15 km of Ramah Lake.

We concluded that the Osprey pair continued to capture enough small, live fish in Ramah Lake to support themselves and 2 young for 4 weeks of the nestling period. Further, they supported at least 1 young an additional 2 weeks, as evidenced by the relatively fresh bluegill found below the nest on 12 August. Even if the mortality rate of fish in the lake was 75% or even 50% instead of our 95% estimate, most potential prey was suddenly lost. We propose that lake conditions improved Osprey foraging by increasing vulnerability of fish prey (Craighead and Craighead 1969:176-178) because greatly reduced D.O. levels forced surviving fish near the lake surface. Higher D.O. levels by mid-August probably allowed fish to descend to lower depths where they were less vulnerable. The possible loss of one fledgling Osprey was likely not from a shortage of food, as it had been raised to fledging age.

Several studies have determined the energetic demands for adult and young Ospreys (summarized in Poole et al. 2002); however, Poole et al. (2002) explain that different fish species have different lipid/protein ratios and amount of edible proportions leading to different energetic values to Ospreys. A sample of 107 southwestern Colorado bluegills averaged 117 mm and 32 g (White, *in litt.)*. Ospreys generally catch fish of 150-300 g and 25-35 cm in length (Poole et al. 2002), which is at least 4 times the mass of the fish likely available after the fish-kill. Van Daele and Van Daele (1982) determined the energetic demands of 1 adult and 2 young Ospreys of 794 g of fish/day. Assuming this is valid for the bluegills at Ramah Lake, it would require an average of 67 10-12 cm fish/day for these Ospreys. We do not know if the Ospreys at Ramah Lake required more time to capture enough fish to feed themselves and the nestlings, but certainly many more trips to the nest were required.

Spring runoff in 2007 raised water levels in Ramah Lake, and fish were restocked. Ospreys nested in the same site and fledged at least 5 young from 2007 to 2009.

ACKNOWLEDGEMENTS

Data for this note were collected under contract to Conservation Services Division of New Mexico Department of Game and Fish, administered by Sartor Williams III, and during normal operations of the Fisheries Management Division of the Department (RWC). Terry Johnson initially found the Osprey nest and observed it on 28 June 2006. Comments by Jean-Luc Cartron, Dan Anderson, Robert Murphy, and Blair Wolf improved earlier drafts of this manuscript.

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ABSTRACTS FROM THE NMOS 48TH ANNUAL MEETING

The following abstracts are from the papers presented 10 April 2010 at the 48th Annual Meeting of the New Mexico Ornithological Society held at the Best Western Rio Grande Inn, Albuquerque, New Mexico. Abstracts are listed in order of the presentations.

ORAL PRESENTATIONS

Introduction to Symposium – H.A. Walker, New Mexico Department of Game and Fish, Santa Fe, NM 87106

The Yellow-billed Cuckoo (*Coccyzus americanus*; cuckoo) is a Neotropical migrant, breeding in wet habitats throughout North America and wintering primarily in South America east of the Andes. Documented population declines and local extirpations in the western United States prompted the U.S. Fish and Wildlife Service in 2001 to determine that listing of the cuckoo population west of the crest of the Rocky Mountains as endangered was warranted, but precluded by higher priority listing actions. Since the listing of the western cuckoo population as a candidate under the Endangered Species Act, land managers have sought guidance and information on how best to implement recovery actions for the species in the west, but they have been met with disparate and incomplete information. As major rivers in Arizona and New Mexico are considered to be important strongholds for the western cuckoo population, ascertaining cuckoo population status and habitat requirements in these two states is particularly integral to conservation efforts. This symposium will serve as a venue for

Yellow-billed Cuckoo researchers throughout New Mexico, as well as from Arizona, to share their research addressing many pressing habitat, demographic, and behavioral issues of relevance to managing Yellow-billed Cuckoos and ensuring long-term survival of ecologically functional populations. The symposium will provide an unprecedented opportunity to collaborate and improve our understanding of and management actions for the Yellow-billed Cuckoo in New Mexico

Distribution and Status of the Yellow-billed Cuckoo in New Mexico – S.O. Williams III, Division of Birds, Museum of Southwestern Biology, University of New Mexico, Albuquerque, NM 87131, and J.R. Travis, Rivers and Birds Inc., Albuquerque, NM 87111

The Yellow-billed Cuckoo (*Coccyzus americanus*) is an uncommon to locally fairly common, regular (annual), summer resident in New Mexico, occurring statewide, but being more numerous in the southern half. The species has a long history of occurrence in the state, from early territorial days to the present, with some 2000 reports for the period 1852-2009. To date, there are records for Yellow-billed Cuckoos for all 33 New Mexico counties, and summer records, implying local breeding, for 32 of them and with nesting confirmed in at least 14, these located in all quadrants of the state. The species typically is present from early/mid-May to mid-September, with arrival dates closely correlated with latitude; extreme arrivals and departures are 21 April and 16 October. Breeding occurs generally from early June to late August, but with nest initiation as early as 15 May and adults tending fledglings as late as 20 September. Most occurrences are in major river valleys, including the San Juan, Canadian, Rio Grande, Pecos, and Gila, but the species occurs in numerous smaller drainages plus isolated wetlands, isolated woodlands, and suburban plantings away from river valleys. Elevations of occurrence range from 890 m on the lower Pecos, 1,070 m on the lower Rio Grande, and 1,130 m on the lower Gila up to 2,250 m in the northern mountains; greatest densities, however, are below about 1,500 m. Vegetation at occupied habitats can be primarily native, mixed native and exotic, or primarily exotic plant species, the latter including riparian saltcedar, orchards, and ornamental/shade plantings. Flowing, standing, or nearby water is not characteristic of all occupied habitats.

Taxonomy is in need of clarification; the subspecies boundary (if any) variously placed: 1) at eastern New Mexico state line; 2) between Pecos River and Rio Grande; 3) at Continental Divide. The Continental Divide has no discernible influence on cuckoo distribution in the state, as has been asserted for states to the north; over two-thirds of New Mexico is east of the divide. Population estimates derived from systematic avian surveys of major New Mexico river systems in early 1980s suggested a minimum of at least 1,000 pairs statewide, with the largest populations in the lower Pecos, middle Rio Grande, and Gila valleys. Results of a study in the early 2000s to detect possible changes in geographic distribution and population size suggested overall distribution had remained unchanged; numbers in Gila and Pecos study areas were unchanged from historic levels but numbers in a Rio Grande study area had declined. Since that study, numbers have declined in the lower Pecos but increased numbers have been documented in the middle Rio Grande. Perhaps the greatest threat to the species in New Mexico is removal of saltcedar from the Pecos and other drainages. Other potential threats include effects of pesticides and loss or fragmentation of suitable woodland habitats to urbanization, agricultural conversion, excessive livestock grazing, inundation, altered hydrology, or other disruptions.

Yellow-Billed Cuckoo Surveys Along the Middle Rio Grande, New Mexico – S.D. Moore and D.D. Ahlers, Bureau of Reclamation Technical Service Center, Denver, CO 80225, and V. Johanson, SAIC Inc., Denver, CO 80225

Various avian studies have been conducted by the Bureau of Reclamation along the Middle Rio Grande during the past 15 years. Between 1997 and the present, due to the presence of an apparently substantial population of Yellow-billed Cuckoos (*Coccyzus americanus* – cuckoo) within the basin, an increasing level of attention has been given to the species. Casual detection data gathered during Southwestern Willow Flycatcher (*Empidonax traillii extimus*) surveys between 1997 and 2005 documented numerous resident cuckoos annually. In 2006, formal protocol surveys, based on methods developed in conjunction with the Arizona Game and Fish Department and the U.S. Geological Survey,

were first conducted for the cuckoo. Additionally, a GIS-based "territory" delineation methodology was developed to quantify cuckoo detections within each survey site. During this first year, 32 river miles were surveyed between the Bosque del Apache National Wildlife Refuge and Elephant Butte Reservoir and 44 cuckoo "territories" were documented. During each of the next 3 years, the area surveyed and number of cuckoos located increased to a high of 107 "territories" documented in 109 survey sites (89 river miles) during the summer of 2009.

Yellow-Billed Cuckoo Home Range, Habitat Use, and Migration Studies on the Middle Rio Grande, New Mexico – J.D. Sechrist and D.D. Ahlers, Bureau of Reclamation Technical Service Center, Denver, CO 80225, V. Johanson, SAIC Inc. (contracted to Bureau of Reclamation), Denver, CO 80225, and R. Doster, U.S. Fish and Wildlife Service, Willows, CA 95988

The Bureau of Reclamation has been recording casual detections of Yellow-billed Cuckoos (*Coccyzus americanus*) on the middle Rio Grande in central New Mexico since 1998. Formal surveys were initiated in 2006 in an attempt to estimate territory sizes, distribution, and abundance of Yellow-billed Cuckoos within this system. In 2007 and 2008, a radio telemetry-based home range and habitat use study (n=10) was implemented. In 2009, Yellow-billed Cuckoos were captured and fitted with Geolocators (n = 13) in an effort to document migration corridor utilization and wintering areas. Survey data indicate Yellow-billed Cuckoo territory numbers have increased on the middle Rio Grande annually since 2006. Telemetry-based home range estimates of Yellow-billed Cuckoos along the middle Rio Grande were determined to be variable (range: 5-282 ha), with an average size of 81.6 ha. The home ranges of these birds were not always associated with surface water, but were always associated with some percentage of native vegetation overstory or native overstory/aggregate understory vegetation type. Work continuing in 2010 will involve attempting to recapture those Yellow-billed Cuckoos instrumented with Geolocators for data recovery and subsequent wintering ground delineation.

Yellow-Billed Cuckoo Habitat Use and its Implications for Riparian Conservation and Restoration – M.J. Johnson, U.S. Geological Survey, Southwest Biological Science Center, Colorado Plateau Research Station, Northern Arizona University, Flagstaff, AZ 86011, and J.A. Holmes, Northern Arizona University, Flagstaff, AZ 86011

The Western population of the Yellow-billed Cuckoo (*Coccyzus americanus*), a candidate for listing under the Endangered Species Act, depends on riparian habitats for breeding. Over the past 50 years its habitat, distribution, range, and population numbers have declined substantially across much of the western United States. In the West, breeding cuckoos now occur in only a fraction of their former range. Relatively little is known about the cuckoo's patterns of habitat use at different spatial and temporal scales. Such information is needed in order to make informed decisions regarding the conservation and management of the cuckoo and its riparian habitats. For example, it is essential for determining where best to focus conservation efforts, including how and where to restore or create riparian habitat for the Yellow-billed Cuckoo. We examined cuckoo habitat use across 3 years and at 3 spatial scales (microhabitat-, macrohabitat-, and landscape-levels), within Arizona, primarily along the Lower Colorado River watershed (LCR), including 1 of its tributaries, the Bill Williams River. We found that sites that were occupied by Yellow-billed Cuckoos generally had taller trees and higher canopies, denser cover in the upper layers of the canopy, more large trees (mostly Goodding's willow and Fremont cottonwood), and sparse shrub layers when compared to unoccupied sites. We also measured microclimate variables and found that occupied sites had generally cooler and more humid conditions. In the Verde River Watershed, occupied deciduous riparian patches were larger than unoccupied sites; in the LCR patch width did not differ between occupied and unoccupied sites. Landscape features that appear to influence cuckoo distribution and abundance include adjacent land use, and the presence of mesquite bosques. We also found that, temporally, the availability of suitable habitat can be highly variable; riparian habitat patches used for breeding can lose suitability rapidly. Given our findings, we discuss factors to be considered when planning

and implementing habitat conservation and restoration for this riparian obligate.

Trachea Length and Vocal Identification of Sandhill Crane Subspecies – M.R. Jones and C. Witt, Museum of Southwestern Biology and Department of Biology, University of New Mexico, MSC03 2020 Albuquerque, NM 87131-0001

Three migratory subspecies of Sandhill Crane (*Grus canadensis*) occur in New Mexico: greater (*G. c. tabida*), lesser (*G. c. canadensis*), and Canadian (*G. c. rowani*). These subspecies vary clinally in size from the very large *tabida* to the small *canadensis*, but field identification is challenging. Although both *tabida* and *canadensis* are abundant in New Mexico during the non-breeding season, only *tabida* warrants conservation concern due to its much smaller global population size. We propose a novel technique to determine the subspecies composition of Sandhill Crane populations using formant spacing in vocalizations. Each note in a crane vocalization is comprised of several formants, or energy peaks in the frequency spectrum. Formant spacing is inversely proportional to the length of the sound-emitting tube. We predicted that *tabida* would have longer tracheae and correspondingly reduced formant spacing. Preliminary analyses of sonograms are consistent with this prediction. To explore this hypothesis further we measured tracheae from 20 *tabida*, 16 *canadensis*, and 3 *rowani*. Diagnostic differences between *tabida* and *canadensis* were found in body mass and culmen. However, trachea lengths overlapped, especially between female *tabida* (mean = 691.5 mm; range: 614-730) and male *canadensis* (mean = 644.2 mm; range: 609-677). Trachea lengths for male *tabida* (mean = 756.8 mm; range: 681-820) and female *canadensis* (mean = 540.6; range: 392 mm-614 mm) were outside of the zone of overlap. Because cranes nearly always occur in flocks containing both sexes, formant spacing of at least some individuals in each flock may be diagnostic of subspecies when *tabida* or *canadensis* is present.

Waterfowl Body Condition and Dispersal Patterns for Waterfowl that Overwinter at the Bosque Del Apache National Wildlife Refuge, Socorro, NM – B.E. Wadlington, and Z.F. Jones, Biology Department, Eastern New Mexico University, Portales, NM 88130, J.N. Vradenburg, U.S. Fish and Wildlife Service, Bosque del Apache NWR, San Antonio, NM 87832, and D.A. Haukos, U.S. Fish and Wildlife Service, Department of Range and Wildlife Management, Texas Tech University, Lubbock, TX 79409

Monitoring migrating waterfowl body conditions and movements over time can be useful in their conservation and in detecting reasons for a species' decline, as the Northern Pintails have been experiencing in North America for much of the last decade. From 1999 to 2010, Mallards, Northern Pintails, and Green-winged Teal were banded and weighed, and wing chord measurements and were taken at the Bosque del Apache National Wildlife Refuge near Socorro, New Mexico. Body mass and wing chord values were used to calculate body fat content estimates that were considered synonymous with body condition for migrating waterfowl. In addition, band recoveries and band recaptures were used to understand annual movements of waterfowl that overwinter at the refuge. Preliminary results indicate that body condition varies among species of overwintering waterfowl at the refuge. Also, annual movements of waterfowl that overwinter in New Mexico suggest that the refuge is a wintertime stopover for waterfowl from all over the North American continent. In conclusion, these data will help provide Bosque del Apache and other regional refuge managers with insight regarding the integration of wintering, breeding, and migratory habitat and food needs of wintering waterfowl in New Mexico.

A Year on the Delta at Morgan Lake, San Juan County – T. Reeves, Computer Science and Information Technology Department, San Juan College, 4601 College Blvd., Farmington, NM 87402

Observations of birds made at Morgan Lake are discussed and photographs are shown. Species encountered include: Canada Goose, Mallard, Gadwall, Green-winged Teal, American Widgeon, Northern Pintail, Northern Shoveler, Cinnamon Teal, Ring-necked Duck, Pied-

billed Grebe, Western Grebe, American White Pelican, Brown Pelican, Neotropic Cormorant, Double-crested Cormorant, Black-crowned Night-Heron, Snowy Egret, Great Egret, Great Blue Heron, White-faced Ibis, Osprey, Northern Harrier, Bald Eagle, Red-tailed Hawk, Sora, American Coot, Snowy Plover, Semipalmated Plover, Killdeer, American Avocet, Black-necked Stilt, Willet, Lesser Yellowlegs, Greater Yellowlegs, Spotted Sandpiper, Long-billed Curlew, Marbled Godwit, Sanderling, Dunlin, Semipalmated Sandpiper, Western Sandpiper, Least Sandpiper, Pectoral Sandpiper, Long-billed Dowitcher, Stilt Sandpiper, Wilson's Phalarope, Red-necked Phalarope, Franklin's Gull, Bonaparte's Gull, Ring-billed Gull, California Gull, Herring Gull, Thayer's Gull, Caspian Tern, Forster's Tern, Common Tern, Least Tern, Black Tern, Burrowing Owl, Northern Flicker, Common Raven, Horned Lark, Marsh Wren, Mountain Bluebird, American Pipit, Common Yellowthroat, Song Sparrow, White-crowned Sparrow, Yellow-headed Blackbird, and Red-winged Blackbird.

A Comparison of Burrowing Owl Productivity in Relation to Local and Landscape Scale Factors across a Latitudinal Gradient – R.S. Treminio, J. Good, M. J. Desmond, and G. Roemer, Department of Fish, Wildlife and Conservation Ecology, New Mexico State University, Las Cruces, NM 88003, C. Campbell and M. Devries, Department of Geography, New Mexico State University, Las Cruces, NM 88003, and W. Gould, Program in Experimental Statistics, New Mexico State University, Las Cruces, NM 88003

The western Burrowing Owl (*Athene cunicularia hypugaea*) has experienced population declines across their northern breeding range, however, interestingly owl numbers are increasing in the southern. Declines have been attributed to the fragmentation and destruction of native grassland due to increased agriculture, prairie dog control programs and sylvatic plague. The declines in the north and increased numbers in the south are puzzling because previous data suggests that owl productivity is higher in the northern compared to southern plains and habitat is more intact in the northern plains. During May through June 2009, we searched for burrowing owl nests at 15 prairie dog colonies within 5 Forest Service National Grasslands (Grand River,

Buffalo Gap, Comanche, Pawnee and Kiowa-Rita Blanca) from New Mexico/Texas to South Dakota. All nests were monitored weekly until the nest attempt was terminated or juvenile owls fledged. We are using satellite imagery to investigate the effect of local and landscape factors on owl productivity across a latitudinal gradient. In 2009 we monitored 376 nests across 61 colonies on our 5 national grassland study areas. The mean number of fledglings/nest was 1.8 for Grand River (SD), 2.0 for Buffalo Gap (SD) and 3.2 for Pawne (CO), 1.8 for Comanche (CO) and 2.1 at Kiowa-Rita Blanca (NM/TX). Nest failure was 34.6% at Grand River, 46.8% at Buffalo Gap, 20.0% at Pawnee, 56.7% at Comanche, and 46.7% at Kiowa-Rita Blanca. Causes of nest failure were not definitive, however in most cases, the loss of the clutch suggested nest predation. Suspected nest predators include badgers, skunks and bullsnakes. Preliminary results for local and landscape factors effect on productivity will be discussed.

Prey Selection in Migrating Sharp-shinned Hawks – J.P. Delong, Department of Ecology and Evolutionary Biology, Yale University, New Haven, CT 06520, S.W. Cox and N.S. Cox, Rio Grande Bird Research, 4426 San Isidro NW, Albuquerque, NM 87107, Z.M. Hurst, Department of Wildlife and Fisheries Sciences, Texas A&M University, 210 Nagle Hall, College Station, TX 77843, and J.P. Smith, HawkWatch International, 2240 South 900 East Salt Lake City, UT 84106

The energetic challenges of migration make acquiring food before or during migratory flights a crucial component of the migratory strategy. Many ridge-migrating raptors opportunistically forage while traveling, but prey selection strategies, and the impact of prey availability on migratory strategy have rarely been investigated. One of the reasons for this is that tools to identify prey selection in migrating raptors have not been available. We introduce an approach for identifying prey selection of migrating hawks - gene matching - and use it to quantify prey selection patterns in Sharp-shinned Hawks (*Accipiter striatus*) migrating through the Manzano Mountains of central New Mexico. Migrating hawks were captured at Capilla Peak, and prey feathers were collected from the toes and talons of their feet. DNA extracted from these feathers was matched to DNA from reference feathers. Prey species

were identified from 50 samples. Prey availability was derived from concurrent mist-netting of small birds in the Capilla Peak area. Prey selection was then compared to data on prey availability. Sharp-shinned Hawks took a range of avian prey types, predominantly thrushes and sparrows. They selected large prey species and in some cases species uncommon at the elevation of the Capilla Peak area. Also, female hawks took larger prey than male hawks. These results indicate that prey selection in migrating hawks can be studied, and that foraging strategies of migrating hawks may involve opportunistically targeting the most energetically profitable prey.

Falcons as Neighbors, Part II: The Unusual 2009 Observations of Nesting American Kestrels in Eldorado at Santa Fe, New Mexico – D.W. Stahlecker, Eagle Environmental, Inc., 30 Fonda Road, Santa Fe, NM 87508

American Kestrels (*Falco sparverius*) began to nest in the nest boxes I provided on my 0.7 ha lot when I moved to Eldorado at Santa Fe (15 km south of downtown) in 1995. They nested 12 of 14 years in the "yard" territory, and 10 of 12 years in a nearby greenbelt. In 2009 the female in the "greenbelt" territory had an approximately 50:50 mix of brown female and off-grey wing coverts; her folded wing gave a visual impression of a faded, partially male plumage. She initiated incubation in late May, 5 weeks later than the "yard" female. Only 2 young fledged from each box, half the 2004-2008 average (3.9 fledglings/attempt, n = 8). Perhaps due to the plumage of the "greenbelt" female, unusual mate interactions were documented and will be described.

Response of Winter Sparrows to a Seed Manipulation Experiment – M.J. Desmond, Department of Fish, Wildlife and Conservation Ecology, New Mexico State University, Las Cruces, NM 88003, and C. Mendez-Gonzalez and L. Abbott, Department of Animal and Range Sciences, New Mexico State University, Las Cruces, NM, 88003

We examined the influence of seed manipulations on winter sparrow abundance and community composition in desert grasslands of southwestern New Mexico over 4 winters. Manipulations were

conducted in open grasslands (2003-2005), and shrub encroached grasslands (2005-2007). We established 30, 0.9 ha plots (300 x 30 m). Our experiment was designed with 4 treatments (A, B, D, E) with 2 variables: seed diversity and seed amount, and a control, and 6 replications. Treatment A was a 5 seed mixture applied at a rate of 20 kg· ha^{-1}. Treatment B was the addition of the same mixture at a rate of 40 kg· ha^{-1}. Treatment D was the addition of 20 kg· ha^{-1} of sand dropseed. Treatment E was the addition of sand dropseed at a rate of 40 kg· ha^{-1}. In open grassland birds exhibited a strong response to seed abundance and seed type with highest avian abundance on plots with the most seed. In shrub encroached grasslands, the relationship was less clear and avian response was not related to seed abundance. Avian community composition was similar between years within grassland types but was more diverse in the shrub encroached grasslands.

The Effects of Fire and Grazing on Avian Abundance and Diversity in an Arizona Oak Savanna – C.T. Nichols and Z.F. Jones, Department of Biology, Eastern New Mexico University, Portales, NM 88130

Following the 2002 occurrence of the 37,000 ha Ryan Fire in southeastern Arizona, we established 16 (8 each in burned and unburned habitat) 4-ha plots to study the impact of fire on an oak-savanna avian community. Plots were sampled for grassland height and cover, tree cover, and avian abundance and diversity. By 2008, the herbaceous vegetation was taller on burned plots (33.34 cm) than unburned plots (29.3 cm), and the tree canopy cover was less on burned plots (8%) than unburned plots (12.5%); however, grazing did not influence any of these variables except grass height. In 2003, there was a drastic difference in average herbaceous vegetation cover between burned (8%) and unburned plots (77%), but that difference was gone by 2008 (burned 81% and unburned 82%). Species richness and total abundance were not different between burned and unburned, or grazing and ungrazed, plots. However, 3 types of species responses to the fire were observed; no response (n = 2), positive response (n=8), and negative response (n=5). Overall, the Ryan Fire has apparently resulted in a long-term decrease in percent tree canopy cover, and short-term negative effects on the

herbaceous vegetation. For the avian community, the Ryan Fire and grazing altered species composition, but had little effect on richness and abundance.

Responses of Birds to Control of Big Sagebrush near Huerfano Mountain, San Juan County, New Mexico – C.G. Schmitt, P.O. Box 267, Kirtland, NM 87417, and D.W. Still, Department of Plant Sciences and Technology, California State Polytechnic University, Pomona, CA 91786

Point count surveys of birds were conducted during May and June of 2004, 2005, and 2006 to investigate their responses to control of big sagebrush (*Artemisia tridentata*) near Huerfano Mountain, San Juan County, New Mexico. The estimates of abundance of birds in an area of big sagebrush (control area) were compared with two other areas of big sagebrush that had been subjected to application of tebuthiuron 12 years (intermediate area) and 4 and 5 years (treatment area) prior to this study. Thirty-five species of birds were recorded during these investigations, 23 species on the control area, 29 species on the intermediate area, and 25 species on the treatment area. Application of tebuthiuron resulted in significant reductions in the abundance and cover of big sagebrush. These changes were characterized as a change from a shrub dominated habitat toward more of a grassland habitat with fewer shrubs. Big sagebrush habitats subjected to application of tebuthiuron had significantly lower abundances of 3 sagebrush obligates, Sage Thrashers (*Oreoscoptes montanus*), Sage Sparrows (*Amphispiza belli*), and Brewer's Sparrows (*Spizella breweri*) and significant decreases in 2 species, Scaled Quail (*Callipepla squamata*) and Say's Phoebes (*Sayornis saya*) that are not particularly dependent on big sagebrush. Six species, Mourning Doves (*Zenaida macroura*), Horned Larks (*Eremophila alpestris*), Northern Mockingbirds (*Mimus polyglottos*), Vesper Sparrows (*Pooecetes gramineus*), Lark Buntings (*Calamospiza melanocorys*), and Western Meadowlarks (*Sturnella neglecta*) were recorded in significantly higher numbers in areas subjected to application of tebuthiuron.

Breeding Bird Responses to Rangeland Restoration in Southern New Mexico – J.M. Coffman, Department of Biology, New Mexico State University, Las Cruces, NM 88003

All across the southwestern US, shrub encroachment has replaced large tracts of open grasslands. Restore New Mexico, a partnership with the Bureau of Land Management, private land owners, and conservation groups has enacted a plan to remove shrubs from invaded areas within New Mexico. The BLM began applying herbicides to shrublands in the early 1980s and has recently increased the frequency and amount of land treated. A pilot study was conducted in the summer of 2009 to review survey sites and identify common species and their abundance. Black-throated Sparrows and Northern Mockingbirds were identified as the most common species. The data collected were used to design a study that captured avian habitat selection associated with the transition from shrub dominated communities. A chronosequence of treated areas (n = 18) within southern New Mexico was selected from 1984-2007. These sites will be surveyed in the summer of 2010.

Tracking Water Resource Use by Migrant and Resident Birds in the Sonoran Desert Using Stable Isotopes – T.C. Hyde and B.O. Wolf, Biology Department, University of New Mexico, Albuquerque, NM 87131

Water is a limited resource in desert ecosystems therefore animals must rely on water found in food (i.e. insects, fruit and seeds) or drink from a permanent source of water. In the Sonoran Desert of Arizona, the Department of Game and Fish maintains permanent water tanks as a resource for big game. We were interested in the reliance of migratory and resident birds on these water resources during the spring and summer. We enriched the water in tanks on the Kofa National Wildlife Refuge with deuterium and sampled blood from the bird community to track the use of these water resources. Because deuterium is found in low abundance in the environment, birds that use tanks will have elevated levels of deuterium in plasma. We sampled 802 birds of 50 species (25 sp residents and 25 migrants) at distances from the water holes ranging from 2 to 900 m. We found that tanks were used by doves

and quail, and some resident passerines. Neotropical migrants, in contrast, largely ignored this resource during spring migration.

POSTER PRESENTATIONS

Southwestern Willow Flycatcher Studies within the Middle Rio Grande, New Mexico – D.D. Ahlers and S.D. Moore, Bureau of Reclamation Technical Service Center, P.O. Box 25007, Denver, CO 80225, and V. Johanson, SAIC Inc. (contracted to BOR), P.O. Box 25007, Denver, CO 80225

The Bureau of Reclamation has been conducting Southwestern Willow Flycatcher *(Empidonax traillii extimus)* studies within the Middle Rio Grande since 1995. These studies have included extensive surveys and nest monitoring within 130 miles of the Middle Rio Grande. Since 1995, a significant increase in the number of Southwestern Willow Flycatcher territories has been documented. In 1995, Reclamation documented 14 territories within the study area; by 2009 a total of 369 territories were found. The greatest increase has occurred within the exposed pool of Elephant Butte Reservoir. Nearly 80 percent of all flycatcher territories have been found within native *(Salix* spp.) dominated habitats, however approximately 37% of their nests have been physically constructed in exotic saltcedar. No statistically significant difference ($P>0.05$) in nest success or productivity was detected when evaluating exotic vs. native nest substrate or dominate vegetation within the territory.

Yellow-Billed Cuckoo Home Range, Habitat Use, and Migration Studies on the Middle Rio Grande, New Mexico – D.D. Ahlers and J.D. Sechrist, Bureau of Reclamation Technical Service Center, Denver, CO 80225, V. Johanson, SAIC Inc. (contracted to Bureau of Reclamation), Denver, CO 80225, and R. Doster, U. S. Fish and Wildlife Service, Willows, CA 95988

The Bureau of Reclamation has been recording casual detections of Yellow-billed Cuckoos (*Coccyzus americanus*) on the middle Rio Grande in central New Mexico since 1998. Formal surveys were initiated in 2006 in

an attempt to estimate territory sizes, distribution, and abundance of Yellow-billed Cuckoos within this system. In 2007 and 2008, a radio telemetry-based home range and habitat use study (n = 10) was implemented. In 2009, Yellow-billed Cuckoos were captured and fitted with Geolocators (n = 13) in an effort to document migration corridor utilization and wintering areas. Survey data indicate Yellow-billed Cuckoo territory numbers have increased on the middle Rio Grande annually since 2006. Telemetry-based home range estimates of Yellow-billed Cuckoos along the middle Rio Grande were determined to be variable (range: 5-282 ha), with an average size of 81.6 ha. The home ranges of these birds were not always associated with surface water, but were always associated with some percentage of native vegetation overstory or native overstory/aggregate understory vegetation type. Work continuing in 2010 will involve attempting to recapture those Yellow-billed Cuckoos instrumented with Geolocators for data recovery and subsequent wintering ground delineation.

New Mexico Colonial Waterbird Survey – Call for Volunteers – W.H. Howe, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, NM 87103, and H. Walker, New Mexico Department of Game and Fish, 1 Wildlife Way, Santa Fe, NM 87507

As part of a west-wide colonial waterbird inventory being conducted across eleven western states from 2009-2011, the New Mexico Department of Game and Fish and the U.S. Fish and Wildlife Service are collaborating on a state-wide survey of colonial grebes, cormorants, herons, egrets, ibis, and gulls (if any), to occur in May 2010. The goals of this survey are to map historical and current breeding colonies in New Mexico and determine current population status of up to 15 species of colonial breeders. We are seeking volunteers to visit colonies, determine numbers of nesting pairs of each species present using standardized survey protocols, and enter the data into the colonial waterbird database developed for this project. Mileage and lodging costs will be reimbursed if needed.

Watershed Restoration on Kewa Tribal Lands – C.K. Lee and S.J. Nieto, Natural Resources Department, Kewa Tribe P.O. Box 70 Santo Domingo Pueblo, NM 87052

The Kewa Natural Resources Department (NRD) has been active since 2004 and has launched a watershed-level restoration strategy for the tribe's natural resources. Biological and hydrological features include 2 major watersheds (the Rio Grande and Rio Galisteo), 2 spring-fed wetlands, 525 ha of bosque, 4 upland vegetation communities, and a diversity of wildlife. One of the key natural features is a 120-ha perennially spring-fed wetland complex that hosts a diversity of marsh birds, waterfowl, passerines, and raptors, as well as having cultural importance for the tribe. To our knowledge, the wetland complex is the largest naturally occurring wetland ecosystem along the entire Rio Grande Valley (Cliff Crawford, pers. comm. 2005) and includes what is likely the lowest elevation fen in the western US. Species of concern known to use the wetlands include northern leopard frogs and migratory Willow Flycatchers and Yellow-billed Cuckoos. In riparian areas, the Kewa NRD is restoring native communities for the benefit of Rio Grande silvery minnows, Southwestern Willow Flycatchers, and other riparian species. This includes the removal of over 445 ha of salt cedar and Russian olive and the creation of 1.7 km of backwater channels at 6 sites. Upland resource management has focused on soil erosion and livestock grazing issues for the benefit of range, forestry, and upland wildlife resources, such as Gray Vireos, Burrowing Owls, and Gunnison's prairie dogs. We are implementing a large-scale composting and a rest-rotation grazing demonstration site to improve the economic viability of restoration activities for the tribe.

A Landscape-Level GIS Prioritization of Playa Lakes for Conservation in Roosevelt County, NM – B.E. Wadlington and Z.F. Jones, Eastern New Mexico University, Portales, NM 88130

In Roosevelt County, New Mexico there are 1,694 playa lakes totaling 3,582 potential ac of surface water, but roads, agricultural development, and wind turbine arrays threaten playa lake use by waterfowl that depend upon them for overwinter survival. These

disturbances can also lead to playa lake deterioration directly, and ultimately reduce the number of lakes available for waterfowl in the region. Using GIS to prioritize individual playas for conservation we assessed the effects of wind farms, roads, and agriculture on playa usage by waterfowl. In particular, we identified playa lakes in close proximity to manmade disturbances, and used this information to delineate which playas are likely to be most beneficial to waterfowl while simultaneously requiring the least amount of active management. Around 22% of the playas in Roosevelt County were impacted by 2 separate wind farms and were removed from further analysis. The 20 largest of the remaining 1,328 playa lakes were further evaluated for proximity to roads and agricultural developments, and led to the identification of 5 playas of high conservation value to waterfowl. Finally, we considered which of these 5 playas were located in a direct flight path between regional National Wildlife Refuges. The end result of this GIS-based landscape-level analysis identified 2 playa lakes of extremely high conservation value and a total potential surface area of 436 acres. We have attempted to demonstrate 1 way in which the use of GIS evaluation combined may be used to assist wildlife managers in making cost-effective resource decisions.

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NEW PUBLICATION: RAPTORS OF NEW MEXICO

Edited by Jean-Luc Cartron: $50 hardcover, 728 pages, 744 color photographs, 8 halftones, 3 line illustrations, 26 maps. In Raptors of New Mexico (University of New Mexico Press), Jean-Luc Cartron gathered the writings of 41 contributing authors to provide readers with a comprehensive treatment of all hawks, eagles, kites, vultures, falcons, and owls breeding or wintering in New Mexico, or simply migrating through the state. The first book to specifically focus on New Mexico's birds of prey, Raptors of New Mexico draws on scientific studies, surveys conducted throughout the state, anecdotal information, and includes data from wildlife rehabilitators and shelter organizations on injuries and illnesses sustained by raptors. Raptors of New Mexico is available at bookstores or directly from the University of New Mexico Press. To order, please call 800-249-7737 or visit www.unmpress.com.

Editor Jean-Luc E. Cartron is a research assistant professor of Biology at the University of New Mexico and director of the Drylands Institute New Mexico office. He has written numerous articles on raptor ecology and is coauthor of A Field guide to the Plants and Animals of the Middle Rio Grande Bosque (University of New Mexico Press).

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NEW MEXICO ORNITHOLOGICAL SOCIETY

— Founded 1962 —

The New Mexico Ornithological Society was organized to gather and disseminate accurate information concerning the bird life of New Mexico; to promote interest in and appreciation of the value of birds, both aesthetic and economic, to further effective conservation of the state's avifauna; to facilitate opportunity for acquaintance and fellowship among those interested in birds and nature; and to issue publications as a means of furthering these ends.

Membership and Subscriptions: Membership in the New Mexico Ornithological Society is open to anyone with an interest in birds. Memberships are for a calendar year and annual dues are payable 1 January. Dues are: Regular Membership $20; Family $30; Student $10; Supporting $50; Life $500. Address for the New Mexico Ornithological Society: Post Office Box 3068, Albuquerque, NM 87190-3068.

NMOS BULLETIN

The *Bulletin* is published quarterly; subscription is by membership in NMOS. The *Bulletin* serves two primary purposes: (1) to publish articles of scientific merit concerning the distribution, abundance, status, behavior, and ecology of the avifauna of New Mexico and its contiguous regions; and (2) to publish news and announcements deemed of interest to the New Mexico ornithological community.

NMOS members are encouraged to submit articles and news. Articles received are subject to review and editing. Published articles are noted in major abstracting services. Please submit articles in double-spaced electronic format, such as a Microsoft Word document, by e-mail to the Editor (see inside front cover). Refer to recent issues of the *Bulletin* for examples of style. News items may be submitted to the Editor by way of e-mail.

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