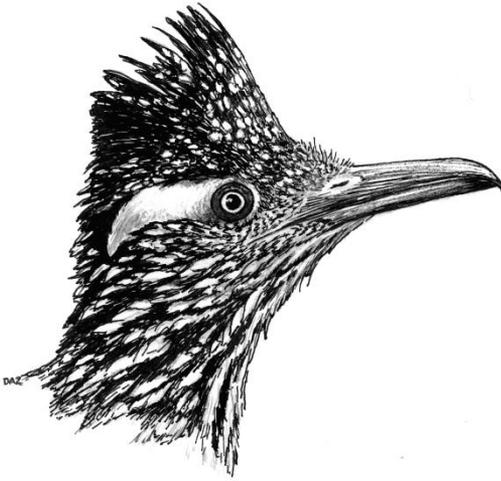


# NMOS BULLETIN



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**A SMITH'S LONGSPUR ON OTERO MESA:  
FIRST VERIFIED NEW MEXICO RECORD**

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**Abstract**—We report on a Smith's Longspur photographed on Otero Mesa, Otero County, New Mexico 6 May 2011, which provided the first verified New Mexico record of the species. We also discuss previously published sight reports for the state, of which only one is acceptable, that of a bird in Doña Ana County 11 November 1986.

**INTRODUCTION**

By far the scarcest of the four bird species we call longspurs in North America, Smith's Longspur (*Calcarius pictus*) nests on the open tundra just beyond tree-line from Alaska east to Hudson's Bay, migrates through the Canadian prairie provinces and the U.S. Great Plains and Midwestern states, and winters in prairies and other open areas within a relatively restricted geographic area primarily from eastern Kansas and southern Iowa south to eastern Oklahoma, northeastern Texas, and adjacent areas of Missouri, Arkansas, and Louisiana (Briskie 2009). The species is decidedly rare west of that range, with but a small handful of records for all of the western states (see Hamilton et al. 2007). Herein we provide details on the first Smith's Longspur to be verified in New Mexico.

**FIELD ENCOUNTER**

On 6 May 2011, Meyer was conducting raptor surveys on the northern part of Otero Mesa, specifically in the Prather Ranch area of the Fort Bliss McGregor Range, located southeast of Alamogordo in central Otero County, in southern New Mexico. From his truck, he was observing birds coming to drink at an uncovered metal water storage tank that was leaking water. The site, at 1486 m, is an abandoned homestead currently used mainly as a livestock watering facility. It consists of mostly bare ground with remnant structures and a few earthen tanks and corrals, surrounded by shrubs and heavily disturbed open grasslands, those characterized by sparse short grass and stands of Wright's dropseed (*Sporobolus wrightii*). At about 0930 hrs, he recognized an unusual solitary longspur on the ground at the tank. He observed the bird, primarily from a

face-on view, for about two minutes, at a distance of about 9 m, before it flew away, not to be seen again. Before the bird flew, he was able to obtain three photographs, all of them frontal views (Fig. 1).



Figure 1. Two photographs of a Smith's Longspur (*Calcarius pictus*) on Otero Mesa, Otero County, New Mexico on 6 May 2011 (photographs by Raymond A. Meyer).

The longspur was a noticeable buffy-orange color on the breast and belly. The breast was marked with thin, dark brown vertical streaks. The auricular patch was bordered by a dark outline with a pale whitish center; the eye-ring was pale. When the bird took flight, the two outer rectrices were seen as distinctly white. As it flew behind his truck, the bird gave a dry rattle-like call that was noticeably different from the Chestnut-collared Longspurs (*Calcarius ornatus*) and McCown's Longspurs (*Rhynchophanes mccownii*) that he heard regularly in that area; he characterized it as four dry, loud monotonic syllables, that seemed louder and harsher than McCown's. The bird was probably a female, as a male would likely be in brighter alternate plumage by that late date.

The record was evaluated and accepted by the New Mexico Bird Records Committee. It represents the first and, to date, only Smith's Longspur to be verified by photograph, specimen, or other tangible evidence for New Mexico.

### PREVIOUS NEW MEXICO REPORTS

There are four previously published reports of Smith's Longspur in New Mexico, the first three of these from the vicinity of Clayton, in Union County in northeastern New Mexico, in the 1960s. Those were reported as five birds seen "several miles east" of Clayton 19 October 1963, three seen "a few miles west" of Clayton 20 October 1963, and up to 25 seen "5 miles east" of Clayton 23 October 1965. The 1963 reports were published as adding a new species to the local list (*Audubon Field Notes* 18:52), although specific numbers, dates, and locations were omitted. The 1965 report was submitted to the editors of *New Mexico Ornithological Society Field Notes*, who questioned it (*NMOSFN* 4[2]:19), which prompted the observers to compile and send additional details for all three sightings, and this was included in a subsequent "corrigenda" by the editors (*NMOSFN* 5[1]:4). These observations have entered the literature of Smith's Longspur (e.g., Kemsies *in* Bent 1968), although questioned by Hubbard (1978). We believe the brief details provided, written some time after the events, do not adequately describe this species, nor do they eliminate other longspurs, including Lapland Longspur (*Calcarius lapponicus*), a species the observers did not consider. Another consideration is that Smith's Longspur is typically a late migrant; the October dates given above are almost a month earlier than the species normally reaches similar latitudes in Oklahoma.

The fourth previously published report was of one seen at the AG Sod Farm near Santa Teresa, Doña Ana County, 11 November 1986 by B. R. Zimmer and J. Donaldson (*American Birds* 41:129). The site, at 1253 m, was characterized by very short grasses and areas of bare ground. Extensive written details provided by Zimmer describe this species well, indicate it was a winter-plumaged male, and distinguish it from the other three longspur species present at the site that season, during what was termed a local longspur invasion. The locality, in southern New Mexico near El Paso, Texas, is about 120 km southwest of the Otero Mesa record. This record was

circulated to the New Mexico Bird Records Committee as NMBRC # 2012-14 and it was accepted.

### STATUS SUMMARY

Based on limited information, Smith's Longspur appears to be a casual late fall and late spring transient to southern New Mexico, where found in open, short grass habitats at about 1250-1485 m in Otero and Doña Ana counties. The species should be looked for in migration and winter in eastern New Mexico grasslands, although to date there are no acceptable records from there.

### ACKNOWLEDGEMENTS

We thank Brian A. Locke, Division of the Environment, Fort Bliss, for his support of Meyer's field work and for reviewing the manuscript.

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**ABSTRACTS FROM THE NMOS 50<sup>TH</sup> ANNUAL MEETING**

The following abstracts are from the papers presented 31 March, 2012, at the 50<sup>th</sup> Annual Meeting of the New Mexico Ornithological Society held at the Best Western Rio Grande Inn, Albuquerque, New Mexico.

**ORAL PRESENTATIONS**

(In order of presentation)

**Distribution Limits and Competitive Dynamics of Black-Chinned and Broad-Tailed Hummingbirds on an Elevational Gradient** – B.L. Abrahamson and C.C. Witt, Department of Biology and Museum of Southwestern Biology, University of New Mexico, Albuquerque, NM 87131

The ranges of lowland Black-chinned Hummingbirds and montane Broad-tailed Hummingbirds overlap at intermediate elevations in Northern New Mexico during the breeding season. We investigated the proximate ecological causes of elevational distribution limits in these two species, specifically the upper distributional limit for black-chinned and the lower distributional limit for broad-tailed. We evaluated hypotheses that these distributional limits are caused by interspecific competitive interactions, habitat, and/or climatic factors. We surveyed nine sites on two transects between 2000 and 2600 m elevation in the Sandia Mountains. Black-chinneds occurred up to 2344 m, while broad-taileds occurred down to 2207 m. Black-chinned abundance correlated with elevation and average nighttime temperature while broad-tailed abundance correlated negatively with black-chinned competitive dominance. Black-chinneds were competitively dominant over broad-taileds at low elevations, but not at high elevations. These results suggest that black-chinneds are limited to lower elevations by temperature or pressure constraints, whereas broad-taileds were limited by intense interspecific competition in the lower portion of their elevational range.

**Most of the Hummingbirds of New Mexico and Arizona** – T. Reeves, Department of Computer Science and Information Technology, San Juan College, Farmington, NM 87402

Photographs are provided for the following species and hybrid hummingbirds known to occur in New Mexico and Arizona: Broad-billed Hummingbird, White-eared Hummingbird, Beryline Hummingbird, Violet-crowned Hummingbird, Blue-throated Hummingbird, Magnificent Hummingbird, Lucifer Hummingbird, Black-chinned Hummingbird, Anna's Hummingbird, Costa's Hummingbird, Calliope Hummingbird, Broad-tailed Hummingbird, Rufous Hummingbird, Allen's Hummingbird, and the hybrid Lucifer X Costa's Hummingbird. Diagnostic characteristics of each species are discussed.

**Some Recent Birds of the Organ Mountains, Doña Ana County, New Mexico –**  
D.J. Griffin, Zia Engineering & Environmental Consultants, LLC., 755 S. Telshor  
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Surveys were conducted for avian species of concern in the Organ Mountains on Fort Bliss during the 2010 and 2011 breeding seasons. In 2010, early-season survey effort was spent conducting presence/absence surveys and nest searching/monitoring for Gray Vireo. Due to overall poor habitat conditions in 2011, less effort was spent for Gray Vireo and more time was spent at higher elevations to survey for as wide a range of breeding birds as possible. Most survey effort was directed at diurnal avian species; however, formal nocturnal surveys for owls and nightjars were conducted in several areas and opportunistically from our camps. In 2010, a total of 106 species was recorded, including 38 that were considered species of concern or of regional interest. Numbers of Gray Vireo were low with only one nesting pair observed, compared to 14 territories in 2007. Fifty-eight species were documented breeding and 14 additional species were probable or possible breeding species. In 2011, a total of 96 species were recorded, including 38 that were considered species of concern or of regional interest. Numbers of Gray Vireo were very low with only 1 territorial/non-breeding pair, and 2 or 3 unpaired/transient males. Forty-one species were documented breeding and 24 additional species were probable or possible breeding species. Environmental conditions were vastly different between years and likely influenced the occurrence and abundance of many species. Madrean Sky Island species were well-represented in both years, however not all species were observed both years.

**Rapid Northward Range Expansion by the Cactus Wren in New Mexico –** S.O. Williams III, Museum of Southwestern Biology, University of New Mexico, Albuquerque, NM 87131, C.M. Rustay, Playa Lakes Joint Venture, 7103 4th Street, Suite O-5, Los Ranchos, NM 87107, and W.H. Howe, Migratory Bird Program, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, NM 87103.

The New Mexico range of the Cactus Wren was well-documented by the 1920s, as resident throughout the desert lowlands across southern New Mexico east to Carlsbad and north to Tularosa, San Marcial, and Cliff; by the early 1960s, that northern limit was adjusted slightly, north to Hagerman, Carrizozo, and Socorro. Detections north and east of that established range began to accumulate noticeably in the 1970s, including to multiple sites in Socorro, Lincoln, and Chaves counties, north to Valencia County, and east into Lea County, and this phenomenon continued into the 1980s, including far north to San Miguel County by 1988. The spread accelerated in the 1990s, with populations detected throughout the east as far north as Quay, Harding, San Miguel, and Guadalupe counties, colonization of the Albuquerque area began by 1995, and scattered detections were obtained north into Santa Fe County. The early 2000s have witnessed consolidation of the range throughout the east and north to

Albuquerque, and, most recently, northwestward into Sandoval County. This substantial range expansion has been overlooked by recent Cactus Wren compendia, but it is complemented by similar northward movements in Texas and Arizona, which likewise began in the 1970s. The current status of the Cactus Wren in New Mexico will be summarized, and possible explanations for the range expansion will be examined.

**Avian Response to Catastrophic Fire at a Single Site in the Middle Rio Grande Bosque** – T.W. Fetz and G.L. Garber, Hawks Aloft, Inc., P.O. Box 10028, Albuquerque, NM 87184

Beginning in December 2003, Hawks Aloft, Inc. conducted avian line transect surveys, duplicating the methods of the early 1980s Middle Rio Grande Biological Survey, in the Middle Rio Grande Bosque between Rio Rancho and the La Joya Waterfowl Management Area, New Mexico. In February 2007, a wildfire consumed over 90% of the vegetation at one transect. Pre-fire vegetation at the site was characterized by a mature cottonwood (*Populus fremonti*) canopy with a dense understory dominated by Russian olive (*Elaeagnus angustifolia*) and a smaller component of salt cedar (*Tamarix* sp.). Avian density (608 birds/100acres) and species richness (32 species detected) during spring 2007, immediately following the fire, were both slightly lower than pre-fire spring densities (range: 697-722 birds/100 acres) and richness (range: 36-43 species). During all post-fire summers avian density (range: 1183-1316 birds/100 acres) and species richness (range: 36-50 species) were greater than or equal to all pre-fire summer densities (range: 767-973 birds/100 acres) and richness (range: 32-36 species). During all post-fire winters avian density (range: 700-1536 birds/100 acres) and species richness (range: 24-30 species) were greater than all pre-fire winter densities (range: 107-662 birds/100 acres) and richness (range: 11-23 species). In addition, our data indicate that during all seasons that surveys were conducted, avian density and richness at the burn site were greater than at all surveyed sites where mechanical clearing of non-native vegetation had occurred (n= 7). We will address possible reasons for the high avian use of the burn and implications relative to bosque land management.

**Nesting Preferences, Productivity, and Success of Loggerhead Shrikes on Kirtland Air Force Base** – C. Borgman and V. Bailey, Envirollogical Services, Inc., Albuquerque, NM 87120

Loggerhead Shrikes (*Lanius ludovicianus*), a small passerine predator and one of only two true shrike species in North America, are conspicuous birds of open habitats across North America. Despite their widespread distribution, Loggerhead Shrikes have experienced range-wide declines over the past decades. Breeding Bird Surveys in New Mexico have noted a steady 3.2% decline since 1966. A population occurs on Kirtland Air Force Base (KAFB) in New Mexico. Since 2007, Envirollogical Services has worked to determine habitat preferences, productivity, and nest success of this population.

Shrike habitat on KAFB is predominately grasslands interspersed with four-wing saltbush (*Atriplex canescens*), Siberian elm (*Ulmus pumila*), and one-seeded juniper (*Juniperus monosperma*). Shrikes also utilize high perches such as utility poles and trees for detecting prey and barbwire fences or thorny bushes for impaling prey. Between 26 and 40 nests have been located each year, some representing second broods. These nests are found primarily in four-wing saltbush and one-seeded juniper, though are occasionally found in various other substrates. Clutch size and overall productivity are fairly consistent each year, but nest success (using Mayfield's method) is highly variable. Nest success has ranged from about 10% to 45% and is somewhat correlated to annual precipitation. Nests are lost most often to predation, but severe weather and abandonment are also factors.

**Nest Site Defense of Cooper's Hawks in Albuquerque** – K.K. Madden, New Mexico Department of Game and Fish and B.A. Millsap, U.S. Fish and Wildlife Service, Albuquerque, NM

Cooper's Hawks (*Accipiter cooperii*) have become the most common diurnal raptor in the Albuquerque area. While Cooper's Hawks are more likely to exhibit aggressive behaviors toward conspecific intruders of the same age and sex, agonistic behaviors directed toward humans are reported more and more frequently as these hawks settle increasingly in urban areas. In order to identify potential factors influencing nest-site defense toward humans, we collected data from nests in Albuquerque urban areas and in the riparian woodland corridor (bosque) that runs through the center of the city during the 2010-2011 breeding seasons. Observers visited each nest once weekly and recorded aggressive behaviors according to a pre-determined scale. Additional information was documented regarding habitat type, nest-tree species, nest height, parental age and sex. While not a completely reliable indication of a specific age, eye color in Cooper's Hawks changes dramatically over time. Therefore, birds were grouped according to predominant eye color: yellow, orange, and red eyes. Chi-square tests support the hypothesis that hawks nesting in urban areas and surrounded by regular human activity are less responsive in defense of nest sites than those nesting in forested areas with minimal human activity. Analyses also indicate that males and younger Cooper's Hawks are more aggressive than females and older Cooper's Hawks. In addition, analyses indicate a significant relationship between nest site defense and nest stage, with stronger responses immediately after hatching and again during the branching stage when at least one chick was observed outside the nest.

**Raptor Monitoring on the Upper Rio Grande and San Antonio Gorges, and Orilla Verde Recreation Area, New Mexico** – G.L. Garber and T.W. Fetz, Hawks Aloft, Inc., P.O. Box 10028, Albuquerque, NM 87184 and V. Williams, Bureau of Land Management, Taos Field Office, 226 Cruz Alta Road, Taos, NM 87571

The Upper Rio Grande Gorge, Orilla Verde Recreation Area, and the Rio San Antonio Gorge are important areas for nesting raptors and migration corridors for many other raptor species. This area includes an abundance of cliff faces that provides ideal nesting substrate for many raptors, including Golden Eagle (*Aquila chrysaetos*), Prairie Falcon (*Falco mexicanus*), Peregrine Falcon (*F. peregrinus*), Red-tailed Hawk (*Buteo jamaicensis*), and Great Horned Owl (*Bubo virginianus*). Hawks Aloft, Inc. and the Taos Field Office of the Bureau of Land Management began monitoring distribution and productivity of breeding raptors in 2000. Prior to 2000, little information concerning the status of raptors in the Upper Rio Grande Gorge region was available, and official surveys had not occurred since the 1980s. Surveys continued from 2003 to 2007, 2010 and 2011, documenting a total of 92 nests. In 2011, there were 17 active nest sites, representing five raptor species. Reproductive success was determined at 16 sites and, of those, all were successful; however, due to a late start because of contracting issues, sites that failed or fledged chicks before June were not included in the sample. A minimum of 28 chicks were fledged, resulting in an average productivity of 1.75 chicks per site. Productivity was highest for Ferruginous Hawk (3.00, n=1), Prairie Falcon (2.40, n=5) and Peregrine Falcon (2.00, n=2), and lowest for Red-tailed Hawk (1.25, n=4) and Golden Eagle (1.00, n=4). Here we document 2011 results and summarize findings from past survey years.

**Population Cycles of Golden Eagles and Peregrine Falcons on The Jicarilla Nation, 2002-2011** – D.W. Stahlecker, Eagle Environmental, Inc., 30 Fonda Road Road, Santa Fe, NM 87508, and T. J. Watts, Jicarilla Game and Fish, P.O. Box 313, Dulce, NM 87528

Breeding populations of Golden Eagles (*Aquila chrysaetos*) and Peregrine Falcons (*Falco peregrinus*) were monitored concurrently on the 850,000 acre Jicarilla Nation, Rio Arriba County, New Mexico, between 2002 and 2011. Survey effort doubled the number of known eagle territories on the Jicarilla Nation by 2008. Eagle reproductive effort was cyclic; the Nation averaged 5.3 fledglings/year for 2002-04, then 25.3 fledglings/year for 2005-2008, but only 2.3 fledglings/year for 2009-11. In 2011 confirmed Golden Eagle occupancy of territories remained high (80%). Known Peregrine Falcon territories increased 240% between 2002 and 2007, then declined 18% by 2011. While the 2011 confirmed Peregrine Falcon occupancy of territories had declined to 82%, slightly below the 85% target of the species' Recovery Plan, there still were twice as many occupied falcon territories in 2011 as in 2002. Between 2002 and 2006, the annual falcon fledging rates averaged 1.91 young/territory, while from 2008 to 2011 they averaged 1.11 young/territory, suggesting that fecundity was less that

mortality. Breeding populations of both species are not isolated from adjacent populations, so that immigration/emigration is likely occurring, but recent poor reproductive output by both species is worrisome.

**Common Black-Hawk (*Buteogallus anthracinus*) in New Mexico's Cliff-Gila Valley 2010 – 2011** – R.S. Shook and D.K. Walkup, Department of Natural Sciences, Western New Mexico University, Silver City, NM 88061

A historically monitored population of Common Black-Hawks (*Buteogallus anthracinus*) in New Mexico's Cliff-Gila Valley, Grant Co. was re-surveyed during the 2010 and 2011 breeding seasons. A total of 31 active nest sites were found, 19 and 24 in 2010 and 2011, respectively. Of the 31 nest sites, 12 were active both years. Twenty-one territories were documented in 2001 in the same study area. During this study, an average linear density of 0.60 pairs/km on the 38 km of Gila River surveyed was calculated. If totals of successful nests for both years were combined, 38 of 43 pairs (88%) produced at least one fledged young each, a noticeably higher rate than in 2000 (75%) and 2001 (62%). Black-Hawks selected nest trees that were found closer to water, in habitats with younger cottonwoods, and in patches with smaller trees, more trees/ha, and a greater subcanopy layer in 2010-11, than in 2000-01. Beginning in the early 1990s, increased irrigation in the Cliff-Gila Valley resulted in increased widespread hydration of the soils with the concomitant increased growth of the understory in riparian woodlands. As recently as 1970, concerns were expressed about the high probability that Black-Hawks could be extirpated in New Mexico's Cliff-Gila Valley, however, since that time population numbers have been increasing. It is likely that this increase is the result of the consolidation of many small farms into larger holdings, which led to a decrease in access to the river corridor, and also to a decrease in wanton shooting.

**Population Status and Nest Failure of Burrowing Owls on Kirtland Air Force Base** – K. Cruz-McDonnell and O. Cruz-Carretero, Envirollogical Services, Inc. Albuquerque, NM 87120.

Monitoring of the population of Western Burrowing Owls (*Athene cunicularia hypugaea*) on Kirtland Air Force Base (KAFB) began in 1998, due to concerns about declining numbers across much of the species' range. The monitoring study is conducted annually to assess population trends and productivity of Burrowing Owls on KAFB. Although the KAFB population status has varied over the 14 years of study, the recent declining trend has caused alarm. The breeding population, nest success, and productivity have shown a strong decline. In 2011, the number of breeding pairs and nest success were the lowest since monitoring began in 1998. With only 14 pairs breeding on KAFB in 2011, 86% failed to produce fledglings. In order to investigate the high rate of nest failure, cameras were installed at five nest burrows during the 2011 breeding season to gain qualitative behavioral information at nest sites. These cameras

were motion activated and recorded ten second digital videos. The recorded videos documented many breeding behaviors, prey deliveries, nestling activities, and interspecific interactions. Videos also recorded disturbance by humans, pets, and predators. High levels of badger and coyote activity were recorded by all burrow cameras, and videos documented badger and coyote predation of young and adult owls. In 2011, 58% of Burrowing Owl nest failure on KAFB could be attributed to predation.

**Differential Migration by Sex in North American Short-Eared Owls (*Asio Flammeus*)** – C.C. Witt and R.W. Dickerman, Museum of Southwestern Biology and Department of Biology, University of New Mexico, Albuquerque, NM 87131-0001.

Differential migration of the sexes is thought to be the predominant pattern in migratory birds, but sex-specific migratory patterns have yet to be described for a majority of species. We used museum specimen data to characterize the seasonal distributions of male and female Short-eared Owls (*Asio flammeus*), a species that cannot be sexed by external characteristics due to very subtle sexual size dimorphism. We found 1188 specimen records from North America with adequate data. Winter distributions of males and females were almost entirely overlapping, but the mean latitude of females was significantly lower than that of males for the months of November to March. The difference averaged 3.1° C during mid-winter but increased to a peak of 6.0° C in March, at which time males initiate spring migration. This result is compatible with the hypothesis that males winter closer to breeding areas because they gain a reproductive advantage from early arrival on breeding territories. However, the sex ratio in the specimen record is skewed, with female specimens predominating during late fall and winter and male specimens predominating during the nesting season. The apparent differential winter mortality of females suggests that female-differential migration may also be affected by intrinsic sex differences in foraging efficiency, cold tolerance, or dominance. We conclude that the longer migratory distance of females reflects each sex optimizing its migratory strategy in light of the higher likelihood of winter mortality in females and the reproductive benefits to males of early arrival on breeding territories.

**The Effects of Migration on the Spread of Avian Malaria in Neotropical Birds** – M. Dodge, S.L. Guers, C.H. Sekercioglu and R.N.M. Sehgal, Department of Biology, San Francisco State University, San Francisco, CA 94132

We examined the phylogenetic relationships among cytochrome b lineages of the avian blood parasite genera *Haemoproteus*, *Plasmodium* and *Leucocytozoon* from three sites across the range of the Swainson's Thrush. To determine whether transmission of these parasites occurs on breeding or wintering grounds, we collected blood samples from both hatch year and adult birds in Alaska and California, and adult birds in Costa Rica. If parasite transmission occurs on breeding grounds, hatch year

birds will be found to harbor local lineages of these parasites. Specifically, we examine the extent to which avian blood parasite lineages migrate with the Swainson's Thrush. Preliminary data reveal a high diversity of blood parasites in this host, and we assess the parasite-host specificity to these and other migratory and non-migratory passerines. Understanding how avian blood parasites are spatially distributed will help us to predict how migration can affect host switching and range expansion events.

**Avian Abundance and Forest Fragmentation in Northeastern United States Using GIS** – F. Anaya and Z. Jones, Department of Biology, Eastern New Mexico University, 1500 S Ave. K, Portales, NM 87016

There has been a steady decline of avian populations for at least 100 years throughout the Northeastern United States. Although there may be many factors contributing to these population declines, this study examined the landscape-scale effects of forest fragmentation on avian abundance. Aerial photographs and satellite imagery from 2001, along with GIS analysis, performed in 2010-2011, were used to identify three categories of forest fragmentation (90%, 50% and 25% remaining forest) on 12 (four plots in each category), 625 km<sup>2</sup> plots in four Northeastern states. Breeding Bird Survey (BBS) routes were used to examine how the varying degrees of forest fragmentation influenced avian abundance for 18 species of forest dwelling birds from 1993-2007. The results indicated that amount of remaining forest in 625 km<sup>2</sup> does have an influence on some species abundances. Forest fragmentation had a negative impact for eight of the 18 species, and a positive influence for seven of the 18 species. Furthermore, three of the 18 species examined apparently had no significant response to forest fragmentation.

**Isolated and Under Threat: Scarlet Macaws in Belize and Guatemala** – C. Britt, Department of Fish, Wildlife, and Conservation Ecology, New Mexico State University, Las Cruces, NM 88003, R. Garcia Anleu and M. Cordova, Wildlife Conservation Society – Guatemala, Flores, Petén, Guatemala and M.J. Desmond, Department of Fish, Wildlife, and Conservation Ecology, New Mexico State University, Las Cruces, NM 88003

Scarlet Macaws (*Ara macao cyanoptera*) in northern Mesoamerica have experienced recent evident genetic isolation and are under threat from a myriad of human pressures. The core breeding areas in Belize and Guatemala are large riparian valleys of the Chiquibul Forest and lowland moist forests in the central-west Maya Biosphere Reserve, respectively. From 43 monitored nests in 2010, 20 in Belize and 23 in Guatemala, nest poaching was determined to be the greatest threat to nest survival in Belize; concentrated around the Chalillo dam reservoir. Connecting tree canopies has an important influence on nest survival across both countries; likely affecting access for non-volant nest predators. Corroborated by the highest nest poaching rates in Belize reported to date, in 2011, nest survival rates from 2010 suggest that the Belize

population is likely to be experiencing a population decline. The intense management efforts in Guatemala are reflected in high nest survival rates, suggesting that current management practices may result in an increasing population. In 2011, we tracked three nesting/post-breeding females in Belize for eight months using satellite telemetry collars. Primary utilized habitats were mid-elevation lowland broad-leaved moist forest, adjacent submontane pine forest, and shrubland, respectively, near water. These macaws exhibited restricted, but gradually expanding, movements following the estimated fledge dates, and continued to utilize nesting areas as the core of their daily movements. These findings emphasize the need to protect nest areas as well as the adjacent habitat that are important to post-breeding family groups.

## POSTERS

(Alphabetical order by author)

**Sorting the South American Siskins (*Sporagra*): The Role of Ecology in a Rapid Continental Radiation** – E.J. Beckman, Department of Biology, University of New Mexico, Albuquerque NM 87131

Ecological transitions across evolutionary time have important consequences for speciation processes and biodiversity. Analyses of young, rapid radiations permit us to address the relevance of ecological transitions to speciation due to the relatively short period between speciation events and the present. The genus *Sporagra*, closely related to the American Goldfinch (*Carduelis*), is a recent, rapid radiation of nine species in the South American Andes. The genus includes species from low and high elevations, humid and dry habitats, and several species with extensive overlap in breeding ranges. We used phylogenetic methods and ancestral character state reconstruction with a multi-locus dataset to ask: (1) What impact do ecological transitions have on the shape of the *Sporagra* phylogeny? And (2) what ecological and morphological traits characterize the *Sporagra* ancestor? We found the genus was derived from a single colonization of a dry habitat, lowland ancestor from North America with a generalist bill about 0.74 million years ago (MYA). Interestingly, the most recently diverged taxa (< 0.12 MYA) breed sympatrically, however these species are ecologically distinct from each other through bill morphology and habitat use, suggesting ecological pressures may have facilitated the rapid evolution of reproductive isolating barriers. We also found humidity differences were an important habitat feature separating closely related species. These results suggest that ecological transitions have played a key role in the evolutionary history of *Sporagra* and may be an important factor in other rapid continental radiations like the Rosy Finches of North America.

**Genetic Color Polymorphism in the MC1R Gene and Local Adaptation in the Vermilion Flycatcher (*Pyrocephalus Rubinus*)** – C.J. Schmitt, Department of Biology and Museum of Southwestern Biology, University of New Mexico, Albuquerque, NM 87131, W. Vargas Campos, Centro de Ornitología y Biodiversidad (CORBIDI), Urb. Huertos de San Antonio, Surco, Lima, Perú, S. M. McNew, and C. C. Witt Department of Biology and Museum of Southwestern Biology, University of New Mexico, Albuquerque, NM 87131

Vermilion Flycatchers are strikingly bright red and sexually dimorphic throughout their range, from the southwestern United States to Argentina; however, in the heavily polluted city of Lima, Peru, over half of Vermilion Flycatcher individuals of both sexes have sooty brown plumage. We found that plumage morph is perfectly predicted by a single polymorphism in the MC1R gene and is determined by a 2-allele system. The dominant allele confers a solid sooty brown plumage and homozygotes lack any red color. Homozygous recessive individuals have bright red plumage typical of the species, while heterozygous individuals have intermediate phenotypes, which are sooty brown with reddish or pinkish tinges, or aberrant pink or red feathers. We used this new understanding of the genetic basis of the plumage morphs to quantify genotype frequencies in and around the city of Lima to compare to predicted genotype frequencies under Hardy-Weinberg Equilibrium. We found striking differences in allele frequencies between the urban center and adjacent agricultural areas. The most parsimonious explanation for this pattern is strong diversifying selection associated with local adaptation to the climate of Lima's unique littoral desert and anthropogenic pollution.

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## NMOS RESEARCH GRANTS ANNOUNCEMENTS

The New Mexico Ornithological Society is pleased to announce the recipients of the 2011 Ryan Beaulieu Research Grant and the 2012 NMOS Research Grant. Each will receive \$1,000 to support their research on New Mexico birds.

### RYAN BEAULIEU RESEARCH GRANT

*Jason Beason, Rocky Mountain Bird Observatory – Determining migration routes and winter destinations of New Mexico’s Northern Black Swifts (Cypseloides niger borealis).* Until recently nothing was known about the migration routes or wintering grounds of the Northern Black Swift. Determining the winter distribution of Black Swifts will contribute much needed information about its life history, and in turn will influence conservation. A pilot study using geolocators was conducted at three breeding colonies in Colorado in 2009-2010 and revealed for the first time the winter distribution of a subset of this species – the Amazon Basin in northwest Brazil (Beason et al. 2012). The goal of this project is to determine the migration routes, timing of migration, and the winter distribution of Black Swifts from Jemez Falls, New Mexico, through the use of light-level geolocators. Maps generated from these data can be used to target habitat type used by the birds on the wintering grounds. Results from the pilot in Colorado indicated clustering of those birds in the wintering area, which suggests a high level of connectivity between breeding and wintering populations. Information about where other breeding populations go in the winter will help to determine whether this species is particularly vulnerable on its wintering ground from either human disturbance or climate change. Funds from this grant will pay for two geolocators, other equipment, and travel costs in New Mexico. Rocky Mountain Bird Observatory is providing a \$500 match for this project, and additional funds are being sought elsewhere.

Beason, J.P., C. Gunn, K.M. Potter, R.A. Sparks, and J.W. Fox. 2012. The Northern Black Swift: migration path and wintering area revealed. *Wilson Journal of Ornithology* 124:1-8.

### NMOS RESEARCH GRANT

*Corrie Borgman, University of New Mexico and Envirollogical Services, Inc. – Assessing migratory status of New Mexico Loggerhead Shrikes (Lanius ludovicianus) at Kirtland Air Force Base using feather deuterium values.* Loggerhead Shrikes are widely distributed across North America, breeding as far north as Canada and wintering throughout the southern United States and Mexico. The widespread decline of Loggerhead Shrikes across their range has prompted the listing of the species or subspecies as threatened or endangered in multiple states and provinces in the United States and Canada. There is relatively little knowledge

regarding the migratory connectivity of breeding and wintering grounds, and defining this could have conservation implications. Loggerhead Shrikes are considered a partial migrant; shrikes breeding north of 40° latitude are almost exclusively migratory, and those south of this latitude may or may not be migratory. Additionally, some southerly populations may exhibit local migrations. In New Mexico, shrikes can be found throughout the state in appropriate habitats, and are present year-round. On Kirtland Air Force Base (KAFB), there is year-round presence of Loggerhead Shrikes, though numbers vary seasonally. On KAFB seasonal surveys have been conducted since 2006, and individuals have been color-banded and monitored since 2009. It is unclear if Shrikes wintering on KAFB are residents, migrants, or a mix of both. The goal of this study is to determine the origin (breeding locations) of Shrikes on KAFB and surrounding areas. Through feather collection and analysis of deuterium (stable isotope of hydrogen) from Loggerhead Shrikes in New Mexico, the breeding locations of these birds can be determined, and we can potentially determine the importance of New Mexico as over-winter habitat for this declining species. Funds from this grant will pay for stable isotope analysis of feather samples.

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**NMOS FIELD EXPEDITION  
WIND RIVER RANCH, MORA COUNTY (11-13 MAY 2012)**

The inaugural NMOS Field Expedition will be to the Wind River Ranch in Mora County along the Mora River, immediately adjacent to Watrous, from 11-13 May 2012. This 4,500 acre ranch is being considered as an additional parcel in the U.S. Fish and Wildlife Service New Mexico Refuge Complex, and USFWS is working with the Thaw family and the Wind River Ranch Trust to make final arrangements for the transition of that property into the refuge system. The Wind River Ranch Trust, the Thaw family, and the USFWS are interested in promoting scientific inventories, and eventually an avian monitoring program in the area, and are very interested in our NMOS Field Expeditions for help. This ranch is a key piece of the >300,000 acre watershed protection area that has been identified by the USFWS as an “approved boundary” for the potential refuge lands in the area. The players were thrilled that NMOS will hold a “bio-blitz” on the Ranch. NMOS members have an open invitation to come up and use the ranch house, the bunk house with kitchen facilities, the conference center (holds 50 people), and anything else that we may need for our bio-blitz endeavor. Tent camping is also possible. We will sample the 5 mile riparian area along the Mora River, the magnificent grasslands for breeding Burrowing Owls and Long-billed Curlews, and any of the other habitats that are found on the ranch. This is a real “win-win” for NMOS, and a great way to give back to the Thaw family and the Trust for their support to NMOS during our successful Challenge.

If interested, or if you need more information, please contact Dave Krueper at [dave\\_krueper@fws.gov](mailto:dave_krueper@fws.gov) or [dkrueper@comcast.net](mailto:dkrueper@comcast.net) for coordination purposes.

## REQUEST FOR BURROWING OWL OBSERVATIONS

The New Mexico Burrowing Owl Working Group is a partnership of non-profit organizations, government agencies, private enterprises, and individuals with a common goal of promoting Burrowing Owl (*Athene cunicularia*) awareness and conservation in our state. Concerned over apparent local population declines in New Mexico, the group was formed in 2001 as a means of sharing data and information among researchers, agencies, and the public. Your observations can improve our knowledge of general distribution and help us protect Burrowing Owls. Volunteer monitoring can also provide an indication of local population trends.

The New Mexico Burrowing Owl Working Group is requesting your help in identifying Burrowing Owl habitat use, abundance, distribution, and status in the state of New Mexico. We ask that any sightings of Burrowing Owls throughout the year be reported.

To report sightings, click on "Report Owl Sightings Here" at the top of the New Mexico Burrowing Owl Working Group webpage:  
<http://www.nmburrowingowl.com/index.html>.

You may fill out the form and e-mail it to [admin@nmburrowingowl.com](mailto:admin@nmburrowingowl.com), or send via U.S. mail to the address listed on the form. Please visit our website for additional information on who we are and what we do. Thank you kindly for your help in this important conservation effort.

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**NEW MEXICO ORNITHOLOGICAL SOCIETY  
FINANCIAL STATEMENT FOR 2011**

Balance as of 12/31/10:	
Checking account balance	\$ 7,823.85
Petty cash	32.29
Total	7,856.14

Net Transactions from 1/1/11 to 12/31/11:	
Dues	4,920.00
NM Bird Finding Guide sales	1,656.00
NM Field Checklist sales	78.00
Annual meeting	-208.58
Donations and deposits	24,598.00
Postage and shipping	-869.72
Miscellaneous	-733.84
Grants	-3,000.00
Database maintenance	-500.00
Printing	-222.56
Storage unit rent	-500.00
Interest	2.09
 Total Transactions	 \$25,219.39

Total 2011 beginning balance plus transactions	\$33,075.53
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Balance as of 12/31/11:	
Checking account balance	11,546.06
Savings account balance	17,124.05
Paypal account balance	3,478.13
Petty cash balance	32.29
Undeposited checks	895.00
 12/31 balance	 \$33,075.53

Petty cash income and disbursements (\$0.00 and \$0.00) are included in the income and expense categories and above.

Date: 11 February 2012

Submitted by: Jerry R. Oldenettel, Treasurer

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**MEMBERSHIP DUES REMINDER**

If you have not already paid your 2012 NMOS membership dues, please take a moment to do so now. To pay for membership, please download the membership form from our website ([www.nmbirds.org](http://www.nmbirds.org)), fill out, and mail to the following address, providing a check made out to "NMOS". Thank you!

New Mexico Ornithological Society  
P.O. Box 3068  
Albuquerque, NM 87190-3068

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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***

**ISSN 2167-003X**

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.

**[www.nmbirds.org](http://www.nmbirds.org)**

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