# NMOS BULLETIN

**New Mexico Ornithological Society**

**Vol. 36, No. 2** **2008**

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## A NOTE FROM THE PRESIDENT

As the days of summer quickly disappear, the Board of Directors of NMOS is continuing to prepare to meet the needs of the Society. Our annual meeting in Albuquerque was well attended, several scientific presentations were given, the Gray Vireo Symposium went very well, and Dr. Ligon gave a wonderful presentation at the evening banquet. A special thanks to the members of the Board that devoted a lot of time to make the event successful.

Prior to the meeting the Board of Directors met and discussed various problems and opportunities to be solved and met in the upcoming year. Following are a few of the items discussed:

1. A goal of the Board is to upgrade the NMOS web site. If you haven't looked at the present site I would encourage you to go to www.nmbirds.org and navigate through the various parts of the site. Comments and suggestions can be addressed to Janet Ruth whose e-mail is easily found on the site. She has done a wonderful job of coordinating the information that is presently displayed.
2. As part of the upgrade in the NMOS web site, there are plans to add more information about the recipients of the Florence Merriam Bailey Lifetime Achievement Award.
3. Sandy Williams and Bill Howe have done an excellent job of completing current issues of the *NMOS Field Notes*. This is a Herculean task and the *Field Notes* are now only one or two issues behind schedule.
4. Finally, we now have a date in April 2009 for out next NMOS Annual Meeting. Look for the announcement in this *Bulletin*. Los Alamos in April should provide an ideal time to reconvene, renew acquaintances, and become more informed on New Mexico ornithology. Begin planning to present a paper. A special thanks to Steve Fettig for his help on this event.

I hope this summer finds you well and that you have had ample opportunity to pursue you interest in New Mexico birds. If you have comments or questions, please pass them on to the Board members.

— Roland Shook

# STATUS OF A DISJUNCT POPULATION OF COMMON BLACK-HAWKS IN SOUTHEASTERN NEW MEXICO: 2002-2003

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**Abstract.**—We monitored a disjunct population of Common Black-Hawks (*Buteogallus antracinus*) along the Rio Hondo, Rio Ruidoso, and Rio Bonito in Lincoln County, New Mexico during the 2002-2003 breeding seasons. This area is 250-300 km from the core of the species U.S. range in southwestern New Mexico and southeastern Arizona. An apparently stable population of 8-10 pairs occupied 70 km of riparian corridor that is mostly privately owned. We monitored nesting efforts of six pairs in both years. Only three young were fledged in two successful nests in 2002, and 4 young fledged in four successful nests in 2003. The density of territories, 0.12/km, was about 25% reported elsewhere (0.4 territories/km).

Common Black-Hawks *(Buteogallus anthracinus*) are widely distributed in riparian areas in northern South America and throughout Central America, with coastal forms likely a different species (*B. subtilis*; Schnell 1994). A migratory population enters the southwestern United States to breed each year, then returns south in winter. In the early 1990s there were an estimated 220-250 pairs breeding north of Mexico; most (80-90%) were thought to be in Arizona (Schnell 1994). More recent work on the Gila River indicates a more significant presence, perhaps 80 pairs, in southwestern New Mexico (Skaggs 1996, Sadoti *in press*). In the southwestern U.S. these hawks nest only in mature deciduous trees, often in gallery forests that grow adjacent to or within flood plains of perennial streams (Schnell 1994). Principle prey are fish, amphibians,

and reptiles (Schnell et al. 1988) taken from or near streams. Their continued existence in this country depends on the management and protection of riparian areas. Common Black-Hawks are listed as "Threatened" under the New Mexico Wildlife Conservation Act (New Mexico Department of Game and Fish 2006).

While the New Mexico core population of Common Black-Hawks has always been in the southwest portion of the state (Hubbard 1978, Skaggs 1996, Sadoti *in press*), this species has ventured considerable distance from that region. Nest records and/or nesting season reports between 1974 and 2004 have come from the Rio Grande in Socorro, Valencia, and Bernalillo Counties, the Canadian River in San Miguel County, and the Pecos River in Guadalupe County. These records are more aptly summarized elsewhere (Sadoti *in press*). However, none of these excursions have been known to have developed into an established breeding population disjunct from southwestern New Mexico.

Early indications of pioneering into the Rio Hondo Valley of Lincoln County were a 23 July 1972 sight record by Steve West and Frances Williams and a 31 March 1983 sight record by Ross Teuber near Lincoln (New Mexico Ornithological Society 2007). In 1996 a Common Black-Hawk nest was discovered (RJT) along the Rio Ruidoso near San Patricio (Williams 1996). A second occupied nest was found and adults were observed in a third area (DWS) in 1999 (Williams 1999) and a third nest was reported on the Rio Bonito by Nancy Cox, Steve Cox, and Jerry Oldenettel in 2000 (Williams 2001). With indications that a small breeding population probably existed, we initiated a more thorough search and monitoring effort in 2002 and 2003.

## METHODS

**Study Area.—**Both the Rio Ruidoso and the Rio Bonito flow east from the northern end of the Sacramento Mountains, then join to form the Rio Hondo. The study area included 80 km of riparian streams and adjacent farmland. Elevations ranged from 1450 to 1900 m above sea level (ASL); the valley floors were seldom more than 800 m wide and were incised between ridges dominated by pinyons (*Pinus edulis*), junipers (*Juniperus* sp.), shrubs, and grasses on steep slopes. Except for a few large properties and several large Bureau of Land Management tracts

along the Rio Bonito, the bottomland has been subdivided into many small tracts of 2 to 15 ha. Historically this bottomland was used for subsistence farming, then commercial orchards, and by 2002 was dominated by pastures, and increasingly, residential development. Streams and acequias (irrigation ditches) were lined with cottonwoods (*Populus deltoides wislizeni*), exotic poplars (*P. alba*), black walnuts (*Juglans rupestris*), box elders (*Acer negundo*), and the abundant, exotic Siberian elm (*Ulmus pumila*).

Access to private land was arranged by contacting owners and co-signing access agreements. While most owners of small holdings allowed us access to their property, representatives of the largest landowner, controlling about 25 km of the lower Rio Hondo, would not sign an agreement. Although territorial pairs were documented from U. S. Highway 70 within this area, it effectively decreased the length of stream bottom in the study area to 57.5 km; 32 km on the Rio Bonito, 19 km on the Rio Ruidoso, and 6.5 km on the upper Rio Hondo.

**Nest Searches.**—Common Black-Hawks build substantial stick nests in deciduous trees (Schnell 1994, Sadoti 2008). We drove public roads during the winter of 2001-2002 and recorded all stick nests found. After acquiring written permission from landowners, we walked streams and ditches to locate other stick nests and documented nests with a Global Positioning System (GPS) satellite receiver. In 2003 only limited surveys for nests were undertaken during winter, but territories found in 2002 were visited in April, other sightings were noted, and active nests were revisited until the end of the nesting season.

Documented stick nests were revisited in April 2002 to ascertain occupancy by Common Black-Hawks or other species. We also made note of hawks seen throughout the study area and searched for nests in the vicinities of such sightings, if permission was provided. Visits were short and nests were viewed from as far away as possible to minimize disturbance (Grier and Fyfe 1987). Active nests were those on which an incubating adult was observed. The presence of adult Common Black-Hawks was noted, even if an active nest was not found. All active nest sites were revisited at one to two week intervals until the fate of the nesting attempt was determined. Young in nests were counted as "fledged" when well-feathered throughout, particularly their heads, therefore exceeding the standard of >80% of the earliest normal

fledging age for diurnal raptors (Steenhof 1987). Earliest fledging age for Common Black-Hawks is 41 days (Schnell 1994).

## RESULTS

Some Common Black-Hawks return to Arizona in late February, but most arrive in March (Schnell 1994). The same is true in the Rio Hondo Valley, with an early observation of 27 February 2002. On 30 March 2002 and again on 31 March 2003 RJT witnessed three adults in territorial disputes, with one adult actively attacking and pursuing an apparent interloper. Adults were incubating in most nests between mid- and late April. Incubation requires 37-40 days (Schnell 1994), so hatching probably began in late May and continued into early June. Chicks were generally not seen until they were half grown. In 2003 all four chicks fledged in the last two weeks of July after approximately 50 days in the nest (Schnell 1994). The last confirmed sighting during the 2002 breeding season was 23 September.

In 2002 we documented nine territories, including three on private land to which we did not have access. At least seven pairs attempted to nest, but only two successfully raised young (Table 1). In 2003 six of the seven territories were again occupied by pairs and at least one adult was seen in the seventh territory. The six pairs attempted nesting and 4 young were fledged. One pair successfully fledged one young in 2003 on a stretch of the Rio Bonito that was dry, except for a few stagnant pools throughout the breeding season. In west-central Texas, Common Black-Hawks were known to forage at a river 1.5 km from the nest grove with only a small nearby impoundment (Maxwell 1999).

All Common Black-Hawk nests were in mature cottonwoods. All nests were at a multi-branched (3 or greater) crotch in the upper third of the tree. Three nest trees were on acequias and four were adjacent to streams. In 2003 four pairs attempted nesting in the same nests used in 2002. The other two pair built new nests in same trees as were used in 2002. Cottonwoods were the earliest trees to foliate and nests were concealed before hawks began incubating.

TABLE 1. Numbers of pairs and productivity of Common Black-Hawks in the Rio Hondo Valley, 2002 and 2003.

| | 2002 | 2003 | Average |
|---|---|---|---|
| Documented Pairs | 9 | 7 | 8 |
| Additional adults | 1 | 2 | 1.5 |
| Active Nests Monitored | 7 | 6 | 6.5 |
| Successful Nests | 2 | 4 | 3 |
| Young fledged | 3 | 4 | 3.5 |
| Young/Monitored Nest | 0.43 | 0.67 | 0.54 |

In three studies where densities were estimated, the average density was 0.4 territories/km of riparian habitat (range 0.33-0.56; Table 2). On the Rio Hondo Valley study area in 2002-2003 the density was 0.12 territories/km, or about 25% of this mean. Rio Hondo Valley Common Black-Hawks also fledged approximately half as many young per territory, 0.54, as Arizona Common Black-Hawks did in an 18-year study (Table 2).

## DISCUSSION

Our short, 2-year study indicates that there is a small (8-10 pairs), low density, but apparently stable breeding population of Common Black-Hawks in the Rio Hondo Valley of southeastern New Mexico. This is the only consistently occupied breeding habitat in the state other than in the species' southwest New Mexico core area.

TABLE 2. A comparison of densities and young fledged per territory of Common Black-Hawks in the Rio Hondo Valley, New Mexico, with three other studies in the northern portion of their range.

| | Aravaipa Canyon, Arizona[1] | West-central, Arizona[2] | Rio Yaqui, Mexico[3] | Gila River, New Mexico[4] | This Study |
|---|---|---|---|---|---|
| Territories/ km | 0.40 | --- | 0.33 | 0.58 | 0.12 |
| Young/ territory | 0.98 | 1.31 | --- | --- | 0.54 |

[1]Schnell (1994) - 18 year study.

[2]Millsap (1981) - 2 year study.

[3]Rodriguez-Estrella and Brown (1990) - 2 year study.

[4]Sadoti (2008) - 2 year study.

The low fledgling rate (0.54 young/occupied territory) may be reason for concern. However, the portion of the population we were not able to study is subject to the least amount of human disturbance, and may well have brought productivity closer to the level of 1.0 fledglings/territory that has been shown in Arizona to support a stable population (Schnell 1994).

Increasing human populations in the Rio Hondo Valley, as well as nearby towns of Ruidoso and Alamogordo, has led to greater diversion of water from the streams and increased withdrawal of water from aquifers that underlie them. Simultaneously, an ongoing drought decreased the amount of water available which resulted in reduced river flows and the drying of segments of the Rio Bonito for long periods during both summers of this study.

Conversion of open acequias to those in enclosed pipes is another conservation concern for Common Black-Hawks in the Rio Hondo Valley. This change will reduce future tree recruitment as well as the viability of existing trees that currently, or could in the future, serve as

nest sites for Common Black-Hawks. More importantly, decreased stream flows and fewer open acequias lead to the conclusion that less aquatic prey will be available for use by Common Black-Hawks.

U.S. Highway 70 through the Rio Hondo Valley was extensively reconstructed in 2003 and 2004. Some acequias adjacent to the highway were enclosed in pipes to accommodate widening. The completed highway also brought traffic closer to several Common Black-Hawk nest sites. Intermittent observations since 2003 indicated that no territories were abandoned as a result of this work.

The study raised local residents' awareness of this beautiful and unusual summer resident of their valley. We are optimistic that this will result in better protection of Common Black-Hawks and their habitat so that they will be a part of the Rio Hondo Valley avifauna for years to come.

## ACKNOWLEDGEMENTS

This study would not have been possible without access permission from numerous Rio Hondo Valley landowners. Some landowners also provided sightings and information leading to the documentation of additional territories. S. Cox, N. Cox, and J. Oldenettel initially located one nest discussed in this manuscript. Y. Torres-Troy contributed observations at known territories and nests. Funding was provided by New Mexico Department of Game and Fish's Share with Wildlife Program. The contract was supervised by J. MacCarter. M. Watson coordinated interactions with the New Mexico Highway Department and their contractors, and S. O. Williams III provided supplemental data on Common Black-Hawk distribution and history in New Mexico. This manuscript was improved by a review by G. Sadoti.

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# ABSTRACTS FROM THE NMOS 46TH ANNUAL MEETING

The following abstracts are from the papers presented Saturday, 12 April 2008 at the 46th Annual Meeting of the New Mexico Ornithological Society held at the Vagabond Inn Executive in Albuquerque, New Mexico. Abstracts are listed in order of the presentations. For papers with multiple authors, the presenting author's name is underlined.

## ORAL PRESENTATIONS

### GRAY VIREO STATUS AND DISTRIBUTION ON FORT BLISS: 2007

CHARLES BRITT, Wildlife Sciences Department, 2980 South Espina, Knox Hall 132, Las Cruces, NM 88003-8003 and CARL LUNDBLAD, 610 Spring Meadows Road, HCR70, Box 610-Z, Amargosa Valley, NV 89020

The objectives of the 2007 portion of the Gray Vireo (*Vireo vicinior*) project were to search for the presence of Gray Vireos on Fort Bliss and to describe basic habitat information regarding the Gray Vireo territories established on Fort Bliss. To accomplish these objectives Gray Vireo surveys were conducted in areas of the Organ and Sacramento Mountains that were identified as suitable habitat for the species. Researchers conducted pedestrian and vehicular surveys using Gray Vireo song playback. A total of 112 search man-days were executed on Fort Bliss. Surveys resulted in detection of 80 Gray Vireos on 37 territories in the Sacramento Mountains and 24 Gray Vireos on 14 territories in the Organ Mountains, totaling 104 Gray Vireos on 51 territories on Fort Bliss. Thirteen nests were located in the Sacramento Mountains while four nests were found in the Organs Mountains. Twelve of the Sacramento Mountain territories had a total of 19 fledglings and two nestlings present. All of the territories detected in the Sacramento Mountains were located along desert riparian corridors within the Grapevine Canyon, Culp Canyon, and El Paso Canyon watersheds. Most of the territories in the Organ Mountains were located within the Soledad Canyon watershed, with the exception of two located in Fillmore Canyon.

## HABITAT PERSEVERANCE AND STATUS OF GRAY VIREO'S ON KIRTLAND AIR FORCE BASE IN ALBUQUERQUE, NEW MEXICO

CAROL A. FINLEY, Natural Resource Management, Kirtland Air Force Base, Kirtland AFB, NM 87117 and ROBERT FREI, Clover Leaf Environmental Solutions, Inc., Albuquerque, NM 87111

In the last five years, Kirtland Air Force Base, located near Albuquerque New Mexico has under taken several projects to document and ensure biodiversity throughout the 52,000 acre installation. Much effort has been spent on documenting the state threatened Gray Vireo (*Vireo vinicior*) on base. In 2003, a base wide survey revealed 53 Gray Vireo territories. In 2005, out of 13 active nests 2-5 produced young (15-38%), in 2006, out of 6 active nests 3-4 produced young (38-50%), and in 2007, out of 10 active nest 5 (50%) produced young. On average 3.6 (38%) of active nests were parasitized by cowbirds. Recently, Kirtland AFB completed a five-year management plan for this species, which has since been integrated into New Mexico's State Plan for the Gray Vireo. Since Gray Vireos are an inhabitant of juniper savanna, the plan focuses on managing this vegetation community between the desert grassland and the pinyon-juniper woodland. Currently, over 200 plant and animal species have been documented in this vegetation type at Kirtland AFB. Preserving and managing the juniper woodland would not only protect the Gray Vireo, but also be beneficial in preserving a wide variety of species.

## GRAY VIREO MONITORING IN NORTHWESTERN AND SOUTHEASTERN NEW MEXICO

MIKE M. STAKE and GAIL GARBER, Hawks Aloft, Inc., P.O. Box 10028, Albuquerque, NM 87184

We monitored a small number of Gray Vireo (*Vireo vicinior*) pairs in the Guadalupe Mountains of southeastern New Mexico from 2005-2007, and near Bloomfield, in northwestern New Mexico in 2007. Nest success was low in both regions (8 of 27 nests successful in the Guadalupe Mountains and 3 of 11 in northwestern New Mexico). Gray Vireos in the Guadalupe Mountains frequently nested in junipers and

oaks, built nests at an average height of less than six feet, and experienced relatively high nest parasitism (62%). The number of pairs in our search area was similar among years. Gray Vireos at our site in northwestern New Mexico nested almost exclusively in junipers, built nests at an average height of nine feet, and experienced low parasitism (11%). We also recorded 20 Gray Vireos in 2007 during point counts at another northwestern site scheduled for vegetative treatments. Gray Vireos in this region are threatened by habitat loss or alteration caused by development and juniper reduction. We caution researchers not to underestimate threats based on apparent regional abundance. We recommend consideration of local population trends and potential negative effects of habitat fragmentation and pervasive juniper reduction treatments when reviewing current status and formulating management guidelines for this species in New Mexico.

## DENSITY AND HABITAT USE OF GRAY VIREOS IN THE SAN JUAN BASIN NATURAL GAS FIELD IN NORTHWESTERN NEW MEXICO

LYNN E. WICKERSHAM and JOHN L. WICKERSHAM, Ecosphere Environmental Services, Durango, CO 81301

We conducted distance sampling for Gray Vireos (*Vireo vicinior*) in 2006-07 on BLM lands in the Farmington Resource Area, within the highly developed San Juan Basin natural gas field. Over the two-year study, we surveyed 48 transects, each 1.75 km, totaling approximately 102 km. We estimated Gray Vireo density from transect data using Program DISTANCE. We compared occupied Gray Vireo habitat with the proportion of available habitat in the study area, by collecting data on habitat characteristics at Gray Vireo detection sites and randomly selected locations. GIS analyses were also conducted to determine the density of natural gas wells and the proximity of wells, roads, and habitat edges to vireo detection sites and random locations. Habitat data were analyzed using binary logistic regression. We observed 28 Gray Vireos in 2006 and 32 in 2007. Our best estimates of density were 0.044 ± 0.013 (SE; $n$ = 23; 2006) and 0.066 ± 0.028 (SE; $n$ = 29; 2007), respectively. These estimates are similar to those from other recent studies in Colorado, Utah, and California; therefore, our data suggests that current

Gray Vireo density in northwestern New Mexico is similar to that across the species' range. Analysis of habitat data indicated that Gray Vireo detection sites were slightly higher in elevation and contained shorter trees and less downed woody debris than randomly selected sites. GIS analysis indicated that density of natural gas wells and proximity of wells and roads did not appear to influence Gray Vireo occupancy.

## MODELING GRAY VIREO HABITAT - GENERAL CONSIDERATIONS

PAUL ARBETAN and TERI NEVILLE, Natural Heritage New Mexico, University of New Mexico, Albuquerque, NM 87131

Construction of a GIS habitat model for Gray Vireo (*Vireo vinicior*) appears relatively straight forward. In general, they seem to prefer a specific range of nest tree densities that are dominant over competing tree species and found in the vicinity of moderate slopes forming open bowl or drainage topographies. The predictive strength of GIS habitat models is tied to inherent inaccuracies of the GIS data. Automated and interactive modeling techniques rely on GIS layers that are surrogates of biophysical landscape characteristics at specific locations. Thus, a lack of digital data at the appropriate scale can greatly limit the applicability of a habitat model. Our emphasis has been on interactive modeling that allows us to compile landscape data at scales appropriate to a desired predictive scale. Using Gray Vireo location data covering diverse geographic areas of the Caja del Rio Plateau west of Santa Fe, the west slope of the Manzano Mountains, and the San Andres and Organ Mountains, we constructed GIS models of Gray Vireo habitat. We obtained greater predictive results using an interactive approach by combining higher resolution data sets, comprehensive field data, and expert review. We are currently refining this approach by deriving data sets of greater specificity towards developing models with greater predictive power.

## AN UPDATE OF THE FOSSIL COLLECTION AT THE NEW MEXICO MUSEUM OF NATURAL HISTORY AND SCIENCE: IT'S NOT JUST DINOSAURS

MARY A. ROOT, New Mexico Museum of Natural History and Science, Albuquerque, NM 87104

The New Mexico Museum of Natural History and Science in Albuquerque opened in 1986. Before that time, New Mexico's fossils were taken to other museums and private collections in other states and countries. Today, the people of New Mexico have shown their interest in preserving New Mexico's natural history by attending, supporting, and in generously contributing to special projects at the museum. Ten thousand dollars was raised in 2000-2001 to purchase a life-sized cast of a giant flightless bird, named *Diatryma*, which lived in what is now New Mexico some fifty million years ago (Eocene Epoch). The paleontologist, Edward Drinker Cope, found fossil foot bones of *Diatryma* in New Mexico in 1874. The New Mexico Ornithological Society took the lead in helping to preserve the avian fossil heritage of our state by making a generous contribution toward the purchase of the cast of *Diatryma*. Today, *Diatryma* is on permanent display, and will be the centerpiece of the new Tertiary Hall. Another avian type-specimen, also from New Mexico and found by Cope, is the complete fossil skeleton of an Old World vulture from the Miocene Epoch (10-20 MYA), named *Paleoborus umbrosus*. Both Old World and New World vultures were present in New Mexico at that time. Last year, an exhibit of all the corvids of New Mexico was on display, mounted by our staff, in cooperation with the Museum of Southwest Biology of UNM. In addition, our collection contains other avian fossils, casts, tracks, and reports from the literature, of birds from the Cretaceous Period through the Pleistocene Epoch. Our most recent acquisition is a collection of numerous shorebird/sandpiper fossil tracks from the Miocene Epoch of an area in the Jemez Mountains, found by Shari Kelley of the NM Bureau of Geology and Mineral Resources.

## LANDBIRD SURVEYS DURING WINTER IN THE BIG BURRO MOUNTAINS, GRANT COUNTY, NEW MEXICO, 2007-2008

DAVID J. GRIFFIN, Griffin Biological Services, 2311 Webb Road, Las Cruces, NM 88012

Avian surveys were conducted between 12 December 2007 and 28 March 2008 using distance sampling and the point transect method to determine densities of winter landbirds in the Big Burro Mountains, New Mexico. Thirty-one species were detected during surveys and an additional 10 species were observed incidental to surveys. Species richness ranged from 5 to 16 species per survey (mean = 10.8), and abundance ranged from 8 to 87 birds per survey (mean = 46.6). Generally, both richness and abundance increased throughout the period. Due to small sample sizes for most species, density estimates were not generated. The most abundant species included Dark-eyed Junco, Mountain Chickadee, Bushtit, Golden-crowned Kinglet, White-breasted Nuthatch, Pygmy Nuthatch, and Western Bluebird, which together accounted for 75% of all birds detected. A few spring migrants and summer residents began to return during the last two survey periods. Additionally, I verified that small numbers of Yellow-eyed Juncos remained at high elevations during the winter period.

## SONGBIRD TRENDS ASSOCIATED WITH MANAGEMENT PRACTICES IN THE MIDDLE RIO GRANDE BOSQUE, 2004-2008

TREVOR FETZ and GAIL GARBER, Hawks Aloft, Inc., P.O. Box 10028, Albuquerque, NM 87184

Between December 2003 and February 2008, we monitored avian abundance and species richness at 61 transects representing 18 vegetation and community structure (C/S) types. Our study area encompassed the middle Rio Grande bosque between the Bernalillo Bridge and the La Joya State Game Refuge, New Mexico. During summer, terrestrial C/S types supporting dense understory vegetation tended to support higher avian density and richness than C/S types with relatively sparse understory vegetation. The highest avian density and

species richness occurred in dense New Mexico olive (*Forestiera neomexicana*). During winter, C/S types incorporating dense vegetation with standing water supported the highest densities and richness of birds. Among terrestrial C/S types, the highest winter avian densities and richness occurred in pure stands of Russian olive (*Elaeagnus angustifolia*) and habitats incorporating extensive amounts of New Mexico olive. These results indicate that the value of Russian olive to wintering birds is greater than previously acknowledged. Currently, the mechanical removal of all non-native vegetation is a common management practice throughout much of the middle Rio Grande bosque. During all seasons, areas subjected to such treatment supported among the lowest avian densities and richness levels, at least over the short term. Hawks Aloft, Inc. will continue monitoring avian abundance and species richness to document avian response to these habitat alterations over the long term.

## TRENDS IN BREEDING NORTHERN BEARDLESS-TYRANNULETS IN GUADALUPE CANYON, NEW MEXICO: RESULTS OF AN 18-YEAR STUDY

SARTOR O. WILLIAMS III, Museum of Southwestern Biology, University of New Mexico, Albuquerque, NM 87131

The Northern Beardless-Tyrannulet (*Camptostoma imberbe*) is a regular but scarce summer resident in New Mexico, where found annually only in Guadalupe Canyon, Hidalgo County. It is occasionally reported elsewhere in Hidalgo County, but with no evidence of breeding away from the canyon; it is casual away from Hidalgo County, with single records for Grant and Eddy counties. First found in the Arizona portion of Guadalupe Canyon in 1947, it was documented nesting in the New Mexico portion in 1962. It was reported intermittently in the New Mexico portion through the early 1980s, reflecting in part less than annual coverage; however, it was unsuccessfully searched for in 1979 and 1980. It has been found annually in Guadalupe Canyon since 1984, and all credible New Mexico records away from there date from 1987. Strictly a warm season resident, this tropical flycatcher typically returns to New Mexico's Guadalupe Canyon by late March or early April. Territorial birds are conspicuous by early April and breeding activity

(nest initiation) is underway by mid-April. Most active nests (building or tending young) were found from mid-May to late June, but nest-building in mid-July indicated potential fledging into early August. Elevations of occurrence in Guadalupe Canyon are about 4400 ft (1340 m), where the species prefers dense thickets of mesquite, acacia, hackberry, and similar vegetation, this either at the edges or as understory of groves of taller trees (sycamore, cottonwood); most reported New Mexico nests were placed in sycamore. Territories tend to be near the few pools of water found in the otherwise dry canyon. Early June surveys along a 2 mi (3.2 km) transect 1987-2004 found an average of 2.53 territories per year (range 1-5); 3.3 territories per year 1987-1996 but only 1.4 territories per year 1997-2004. Higher numbers during the early period may reflect exclusion of livestock from the canyon beginning in 1987 plus generally wetter conditions during the early 1990s; largest numbers corresponded to the very wet years 1992 and 1993. Numbers dropped in 1997 following prescribed "brush control" fires that negatively impacted several traditional territories and, after partial recovery following that event, declined again to only one territory per year 2001-2004, this during a time of drought. The species is listed by New Mexico as endangered, as the very small and localized breeding population is vulnerable to loss of its required low-elevation riparian habitat from burning, clearing, reduced water table, or (potentially) overgrazing.

## WILLIAM GAMBEL IN SANTA FE AND THE NOMENCLATURE AND TYPE LOCALITY FOR THE MOUNTAIN CHICKADEE (*POECILE GAMBELI*)

TOM R. JERVIS, 109 Daybreak, Santa Fe, NM 87507

William Gambel was in Santa Fe for about two months in the summer of 1841. His 1843 description of the Mountain Chickadee (*Poecile gambeli*) is based on that visit and was the basis of Ridgeway's 1886 entry in the first AOU Checklist of the Birds of North America in which he noted that the original designation of *Parus montanus* by Gambel was preoccupied and named the bird *Parus gambeli.* Gambel did not procure a specimen (or it was lost) and in any case was not very specific about the locations of any of his collections. Gambel states that the bird was "first observed about a day's journey from Santa Fe, in

New Mexico." Subsequent editions have further obscured the type locality of the bird. The third edition (1910) of the Checklist states that this was "a day's journey west of Santa Fe" without justification and the current edition has "west" in brackets. Analysis of Gambel's time in Santa Fe suggests that he probably first observed the bird east of Santa Fe, perhaps in Pecos or Glorieta. Subsequent editions of the Checklist have also continued to use the common name Mountain Chickadee despite the conflict with the scientific name. Although variously known as Gambel's Chickadee and Mrs. Bailey's Chickadee, consistency with the scientific name suggests that the common name be formalized as Gambel's Chickadee. This may be particularly important in light of recent research on the phylogeography of the taxon (Molecular Ecology 16:1055-1068; 2007).

## NIGHTJARS AND NIGHT SURVEYS IN NEW MEXICO

DAVID J. KRUEPER, US Fish & Wildlife Service, Migratory Bird Office, 500 Gold Ave, P.O. Box 1306, Albuquerque, NM 87103, CHRISTOPHER RUSTAY, Playa Lakes Joint Venture, 1303 Rio Grande Boulevard NW, #5, Albuquerque, NM 87104, and BRUCE NEVILLE, Centennial Science and Engineering Library, MSC05-3020, University of New Mexico, Albuquerque, NM 87131

Beyond distribution and migration information, relatively little is known about population status, trends and abundance of some species of nightjars in New Mexico. Breeding Bird Survey (BBS) data show that three species are recorded with enough frequency to determine trends within New Mexico. Lesser Nighthawk (*Chordeiles acutipennis*) and Common Nighthawk (*Chordeiles minor*) show noticeable declines since 1966, while Common Poorwill (*Phalaenoptilus nuttallii*) shows a noticeable increase during this time. Regional trends show significant declines for Common Nighthawk and Whip-poor-will (*Caprimulgus vociferus*). Reviewing the status of New Mexico caprimulgid populations within the context of the larger regional and national picture may help us understand why these populations are showing such marked declines. Recently there have been lively discussions as to whether the BBS adequately surveys nocturnal species such as nightjars and owls. The Center for Conservation Biology (CCB) at the College of William &

Mary developed a survey protocol which seeks to address this concern, and volunteers completed a pilot survey in the southeast United States in 2007. Although this protocol has shown moderately good results, there are concerns about whether it will translate well to New Mexico. We will outline the nightjar survey protocol and discuss possible survey modifications beyond simply running BBS-style routes at night. Because trends of nightbirds in New Mexico are either unknown or based on limited data, running appropriate night surveys is a laudable effort, but this should not be done without first determining the efficacy of that monitoring effort.

## RESISTANCE TO ENVIRONMENTAL HYPOXIA BY HUMMINGBIRDS ALONG AN ALTITUDINAL GRADIENT

CHRISTOPHER C. WITT, Department of Biology and Museum of Southwestern Biology, University of New Mexico, Albuquerque, NM 87131

Hummingbirds are diverse and conspicuous in high mountainous regions of the New World, with several species occurring at or above 4000 m elevation where oxygen partial pressure ($pO_2$) is reduced by 40% relative to sea level. Hovering hummingbirds exhibit the highest rates of mass-specific oxygen consumption among vertebrate animals, but it is unknown whether there are respiratory adaptations that enhance oxygen uptake and delivery under high-altitude environmental hypoxia. As a first step, this study examines variation in hypoxia resistance among 27 species of hummingbirds at six sites ranging from sea level to 4000 m. Hypoxia resistance was quantified as the minimum $pO_2$ at which a hummingbird can perform sustained hovering. Hummingbirds assimilated to a flight chamber with a perch and feeder, after which the oxygen concentration was reduced by 0.5% every 5 minutes. The birds were forced to hover by brief removal of the perch at each level of oxygen until the point of aerodynamic failure was identified. Hummingbirds demonstrated remarkable hypoxia tolerance. Even species restricted to Amazonian lowlands were able to hover at $pO_2$ equivalent to the peak of Mt. Everest. Hummingbirds from sea level up to 1400 m failed at similar $pO_2$ levels, but hummingbirds living above 2800 m exhibited increasing hypoxia resistance with increasing elevation.

## AN ANALYSIS OF TWENTY-SEVEN YEARS OF DATA FROM THE SOUTHWESTERN NEW MEXICO AUDUBON SOCIETY'S ANNUAL RAPTOR COUNT

ROLAND SHOOK, Department of Natural Sciences, Western New Mexico University, Silver City, NM 88061

Since 1970, the Southwestern New Mexico Audubon Society has sponsored an annual count of raptors (plus a few additional non-raptorial species) conducted on the first Saturday of December. Twenty-seven years of data collected on Northern Harrier (*Circus cyaneus*), Sharp-shinned Hawk (*Accipiter striatus*), Cooper's Hawk (*Accipiter cooperii*), Harris's Hawk (*Parabuteo unicinctus*), Red-tailed Hawk (*Buteo jamaicensis*), Ferruginous Hawk (*Buteo regalis*), Rough-legged Hawk (*Buteo lagopus*), Golden Eagle (*Aquila chrysaetos*), American Kestrel (*Falco sparverius*), Merlin (*Falco columbarius*), Prairie Falcon (*Falco mexicanus*), Greater Roadrunner (*Geococcyx californicus*), Great Horned Owl (*Bubo virginianus*), and Loggerhead Shrike (*Lanius ludovicianus*) were analyzed using a multiple regression model. Total variance in the number of observations of a species was partitioned among survey effort (miles driven) and years surveyed. Northern Harrier, Sharp-shinned Hawk, Cooper's Hawk, Harris's Hawk, Red-tailed Hawk, Ferruginous Hawk, Golden Eagle, Merlin, and Greater Roadrunner showed no significant relationship ($P \leq 0.05$) between number of birds observed annually and the number of miles surveyed, or between the number of birds observed annually over the years surveyed. American Kestrel showed a significant positive relationship between number of birds observed annually and survey effort. Rough-legged Hawk and Great Horned Owl both showed a significant decline in the number of birds observed over the years surveyed. Prairie Falcon and Loggerhead Shrike showed both a significant positive relationship between the number of birds observed annually and survey effort, and a significant decline in number of birds observed annually over the years surveyed.

## NOT "TILTING AT WINDMILLS": DETERMINING A BASELINE RESIDENT GOLDEN EAGLE POPULATION OF EASTERN NEW MEXICO – 2006-2008

DALE W. STAHLECKER, Eagle Environmental, Inc., 30 Fonda Road, Santa Fe, NM 87508

Aerial surveys of New Mexico east of I-25/U. S. 84/Pecos River for Golden Eagle (*Aquila chrysaetos*) nests were conducted mid-March 2006-08 and early June of 2006-07. Four distinct sub-areas were delineated: NE Highlands (4,000 $mi^2$), Canadian Breaks (8,900 $mi^2$), Caprock (2,600 $mi^2$), and the SE Plains (11,450 $mi^2$). As of the March 2008 survey, 82 territories had been occupied at least once in three breeding seasons; 76 of those were documented by an active nest in at least one of the three years. Of those 82 territories, 26 were in the Caprock, 29 were in the Canadian Breaks, 27 were in the NE Highlands, and none were in the SE Plains. The Caprock had the greatest density of territories (10/1000 $mi^2$), but active nests/year decreased 50% in 3 years. The NE Highlands density was intermediate (6.75/1000 $mi^2$), and active nests/year declined only 20% over the same period, and had the greatest percentage of consistently occupied territories (50%). The Canadian Breaks had the lowest density (3.25/1000 $mi^2$), but contained the largest amount of area without suitable nest substrates. An entirely aerial survey likely resulted in an undercount of occupying but non-nesting territorial pairs. Young fledged/known territory approximated the 0.50/occupied territory deemed necessary for a stable population. Federal and State agencies now have a reasonable population estimate for the region, and also have known territory locations with which to evaluate future proposed windfarms.

## FERRUGINOUS HAWK DIET AND NESTING BEHAVIOR IN TWO GRASSLANDS IN NEW MEXICO WHICH DIFFER IN ANTHROPOGENIC ALTERATION

WILLIAM H. KEELEY, MARC J. BECHARD, Dept of Biology, Boise State University, Boise, ID 83725, and GAIL GARBER, Hawks Aloft, Inc., PO Box 10028, Albuquerque, NM 87184

Human-related development and its concomitant disturbance are a major cause of Ferruginous Hawk (*Buteo regalis*) reproductive failures, especially in times of low prey abundance when the female may be forced to leave the nest to provision her young. During 2004-2005, we studied Ferruginous Hawk (FEHA) diet and nesting behavior using regurgitated pellets, prey remains, and video monitoring in two grasslands in New Mexico which differ in anthropogenic alteration and primary prey composition. Using pellet analysis and controlling for number of young, FEHA provided 50% more biomass to nests in the exurban Estancia Valley (EV) than in the relatively undeveloped Plains of San Agustin (PSA). Importantly, Gunnison's Prairie Dog (*Cynomys gunnisoni*, GPD), represented a greater portion of diet to EV nests ($n$ = 29) than PSA nests ($n$ = 14) ($P \leq 0.007$). Video data revealed EV adults supplied their young with 87% more biomass per delivery than PSA adults but the latter delivered 25% more items per hour. Statewide, female time at nest was positively correlated with biomass delivered by males ($P < 0.05$) and negatively correlated with age of young ($P < 0.0001$). Females at EV video-monitored nests ($n$ = 3) spent 50% more time at the nest than PSA females ($n$ = 3), and PSA females exhibited a more prolonged response to controlled disturbance associated with refreshing videotapes ($P < 0.05$). GPD represent a consistent prey source which may offer minimal predatory search time, thus affecting various facets of parental care and potentially increasing FEHA tolerance of anthropogenic disturbances in the EV. Future conservation efforts should focus on preserving intact GPD colonies.

## NESTING COOPER'S HAWKS IN ANIMAS PARK, FARMINGTON, NEW MEXICO, SPRING AND SUMMER 2007

TIM REEVES, Computer Science and Information Technology Dept., San Juan College, 4601 College Blvd., Farmington, NM 87402

A Cooper's Hawk nest was monitored by numerous observers in Animas Park during the spring and summer of 2007. I documented the nesting season of this pair of birds by photographing them throughout the period. On March 13 a pair consisting of an adult male and an immature female was observed and heard calling in the territory where the nest would be built. The first observation of the female incubating was April 26. On June 10 the female was first seen feeding nestlings. The first observation of young birds outside of the nest was on July 6. On July 8 two young birds were seen flying from the nest tree. The last time the female was seen bringing food to the nest was July 12. The first long distance flight of 100 m by two young birds occurred on July 13. On July 16 young birds were seen perching in an old abandoned Sharp-shinned Hawk nest about 12 m from their nest tree. They were later observed in this nest eating prey that they caught. On August 6 all three young were observed about 200 m from the nest tree and were believed by this time to have abandoned their nest area. I estimate that this family of hawks ate 360 birds in two months.

## 1980-2008 AVIAN CHOLERA OUTBREAKS AT BOSQUE DEL APACHE NATIONAL WILDLIFE REFUGE

COLIN K. LEE, Bosque del Apache National Wildlife Refuge, PO Box 1246, Socorro, NM 87801

Bosque del Apache National Wildlife Refuge had its worst avian cholera event on record during the winter of 2007-2008, with 3,852 known waterbird deaths and an estimated 7,500 total waterbird deaths. Once cholera was determined on the refuge, Refuge staff took measures to reduce spread of the bacteria by increasing water flow-through in the wetland impoundments and removing carcasses from the wetlands each day. Cholera mortalities generally increased from December through late-January. Daily mortalities were not related to numbers of light geese

present on the Refuge, which were fairly stable during that time, but appeared to be brought about by cold weather events ($r^2$ = 0.0992, $P$ = 0.0053). However, the severity of large outbreak events between 1982 and 2008 appeared to be strongly correlated with both the peak number of light geese wintering in the Middle Rio Grande Valley (MRGV; $r^2$ = 0.3180, $P$ = 0.0018) and seasonal low temperatures ($r^2$ = 0.1649, $P$ = 0.0320). Because avian cholera events appear to be exasperated by high populations of wintering light geese and extreme cold weather events, Refuge personnel will continue to work with the New Mexico Department of Game and Fish and other agencies to improve methods of dispersing the winter light goose population among State and Federal refuges and ensure better water circulation in wetlands to reduce the severity of cholera outbreaks once they become established.

## POSTER PRESENTATION

### DETERMINATION OF YEARLY BREEDING SITE FIDELITY OF DUSKY FLYCATCHERS

JAMES R. TRAVIS and JASMINE TRAVIS, 9420 Avenida de la Luna NE, Albuquerque, NM 87111

I recorded dawn songs from each territory of a local population of Dusky Flycatchers. The Dusky Flycatcher song is a set of three distinctive syllables sung in species specific order. The syllables of different individuals differ in small, but definitive ways. By multivariable statistical analysis of data from sonograms I am able to track annual appearance of individuals. Sonograms showing the distinctive features and the results will be shown. My reasons for making this change are that I have found that the precision needed for significant findings in the case of the Hammond's Flycatcher was unattainable primarily as a result of background water noise from the streams where the flycatchers were recorded. Also, I have all of the Dusky Flycatcher data assembled in a similar fashion to the Hammond's Flycatcher data.

## NMOS 46TH ANNUAL MEETING SUMMARY

The New Mexico Ornithological Society held its annual meeting on Saturday, 12 April 2008 at the Vagabond Inn Executive in Albuquerque, with an associated field trip on13 April. The Annual Meeting was held in conjunction with a jointly sponsored New Mexico Department of Game and Fish/NMOS Gray Vireo Symposium.

Registration began at 8:30 a.m. Total registration for the Annual Meeting was 81 people. The business meeting was called to order at 9:00 a.m. by President Roland Shook. Jerry Oldenettel provided a Treasurer's Report, a summary of which was published in the last issue of the NMOS Bulletin—36(1):10. A series of reports regarding NMOS activities over the last year were presented, as follows.

Mary Alice Root gave an update on the *NMOS Field Notes* Database.

**NMOS Website.**—Janet Ruth gave members the new website address (www.nmbirds.org) and described resources and information available on the website: Ryan Beaulieu Research Grant, Florence M Bailey Lifetime Achievement Award, Annual Meeting, Publications and Sales, Approved NMOS Board Meeting minutes, scanned past issues of the *NMOS Bulletin* and *NMOS Field Notes*, a link to the *NMOS Field Notes* Database, and numerous other links.

**Rare Bird Alert**.—The Rare Bird Alert was started by Pat Snider and Christopher Rustay (who donated the first phone) in 1991 and was called the Rare Bird Report. It is updated on Mondays and Thursdays and is available on the NMOS website. It is also distributed to the AZ-NM birding e-mail list (BIRDWG05).

***NMOS Bulletin.***—Rob Doster, editor, has two papers in review/revision. He encouraged members to submit more papers/significant observations; he is working on a set of instructions for authors. He is aiming for a June publication date for the next issue.

***NMOS Field Notes.***—Sandy Williams and Bill Howe, editors, have succeeded in getting the publication as current as *North American Birds*.

**Bird Records Committee.**—Sandy Williams provided an explanation of the process for submitting records and the process that the BRC uses to review these submissions. Three more species (Iceland Gull, Green Kingfisher, and Black-capped Gnatcatcher) have been added to the New Mexico state list during the last round of reviews, for a total of 520 species for the state. One or two more species may be added after the next round of reviews.

There was no Old Business. New Business was as follows:

**Election of NMOS Board.**—The Nominating Committee consisted of Sandy Williams (chair), Bill Howe, and Dave Mehlman. The following slate of officers was presented: Roland Shook (President), Dave Krueper (Vice President), Jerry Oldenettel (Treasurer), Nancy Cox (Secretary), Janet Ruth (Director), Martha Desmond (Director), and Chuck Hayes (Director). The slate was approved.

**Ryan Beaulieu Research Grant.**—The Research Grant Committee announced a $1000 award to David Griffin (Griffin Biological Services) for additional work in the Big Burro Mountains during spring migration and summer breeding season (David received a 2007 Ryan Beaulieu Research Grant for winter work in the Big Burros).

It was announced that the next NMOS Annual Meeting will be held in Los Alamos in the spring of 2009. The next meeting of the NMOS Board will be in August. The business meeting was adjourned at 9:40 a.m.

The annual meeting continued with a New Mexico Department of Game and Fish/NMOS jointly sponsored Gray Vireo Symposium from 9:45 a.m. to 12:00 p.m. followed in the afternoon by an NMOS Science Session (1:00 – 5:30 p.m.) held concurrently with a final Gray Vireo Symposium Round Table discussion (1:00 – 3:00 p.m.). Abstracts for these presentations appear elsewhere in this issue of the *Bulletin*. The

New Mexico Department of Game and Fish plans to produce a more detailed publication from the Gray Vireo Symposium.

The evening banquet was also held at the Vagabond Inn Executive at 6:30 p.m., followed by a keynote presentation by Dr. J. David Ligon, Professor Emeritus, University of New Mexico. Dr. Ligon gave a illustrated retrospective on his research career entitled "Cooperation and Cooperative Breeding: Woodpeckers, Woodhoopoes and Jays", with a focus on his work with Acorn Woodpeckers, Green Woodhoopoes, and Pinyon Jays.

A field trip on Sunday, 13 April visited Gray Vireo habitat and presented Gray Vireo management issues at Kirtland Air Force Base.

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## NMOS 47th ANNUAL MEETING ANNOUNCEMENT

25 April 2009
Fuller Lodge
2132 Central Avenue
Los Alamos, New Mexico

The 47th Annual Meeting of the New Mexico Ornithological Society will be held on Saturday, 25 April 2009 at Fuller Lodge, located at 2132 Central Avenue in the historic district of Los Alamos. Further details on the meeting, including the Call for Papers and registrations information, will appear in upcoming issues of the *NMOS Bulletin*. Details will also be posted on the NMOS web site, www.nmbirds.org, as they become available.

* * *

This issue of the *NMOS Bulletin* published 30 June 2008.

## 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.

**www.nmbirds.org**

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