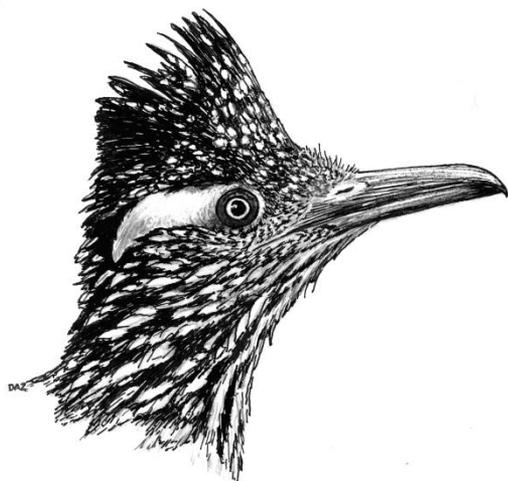


# NMOS BULLETIN



New Mexico  
Ornithological  
Society

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## NEST SITE USE AND DIET OF BARN OWLS IN NORTHEASTERN NEW MEXICO

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**Abstract**—The Barn Owl (*Tyto alba*) inhabits open habitats throughout much of New Mexico, but its conservation status and ecology remain poorly known due to its nocturnal and secretive nature. From May–July 2009 and 2010, we located Barn Owl nesting sites in a 16,000 ha shortgrass prairie study area in Colfax County, New Mexico and collected pellets at these sites in an effort to describe nest site use and diet of this owl population. Over both years, we located nine nest sites and one roost site. Of the nine nest sites, six were in natural holes or excavated burrows in vertical banks, while three were in human-made structures. Although most nesting sites were widely dispersed, in 2009 we found three active nests clustered within a 200 m radius. Over both years, we collected and dissected 823 pellets. Overall, we identified 1364 individual vertebrate prey items from the pellets, with mammals representing ~98.5% of prey items. The remaining prey items identified included birds, fish, and invertebrates. Although, we identified 12 genera of mammals, no single mammalian prey type dominated at all nests. Further, arid, upland species (e.g., kangaroo rats (*Dipodomys*), pocket gophers (*Thomomys*), pocket mice (*Perognathus* and *Chaetodipus*), and grasshopper mice (*Onychomys*)) were more abundant in the diet from some nest sites whereas voles (*Microtus*) and habitat generalists (deer mice (*Peromyscus*) and harvest mice (*Reithrodontomys*)), were more abundant at others. Overall, our results described a diverse, small mammal community, with variation in diet among nest sites likely reflecting differences in habitat type availability within the foraging ranges of the owl pairs studied.

The Barn Owl (*Tyto alba*) is a widespread species found primarily in open habitats of low to middle elevations throughout New Mexico, only absent from the state's mountain ranges (Cartron and Cox 2010). Due to its nocturnal and secretive nature, the conservation status of the Barn Owl is currently unknown within the state. However, this species can be locally common in open habitats of New Mexico, especially those with appropriate natural or human-created nesting and roosting sites (Salter 1991, Cartron and Cox 2010).

The Barn Owl is an almost exclusively nocturnal hunter that specializes on small mammal prey (Marti et al. 2005). Its diet has been well studied in many parts of its range (Clark and Bunck 1991, Marti et al. 2005). However, we could locate only three reports of Barn Owl diet in New Mexico, all in the central or southern parts of the

state; Pache (1981) along Tijeras Arroyo near Albuquerque, Jorgenson et al. (1998) in the foothills of the Sacramento Mountains, and Cartron and Cox (2010) on Kirtland Air Force Base.

During summer 2009 and 2010, we searched for Barn Owl nesting sites near riparian habitats on Vermejo Park Ranch, Colfax County, and collected pellets at these sites in an effort to determine if Barn Owl pellets could be used as a method to study a probable population of the endangered New Mexico Meadow Jumping Mouse (*Zapus hudsonius luteus*) (Goguen 2016). Although this effort proved ineffective for studying jumping mice, we acquired a large amount of information about Barn Owl nesting ecology and diet. The objective of this paper is to describe nest site use and diet of a population of Barn Owls in northeastern New Mexico.

### STUDY SITE

Our study was conducted in an ~16,000 ha study area on the 233,603 ha Vermejo Park Ranch in Colfax County, northeastern New Mexico. The study area was located just east of the foothills of the Sangre de Cristo Mountains at 1800-2100 m elevation, and was loosely bounded by route US-64 to the west, I-25 to the east, NM-58 to the south, and the Vermejo River to the north. The study area consisted primarily of shortgrass prairie dominated by perennial grasses, particularly blue grama (*Bouteloua gracilis*), interspersed with other grasses, forbs, shrubs, and cacti. The dominant large grazer on the site was the American Bison (*Bison bison*) in a managed herd. Black-tailed Prairie Dogs (*Cynomys ludovicianus*) were also abundant with colonies covering >3000 ha of prairie. The prairie habitat was transected by four stream systems (Ponil Creek, Cerrososo Creek, Van Bremmer Creek, and Vermejo River) supporting narrow strips of woody and herbaceous riparian habitat. The woody component of this habitat consisted of scattered Rio Grande cottonwood (*Populus deltoides* var. *wislizenii*) trees, with dense patches of willow (*Salix* spp.) and salt cedar (*Tamarix chinensis*). The herbaceous component consisted of a variety of forbs, grasses, and sedges. See Goguen (2012) for additional information about the plant and animal communities of the study area.

### METHODS

Starting in mid-May 2009, we searched for Barn Owl nesting or roosting sites in stream banks and adjacent arroyos, and at potential human-made sites along three streams in the pasture, Cerrososo Creek, Van Bremmer Creek, and the Vermejo River. Ponil Creek was not searched as it lacked the steep-walled banks that could potentially support Barn Owl nesting. Upon locating a potential nest or roost site, we recorded evidence of use (e.g., flushing of an adult, eggshells below the nest, noise of young) and collected all fresh pellets beneath. During the remainder of the field season (through early July) we re-visited each owl site every two to four weeks to collect additional new pellets. During 2010, we re-visited each known owl site and searched for new sites,

recording evidence of owl use and collecting pellets at active sites using the same methodology as in 2009.

Pellets were soaked in water, and pulled apart with forceps to identify prey. Prey items were separated by taxon. We identified mammalian remains to the level of the genus using skull guides and keys (Jones and Manning 1992, Elbroch 2006). In some cases, we were able to infer identification to level of the species when only one species of an identified genus was distributed in the study region. To avoid double-counting, only the total number of crania for each species was quantified in each pellet, although mandibles were regularly used to aid in identification. We quantified bird remains based on the number of crania detected, but did not attempt further identification. We identified fish remains to family based on scales (Daniels 1996). Insect remains were simply identified to order based on the larger, easily identified parts (e.g. grasshopper legs) that were collected.

## **RESULTS**

### **BARN OWL NESTING SITE DESCRIPTIONS**

In 2009, we located ten nesting or roosting sites that contained at least one adult owl (Table 1; Hereafter, we refer to specific owl sites by the “Site ID” provided in this table). Of these ten sites, nine were either confirmed or assumed to be nesting sites based on the presence of eggs or eggshells, noisy young, and/or a pair of adults. The remaining site (VBC1) appeared to be a roosting site occupied by a single owl. Further, this shallow burrow was low enough to look into, and there was never evidence of eggs or young. Of the nine nest sites, six were in natural holes or excavated burrows in vertical stream banks or arroyos (Fig. 1). The three remaining nests were all associated with human-made structures; one in a deserted railroad boxcar, one in the attic of a deserted farm house, and one under a railroad bridge (Table 1; Fig. 1). We did not detect any new owl sites in 2010. However, three of the burrow sites (VBC1, VR1, VR2) from 2009 had collapsed and were no longer available as nest sites.

Most Barn Owl nesting sites were widely dispersed with at least 2 km between nests. However, we also identified an area where nests were clustered in close proximity, particularly in 2009 (Fig. 2). In 2009, three active nests (BC, WH, and VR2) were located all within a 200 m radius. A fourth active nest (VR1) was also discovered about 700 m south of this cluster. In 2010, both of the nests in the human-made structures (WH and BC) were still active, but the burrow nests of VR1 and VR2 had both collapsed.

### **BARN OWL DIET ANALYSIS**

In 2009, we collected 466 pellets from seven nests and one roost site (mean = 58.3 pellets/site; See Table 1 for number of pellets collected at each site). We could not collect pellets at VR3 or VR4 as these nests were in cliff faces that extended over the river. In 2010, we collected 357 pellets from only five nests (mean = 71.4 pellets/nest), as three of the burrow sites from 2009 had collapsed.

Overall, we identified 1364 individual vertebrate prey items from the pellets (820 in 2009, 544 in 2010; Table 2). Mammals were the dominant prey at all nests; over both years, we identified 1344 individual mammalian prey items from 12 genera (Table 2). Birds represented only a small proportion of the total prey items (<2%) in both years (Table 2). The only other vertebrate prey identified were fish (*Cyprinodontidae*) remains present in one pellet. Invertebrate prey items were detected in only four pellets; we found shell fragments from large beetles (*Coleoptera*) in two pellets, the hind legs of a large grasshopper (*Orthoptera*) in one pellet, and crayfish (*Cambaridae*) shell fragments in one pellet.

No one mammalian prey type dominated the diet, either for the entire sampled population (Table 2), or for any individual nest (Fig. 3). Among the seven nests sampled in 2009, there was considerable variation in the relative importance of the main mammalian prey taxa (Fig. 3). For example, at three nests (BC, WH, VR2), arid upland mammal species, like kangaroo rats (*Dipodomys*), pocket gophers (*Thomomys*), pocket mice (*Perognathus* and *Chaetodipus*), and grasshopper mice (*Onychomys*), made up the majority (56-71%) of the diet. In contrast, at the Cerrososo Creek nests (CC1 and CC2), voles (*Microtus*) and habitat generalists, deer mice (*Peromyscus*) and harvest mice (*Reithrodontomys*), made up the majority (63-64%).

## DISCUSSION

### BARN OWL NESTING SITES

Barn owls in our study area used a variety of human-made and natural nesting sites. Most nests were located in either natural crevices or burrows in steep river banks or arroyos. Given the Barn Owl's preference for open habitats that often lack large trees, its flexibility in nest site use is well documented (Cartron and Cox 2010). In prairie or desert habitats of the western United States, steep earthen banks appear to be a common location for Barn Owl nesting sites (Martin 1973, Millsap and Millsap 1987, Jorgenson et al. 1998). In two cases in our study (CC2 and VR2), the nest site used appeared to be a natural crevice already suited for nesting. In the other cases, however, it is likely that the owls, at least to some degree, excavated their own nesting burrows, as has been observed in other locations (Martin 1973, Millsap and Millsap 1987).

Given the territorial nature of most birds, we were surprised by the presence of three nests in close proximity in 2009. Barn Owls, however, appear to defend only the immediate area around the nest (Bunn et al. 1982). In fact, it is not uncommon for two or more pairs to nest in close proximity and to share overlapping foraging ranges (Smith and Marti 1976, Salter 1991). This apparent tolerance of conspecifics in close quarters likely relates to the rarity of high quality nesting sites and, perhaps, the abundance of small mammal prey in the open habitats that this species prefers. In the Chihuahuan Desert of southern New Mexico large groups of Barn Owls are often found in close proximity sharing abandoned mineshafts for nesting and roosting (Salter 1991). Prey abundance near these sites is not appreciably greater than other sites in the Chihuahuan desert. Instead, owls appear to be congregated simply because of the presence of high quality nesting and roosting sites (Salter 1991).

**BARN OWL DIET**

Similar to most studies of Barn Owl diet across its' range, small mammals were the most common prey, comprising ~98.5% of prey items identified. All of the main mammalian taxa that we encountered have also been commonly observed as prey in other western Barn Owl populations (e.g., Marti 1969, Pache 1981, Franzeb and Laudenslayer 1982, Gubanyi et al. 1992, Jorgenson et al. 1998), and even the rare prey items (e.g., bat, fish, crayfish, and insects) have been documented occasionally in other diet studies (Marti et al. 2005). In many regions of the United States, a single mammalian prey taxon often dominates the diet of local Barn Owls (e.g., voles in the east or north, Cotton Mice (*Sigmodon hispidus*) in the south, or pocket mice and kangaroo rats in the desert Southwest; reviewed by Marti et al. (2005)). This was not the case in our study as five different taxa each made up at least 10% of the total prey items captured, with the most frequent prey item overall being Botta's Pocket Gopher (*Thomomys bottae*) at only 24%. Further, even at individual nests, it was rare for a single prey type to make up even one-third of the prey items taken (Fig. 3). There was considerable variation in prey composition among nests. For example, the proportion of kangaroo rat prey items ranged from 47% at VR2 to 9% at CC2, while the proportion of vole prey items ranged from 31% at CC2 to 3% at WH. This variation likely reflects differences in habitat type availability within the foraging ranges of the different owl pairs. The Cerrososo Creek nests, for example, were closer to extensive areas of moist, riparian habitat than the other nests in our study. This variation probably also explains the apparent differences in prey species importance between 2009 and 2010. In 2010, we sampled fewer nests with most pellets (61%) coming from just two nests (WH and BC). Both of these owl pairs had diets dominated by arid, upland prey species. Given that prey selection in Barn Owls appears to be related to the relative vulnerability of the different potential prey species (Marti et al. 2005), it may simply be that the small mammal community of our study area is relatively diverse with no single species dominating in abundance or ease of capture.

**Table 1.** Descriptions of Barn Owl (*Tyto alba*) nesting and roosting sites located in a shortgrass prairie study area on Vermejo Park Ranch, Colfax County, New Mexico 2009 and 2010 (Table 1 continued on next page).

Site ID	Nearest stream	Nest/Roost site description	# of pellets collected	
			2009	2010
CC1	Cerrososo	Nest in burrow 4 m up a 7 m vertical stream bank. Overlooked broad riparian zone with areas of dense herbaceous vegetation under salt cedar ( <i>Tamarix chinensis</i> ) and willow ( <i>Salix</i> spp.) shrubs.	62	37

Site ID	Nearest stream	Nest/Roost site description	# of pellets collected	
			2009	2010
CC2	Cerrososo	Nest in natural, horizontal crevice 3.5 m up a vertical stream bank. Overlooked narrow, dense willow strip enclosing the creek.	73	21
RR	Van Bremmer	Nest 5.5 m up under a railroad bridge directly over creek. Owls re-used a large, stick nest, probably from Chihuahuan Ravens ( <i>Corvus cryptoleucus</i> ). Bridge overlooked broad, sparse, willow riparian zone.	34	83
VBC 1	Van Bremmer	Roost in shallow burrow 2.5 m up a 4.5 m stream bank. Overlooked dry, weedy slope running down to narrow riparian zone along creek with scattered cattail ( <i>Typha</i> spp.).	26	0 <sup>a</sup>
VR1	Vermejo	Nest in burrow 4 m up a 5 m arroyo bank that stood adjacent to the Vermejo River. Surrounded mainly by shortgrass prairie with little riparian vegetation.	49	0 <sup>a</sup>
VR2	Vermejo	Nest in vertical crevice 2.5 m up a 5 m vertical stream bank. Overlooked wide riparian area dominated by sedges and grasses.	61	0 <sup>a</sup>
VR3	Vermejo	Nest in burrow 7 m up an 11 m vertical stream bank that overhangs the Vermejo River. Broad, shrub-dominated riparian zone ran along opposite side of river.	0 <sup>b</sup>	0 <sup>b</sup>
VR4	Vermejo	Nest in burrow 6 m up a 9 m vertical stream bank that overhangs the Vermejo River. Broad, shrub-dominated riparian zone ran along opposite side of river.	0 <sup>b</sup>	0 <sup>b</sup>
WH	Vermejo	Nest located in attic of abandoned farm house 240 m from Vermejo River. House surrounded entirely by shortgrass prairie.	47	111
BC	Vermejo	Nest located behind wall panel inside old, wooden boxcar 170 m from Vermejo River. Boxcar surrounded by shortgrass prairie, and lay at the edge of a prairie dog colony.	114	105

<sup>a</sup> Burrow collapsed and unoccupied in 2010.

<sup>b</sup> Burrow directly over river; pellets could not be collected.

**Table 2.** Vertebrate remains found in 823 Barn Owl (*Tyto alba*) pellets collected at nest and roost sites between May and July 2009 (466 pellets) and 2010 (357 pellets) on Vermejo Park Ranch, Colfax County, New Mexico. Numbers in the table are the proportion of the total individual vertebrate prey items (*n*) that were of each particular taxon.

<b>Taxon</b>	<b>2009 <i>n</i> = 820</b>	<b>2010 <i>n</i> = 544</b>	<b>Total <i>n</i> = 1364</b>	<b>Broad habitat association<sup>a</sup></b>
Shrews ( <i>Sorex</i> spp.)	0.006	0.015	0.010	Mainly moist habitats
Big Brown Bat ( <i>Eptesicus fuscus</i> )	0.001	0	0.001	Aerial
Desert Cottontail (juveniles) ( <i>Sylvilagus audubonii</i> )	0.011	0.006	0.009	Dry uplands
Ord's Kangaroo Rat ( <i>Dipodomys ordii</i> )	0.189	0.215	0.199	Dry uplands
Pocket Mice ( <i>Perognathus</i> spp. and <i>Chaetodipus hispidus</i> )	0.063	0.064	0.064	Dry uplands
Botta's Pocket Gopher ( <i>Thomomys bottae</i> )	0.194	0.320	0.244	Dry, sandy uplands
Western Harvest Mouse ( <i>Reithrodontomys megalotis</i> )	0.210	0.149	0.185	Generalist
Deer mice ( <i>Peromyscus</i> spp.)	0.123	0.077	0.105	Generalist
Wood rats ( <i>Neotoma</i> spp.)	0.005	0.017	0.010	Grasslands to woodlands
Voles ( <i>Microtus</i> spp.)	0.132	0.066	0.106	Moist to dry, grassy habitats
Northern Grasshopper Mouse ( <i>Onychomys leucogaster</i> )	0.052	0.055	0.054	Dry uplands
Birds	0.013	0.017	0.015	
Fish (Cyprinodontidae)	0	Present <sup>b</sup>	----	

<sup>a</sup> Broad habitat associations for mammal taxa are from Findley (1987).

<sup>b</sup> Scales and bones (but no crania) from an unknown number of fish were found in a single pellet in 2010

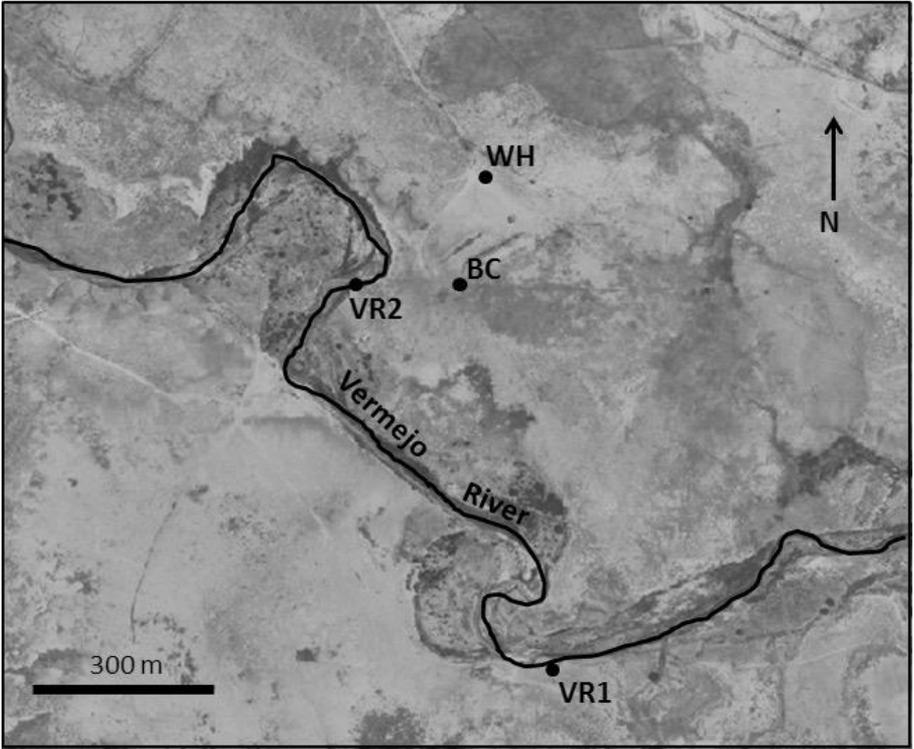
(A)



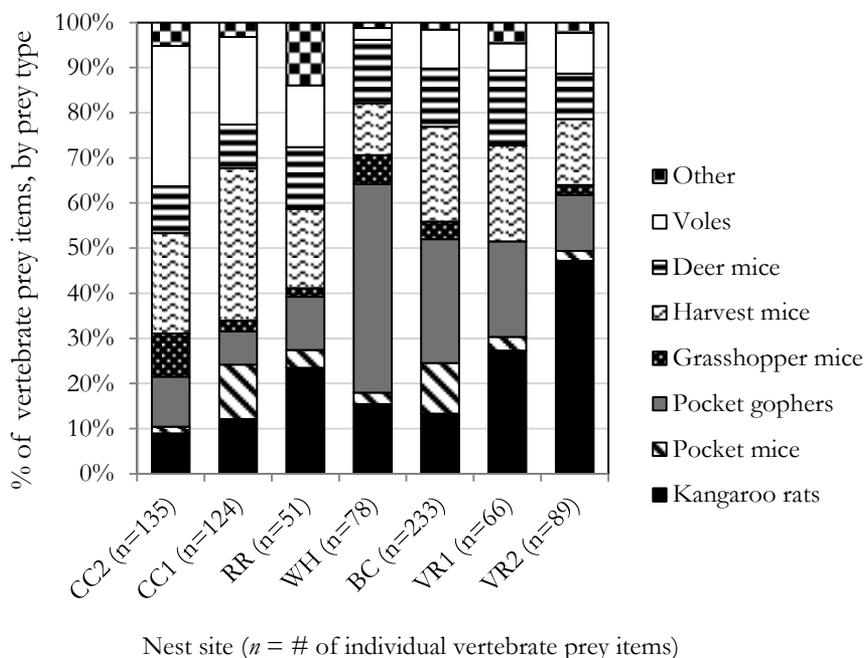
**Figure 1A.** Examples of Barn Owl (*Tyto alba*) nesting sites on Vermejo Park Ranch, June 2009: (A) Nest VR2 in bank in foreground (arrow).



**Figure 1B.** Examples of Barn Owl (*Tyto alba*) nesting sites on Vermejo Park Ranch, June 2009: (B) Nest CC1 (arrow) in bank of Cerrososo Creek.



**Figure 2.** Relative location of a cluster of Barn Owl (*Tyto alba*) nests located along the Vermejo River on Vermejo Park Ranch, Colfax County, New Mexico, 2009. See Table 1 for nest site descriptions.



**Figure 3.** Comparison of prey composition based on pellets collected at 7 Barn Owl (*Tyto alba*) nest sites on Vermejo Park Ranch, May-July 2009. See Table 1 for nest site descriptions and Table 2 for scientific names of prey taxa.

### ACKNOWLEDGMENTS

We thank the management of Vermejo Park Ranch for allowing us access to the property, and thank Lou Albanese, Bob Ward, and Lisa Goguen for their assistance with pellet collection or dissection. We also thank two anonymous reviewers for their comments on an earlier draft. Funding and support for this research was provided by Faculty Research Development Grants from the Pennsylvania State University, Hazleton.

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**NEW MEXICO ORNITHOLOGICAL SOCIETY  
54<sup>RD</sup> ANNUAL MEETING  
9 APRIL 2016**

The New Mexico Ornithological Society (NMOS) will hold its 54<sup>th</sup> Annual Meeting on Saturday, 9 April 2016, at the Crowne Plaza Hotel. This meeting will include an NMOS business meeting, an NMOS general science session, and an evening banquet and keynote speaker. This meeting will help to celebrate the last 100 years of bird conservation and research in New Mexico, featuring presentations on the migratory bird treaty centennial, ornithological highlights since the time when Florence M. Bailey began work on the Birds of New Mexico, and extensions of range distributions from the historical period to the present.

Meeting participants are encouraged to stay on site at the Crowne Plaza, which has established a special discounted room rate of \$79/night for NMOS meeting attendees. Reservations for rooms must be made by March 18, 2016 to receive our special rate. Registration is required for all events. There will be a minimal registration fee (\$10 – \$25 for pre-registration; \$20 – \$35 for on-site registration) for the Annual Meeting to cover meeting expenses (meeting facility, program/abstract booklet and refreshments at the breaks). The abstracts for presentations at the NMOS General Science Session will be distributed at the meeting and will be published in the NMOS Bulletin.

The NMOS evening banquet and keynote address will also be held at the Crowne Plaza. The banquet will be a buffet dinner with a choice of entrees, including vegan and gluten-free options. Other dietary restrictions should be noted on the registration form. The price is \$30 (note that this includes tax and gratuity) and banquet reservations are available with pre-registration only. Payment for meeting registration and the banquet are to be made through NMOS using the registration form and process below.

NMOS will be offering an organized, guided field trip (no charge) on Sunday morning following the annual meeting. The field trip will be to the Valle de Oro National Wildlife Refuge, and will include access to some of the adjacent Rio Grande bosque.

Please save a copy of the Word version of the registration form to your computer and fill out the form. Email the form to Ashli Gorbet at [antelope916@hotmail.com](mailto:antelope916@hotmail.com) AND print a hard copy and mail with payment according to instructions below.

**NMOS ANNUAL MEETING  
REGISTRATION FORM**

**REGISTRATION and FEES (payable to NMOS) ARE DUE BY MARCH 25!**

Pre-registration fee levels and banquet reservations are only available if registration and payment are received by due date

# of Meeting Pre-Registrations @ \$25 \_\_\_\_\_; # of Student Meeting Pre-Registrations @ \$10 \_\_\_\_\_

# of Reservations for Saturday Banquet @ \$30 \_\_\_\_\_

To assist in planning, please specify any dietary limitations:

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TOTAL AMOUNT ENCLOSED \_\_\_\_\_

Please indicate your interest in the field trip on Sunday # \_\_\_\_\_

NAME(S): \_\_\_\_\_

ADDRESS: \_\_\_\_\_

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E-mail: \_\_\_\_\_

**PLEASE provide your email address.** It will enable us to contact you to confirm registration or with last-minute information (e.g., emergency meeting cancellation, information about field trips, etc.). All registrations will be acknowledged by email within a week of receipt. If no acknowledgement is received, it is your responsibility to follow up with Ashli to ensure registration.

Email your Registration Form to: antelope916@hotmail.com

ALSO Mail Payment & Registration Form to:

Ashli Gorbet  
7204 Oralee St. NE  
Albuquerque, NM 87109

Checks should be made out to "NMOS".

**NMOS 54<sup>th</sup> ANNUAL MEETING  
CALL FOR PAPERS  
NMOS GENERAL SCIENCE SESSION**

Oral presentations for the NMOS General Science Session will be allotted 15 minutes, with an additional five-minute period for questions. Papers may range from technical reports of original research to more general presentations addressing science-related questions. Poster presentations are also encouraged; size should be no larger than 36" H X 48" W.

Please submit abstracts for the General Science Session containing the following:

- TITLE (in all capital letters) of no more than 20 words
- Names and addresses of author(s) in the following form:

Bear, V. L. and C. Finch  
Dept. of Ornithology  
University of Central New Mexico  
Birdsville, NM 88666

- Body of abstract as one single-spaced paragraph, not to exceed 250 words.
- Include E-mail address and/or phone number of presenting author.

Please email your abstract, including the entire abstract in the body of the email, **NOT** as an attachment. This will prevent any problems with incompatible word processing formats. The deadline for the submission of abstracts will be 15 March 2016. Please email your abstract to Martha Desmond at [mdesmond@nmsu.edu](mailto:mdesmond@nmsu.edu) AND Kathy Granillo at [kathy\\_granillo@fvs.gov](mailto:kathy_granillo@fvs.gov).

All abstract submissions will be acknowledged within a week of receipt. If no acknowledgement is received, it is the submitter's responsibility to follow up with the Session Chair to ensure consideration. The abstracts for the NMOS General Science Session will be distributed at the meeting and will be published in the ***NMOS Bulletin***.

\* \* \*

## NMOS RESEARCH GRANTS

NMOS offers two research grants each year to help support research on New Mexico birds. The **Ryan Beaulieu Research Grant** for \$1000 is presented in memory of Ryan Beaulieu. Following the wishes of Ryan's family, this grant will support research projects that do not involve the collection of birds. For more information about Ryan Beaulieu and his bird research interests, see the *Audubon* magazine article, *Band of Brothers* about Ryan and his friends Raymond VanBuskirk and Michael Hilchey and their Rosy-Finch project. The **NMOS Research Grant** is also available for \$1000.

The criteria for both grants are:

- The grant money must be spent while conducting research on birds in New Mexico;
- The recipient must either present a paper based on the research at an annual NMOS Meeting or submit an article based on the research to the NMOS Bulletin; and
- Preference will be given to student applicants.

A short research proposal (2 pages maximum) must be submitted describing the nature of the project and how the allocated funds are to be spent (e.g., on gas, tape recording, specific equipment, etc.). Each proposal should state clearly whether the project does or does not involve collection of birds. Each proposal should include two letters of reference, one of which should be from a graduate advisor if the applicant is a graduate student. References should comment on the applicant's commitment to New Mexico ornithology and ability to design and carry out creative, independent research. All proposals will be evaluated together and up to two proposals will be awarded grants. The Ryan Beaulieu Research Grant will fund a project that does not involve the collection of birds; the NMOS research grant is open to all projects that meet the criteria above.

Please submit your electronic proposal with "NMOS Grant" in the subject line to: Matt Baumann mb687@yahoo.com.

**The deadline for 2016 Research Grant proposals is 15 March 2016.** All applications will be acknowledged within a week of proposal receipt. If no acknowledgement is received, it is the applicant's responsibility to follow up with their submission to ensure consideration. Grant awards will be announced at the NMOS Annual Meeting (9 April 2016, Albuquerque).

**New Mexico Ornithological Society**  
**Financial Statement**  
as of 31 December, 2015

Balance as of 12/31/14:

2014 Account Balance	\$29,298.20
Petty Cash	32.29
Total	\$29,330.49

Net Transactions from 1/1/15 through 12/31/15:

Dues	2020.00
NM Bird Finding Guide Sales	864.00
NM Field Checklist Sales	30.80
Annual meeting	-751.24
Donations and deposits	475.00
Postage and shipping	-671.66
Miscellaneous	-62.00
Grants	-3,000.00
Printing	-989.48
Database/Bird Finding Guide	-500.00
Storage Unit Rent	-1152.00
Interest	5.21
Total Transactions	-3,731.37

Total 2015 beginning balance plus transactions	\$25,599.12
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Balance as of 12/31/15:

Checking Account Balance	2,094.61
Savings Account Balance	23,472.22
Petty Cash Balance	32.29
Undeposited Checks	0
12/31/15 balance	\$25,599.12

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

Zimmerman print sales: 175.00

Date: 20 January, 2016

Submitted by:

Jerry R. Oldenettel, Treasurer

## **REVIEWERS FOR NMOS BULLETIN VOLUME 43**

The New Mexico Ornithological Society and the Editor of the *NMOS Bulletin* thank the following individuals who served as reviewers for manuscripts that appeared in Volume 43 of the *Bulletin*:

Andy Johnson, Terry Johnson, John D. Long, Dale Stahlecker, and Blair Wolf.

\* \* \*

## **MEMBERSHIP DUES REMINDER**

Please take the opportunity now to pay your 2015 NMOS membership dues. 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

\* \* \*

# 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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New Mexico Ornithological Society  
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