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40th ANNUAL MEETING OF THE NEW MEXICO
ORNITHOLOGICAL SOCIETY

Saturday, March 9, 2002

New Mexico Museum of Natural History and Science
Albuquerque, New Mexico

Program and Abstracts



Diatryma gigantea

PROGRAM

- 8:30 am – Noon Registration at the Museum
- 9:00 am – 9:50 am Business meeting and election of officers
- 10:00 am Session I
- 10:00 am Welcome: Dr. Spencer Lucas of the New Mexico Museum of Natural History and Science
- 10:10 am Four flew over the cuckoo's nest: biology of Yellow-billed Cuckoos on the Gila River and Rio Grande, New Mexico. Stoleson, S.H., and J.F. Kelly
- 10:30 am Look out, here they come! Growth of the four corners Osprey population and its implications to New Mexico. Stahlecker, D. W.
- 10:50 am Short-term, local-scaled effects of wildfire on breeding Olive-sided Flycatchers. Meehan, T. D. and T. L. George.
- 11:10 am Genetic benefits separated from the possibility of differential maternal investment in Red Junglefowl. Parker, T. H.
- 11:30 am Using combined stable-hydrogen isotope and band encounter analyses to assess migration patterns of immature Sharp-shinned Hawks. Smith, R. B., T. D. Meehan, and B. O. Wolf
- Noon Break for lunch – View posters, etc.
- 1:00 pm Session II
- 1:00 pm Flammulated Owl migration project – 2002 update. DeLong, J. P.
- 1:20 pm Documented avian rarities in San Juan County, New Mexico. Part VI: Loons – finches 2000-2001. Reeves, T.

- 1:40 pm Influence of migrant density and weather conditions on migration patterns of Northern Saw-whet Owls. Whalen, D. M.
- 2:00 pm Black Hawk down: a report from the Gila Valley. Sadoti, G.
- 2:20 pm Retention of avian community representation in the Rio Grande corridor of New Mexico. Thompson, B. C., D. A. Leal, and R. A. Meyer.
- 2:40 pm Break, view posters, etc.
- 3:00 pm Session III
- 3:00 pm Population trends of the Mexican Spotted Owl in West-central New Mexico. Stacey, P. B. and M. Z. Peery.
- 3:20 pm Exhibit plans for *Diatryma* at the New Mexico Museum of Natural History and Science. Root, M. A. and G. Morgan.
- 3:40 pm Current status of the New Mexico Breeding Bird Atlas project: Spring 2002 update. Fair, J. M., S. M. Fettig, G. Garber, J. Place, C. Rustay, R. Salazar, J. Travis, and R. Wechsler.
- 4:00 pm Complex interactions between crossbills, conifers, insects and squirrels. Siepielski, A. M. and C. W. Benkman.
- 4:20 pm Comments from founders and long-time members. Jim Findley, Burt Lewis, Jim Travis, Bill Huey
- 5:00 pm Break
- 7:00 pm Banquet, Sandia Room, Museum of Natural History and Science
- 8:15 pm Keynote speaker: Dr. Craig Benkman
Crossbills on a landscape, or why there are so many types.

ABSTRACTS
(Talks - In order of presentation)

FOUR FLEW OVER THE CUCKOO'S NEST: BIOLOGY OF YELLOW-BILLED CUCKOOS ON THE GILA RIVER AND RIO GRANDE, NEW MEXICO

Stoleson, S.H., and J.F. Kelly, USDA Forest Service, Rocky Mountain Research Station, Albuquerque, NM 87102; H.A. Walker, Dept. of Biology, University of New Mexico, Albuquerque, NM 87131; G. Sadoti, New Mexico Natural Heritage Program, University of New Mexico, Albuquerque, NM 87131.

The Yellow-billed Cuckoo is among the most enigmatic of North American birds. The cuckoo has declined precipitously or disappeared from most western states in recent decades, primarily because of the loss of its obligate riparian habitat. Little is known about its biology, and much of what has been published is erroneous or irrelevant to New Mexico. We present information on cuckoo densities, nesting habits, and basic natural history based on continuing studies on the Rio Grande and the Gila River. Cuckoos are among the latest migrants to arrive in the spring, yet remain well into autumn. Densities vary among habitats and locations: they are relatively uncommon (approx. 1 pr /20 ha) in the mixed native/exotic Rio Grande bosque, but very common (approx. 1 pr /6 ha) in native broadleaf woodland on the Gila. Nests are placed in a variety of tree species. Exotic saltcedar and Russian olive are used extensively on the Rio Grande (6 of 6 nests), and occasionally on the Gila (2 of 52 nests). Most nests are placed near water and habitat edge. Clutch size ranges from two to five eggs. The nesting cycle is extremely short because nestlings hatch and grow very rapidly. Contrary to published information, cuckoos in NM regularly raise two broods per season, and perhaps occasionally three. Apparent rates of nest success are high: on the Gila, at least 65%, and possibly as high as 94% of nests, fledged one or more young. Survey methods and research needs will be discussed.

LOOK OUT, HERE THEY COME! GROWTH OF THE FOUR CORNERS OSPREY POPULATION AND ITS IMPLICATIONS TO NEW MEXICO

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Osprey (*Pandion haliaetus*) are poor pioneers, with males in particular strongly inclined to breed in their natal area. New Mexico had two documented nests on the Gila River prior to 1920, then a 70 year "drought". Colorado had only two verified nesting locations for Ospreys in the early 1960s. One of those was Electra Lake, in southwestern Colorado. This territory was occupied most years through the 1960s, 1970s, and 1980s and by 1995 there were at least 4 occupied territories in southwestern Colorado. Osprey that likely fledged from southwestern Colorado nests pioneered at El Vado Reservoir, New Mexico, 140 km southeast of Electra Lake, in 1989 or 1990. I began monitoring Osprey nesting in New Mexico in 1993, and have documented a gradual increase in the known breeding population from two (1992) to nine pair in 2001. In 2001 nineteen young were fledged from 8 successful Osprey nests in northern New Mexico. Between 1997, when the first nest platforms became available, and 2001, 54 Osprey have fledged. The longest held territory has been responsible for 31 fledged young over a 12 year period, or 42% of 73 total fledglings. Productivity data is generally lacking for southwestern Colorado Ospreys, who nest mostly on natural sites. The Four Corners population now includes at least 16 nesting pairs within a 200 km arc across the two states. This population would appear to be entering a strong growth period. While it took 35 years for the Four Corners population to increase from 1 (1961) to 7 pairs (1995), it took only 6 years for the number of known pairs to reach 16. A systematic aerial/ground survey is scheduled in 2002 with support from Colorado Division of Wildlife, New Mexico Department of Game and Fish, Jicarilla Game and Fish Department, San Juan National Forest and YOU. Over the next 5-10 years nesting Osprey could show up in every major drainage, and at many lakes and reservoirs in New Mexico. The Four Corners population could exceed 50 pairs by 2010.

SHORT-TERM, LOCAL-SCALED EFFECTS OF WILDFIRE ON BREEDING OLIVE SIDED FLYCATCHERS.

Meehan, T.D., and T.L. George, Wildlife Dept., Humboldt State University, Arcata, CA 95521

We conducted a comparative study to assess the effects of wildfire on breeding Olive-sided Flycatchers (*Contopus cooperi*) at small temporal (first two years after wildfire, 2000 and 2001) and spatial (local population) scales in the Trinity Alps of northwestern California. A GIS-based inquiry showed that in the first two years after a fire, flycatcher presence was most strongly predicted by the presence of edge habitat resulting from timber harvest before the fire (i.e., pre-fire characteristics, odds ratio = 8:1). Nest monitoring showed that flycatchers in burned territories had much higher rates of nest loss (71%) than those in unburned territories (20%) in both 2000 and 2001. Foraging observations and aerial arthropod sampling carried out during 2000 showed that peak foraging rates and prey abundance were roughly half as high in burned territories (1.0 attacks per minute, 1105 mg per 2m² per 40 days) as they were in unburned territories (2.1 attacks per minute, 1909 mg per 2m² per 40 days). These patterns were also apparent in 2001 (burned territories - 1.5 attacks per minute, 1751 mg per 2m² per 40 days; unburned territories - 2.5 attacks per minute, 3200 mg per 2m² per 40 days). Our data suggests that at small spatiotemporal scales, fire has negative effects on Olive-sided Flycatcher reproduction. Reduced reproduction appears to be partially related to the direct or indirect effects of food limitation in recently burned areas.

GENETIC BENEFITS SEPARATED FROM THE POSSIBILITY OF DIFFERENTIAL MATERNAL INVESTMENT IN RED JUNGLEFOWL.

Parker, T. H., Department of Biology, University of New Mexico, Albuquerque, NM. 87131

According to the good genes hypothesis, male attractiveness signals male genetic quality, and females mate with more attractive males to obtain good viability genes for their offspring. A number of studies have demonstrated a positive relationship between paternal attractiveness and offspring quality. This pattern could be due to a good genes effect, or it could be due to increased maternal investment in the offspring of more attractive males. To isolate these two possibilities, I housed females with vasectomized (sterile) males and inseminated them artificially. All

sterile and sperm donor males were in the upper or lower third of the comb-size (attractiveness) distributions. Females adjusted clutch size, but did not otherwise differentially invest in reproduction in response to their social mate's attractiveness. However, mass and comb size were higher for the male offspring of large-combed sperm donor males. This is strong support for the action of genetic benefits in maintaining female preference for large-combed males in this population. Differences in results between male and female offspring suggest that genes affecting condition differ between males and females.

USING COMBINED STABLE-HYDROGEN ISOTOPE AND BAND ENCOUNTER ANALYSES TO ASSESS MIGRATION PATTERNS OF IMMATURE SHARP-SHINNED HAWKS

Smith, R. B., Department of Biology, University of New Mexico, Albuquerque, NM 87131, and HawkWatch International Inc., 1800 South West Temple, Suite 226, Salt Lake City, Utah 84115, T. D. Meehan, HawkWatch International Inc., 1800 South West Temple, Suite 226, Salt Lake City, Utah 84115, and B. O. Wolf, Department of Biology, University of New Mexico, Albuquerque, NM 87131

Migration patterns for a single species can take two distinct forms: leap-frog migration and chain migration. Leap-frog migration occurs when northern breeding populations winter further south than southern breeding populations. Chain migration occurs when the northern and southern breeding populations keep a similar latitudinal sequence in their summer and winter quarters. Here we use a combined approach of stable-hydrogen isotope analysis of feathers and band encounter analysis using data from the USGS Bird Banding Lab to assess the migration patterns of immature Sharp-shinned Hawks (*Accipiter striatus*) in Interior North America. Combined stable-hydrogen isotope and band encounter data indicated that young Sharp-shinned Hawks migrate in a chain migration pattern. Combined stable isotope and morphological data (body mass and tarsus length) indicated that northern breeding populations were larger than southern breeding populations. We also examined the potential energetic costs associated with migration distance by comparing stable isotope estimates of distance traveled to estimates of body fat stores and found that northern breeding populations maintained higher fat levels than southern breeding populations. To understand the mechanisms driving our observations, we compared our results to several hypotheses from migration theory. We conclude that chain migration in young Sharp-shinned Hawks of Interior North America is a result of an interaction

between the need to arrive early on the breeding grounds and the behavioral and/or physiological constraints imposed by body size.

FLAMMULATED OWL MIGRATION PROJECT - 2002 UPDATE

DeLong, J.P., HawkWatch International, 2314 Hollywood Ave NW, Albuquerque, NM 87104

In fall 2002 we conducted a full-time, nocturnal mist-netting program for migrating Flammulated Owls. The study site was located in the vicinity of Capilla Peak in the Manzano Mountains of central New Mexico. During 41 nights from 1 September to 27 October, we captured and banded 156 Flammulated Owls, 12 Northern Saw-whet Owls, 1 Western Screech-Owl, and 1 Long-eared Owl. Ninety-three percent of Flammulated Owls were captured in September, and all but two Northern Saw-whet Owls were captured in October. Stable hydrogen isotope ratios in 28 feathers taken from Flammulated Owls captured in 2000 suggested that owls originated from a wide latitudinal range. Sex of 33 owls determined from analysis of DNA indicated a ratio of males to females in the captured sample that was not significantly different from 1:1. No reliable sexing criteria were discerned. No differences were found between sexes in capture date or in body condition (fat and pectoral muscle scores). However, males flew significantly later in the night than females. Goals and plans for the 2002 fall field season are discussed.

DOCUMENTED AVIAN RARITIES IN SAN JUAN COUNTY, NEW MEXICO. PART VI: LOONS - FINCHES 2000 - 2001.

Reeves, T., Dept. of Computer Information Systems, San Juan College, Farmington, NM 87402

Sightings during 2000 and 2001 of accidental, rare, and uncommon birds in San Juan County, NM, are documented by color slides (part V presented at 1999 NMOS annual meeting). Choice of species treated is based on criteria published in the abstract of that talk published in NMOS Bulletin 26(2):29. Additional species were chosen due to lack of previous documentation in the county as indicated on the Revised Checklist of Birds of San Juan County, New Mexico (T. Reeves & A. P. Nelson, 1999). Locations and dates on which the documenting photographs were taken are listed. Sightings reported to me by other birders have initials listed

after the date and birders accompanying me when slides were taken are listed after the date with "w/" (CLUB = Four Corners Bird Club field trip participants, DD = Dick Davis, MI = Margaret Ismay, AN = Alan Nelson, JW = Jim Welles). Slides are shown of the following species (copies of selected slides are on file with NMOS): LOONS: **Pacific Loon**, *Gavia pacifica*, juvenile, 1st documented county record and 2nd county report (Lake Farmington, 11 NOV 2000). **Yellow-billed Loon**, *Gavia adamsii*, juvenile, 2nd documented county record (Lake Farmington, 16 NOV 2000, 10 DEC 2000, 27 JAN 2001, photographed on many dates, last seen 29 JAN 2001). GREBES: **Horned Grebe**, *Podiceps auritus*, regular in NOV (Lake Farmington, 16 DEC 2000, w/MI, DD). GULLS, TERNS: **Elegant Tern**, *Sterna elegans*, 1st documented county record, 2nd state record (B-Square Ranch, 18 JUL 2001). DUCKS, GEESE, SWANS: **Blue-winged Teal**, *Anas discors*, sparse migrant, (Lake Farmington, 18 APR 2000). **Oldsquaw**, *Clangula hyemalis*, 2nd documented county record and 3rd reported sighting (Lake Farmington, 16 NOV 2000). SHOREBIRDS, PHALAROPES: **Whimbrel**, *Numenius phaeopus*, 4th documented county record, 8th report (Morgan Lake, 8 May 2000). WOODPECKERS: **Red-naped Sapsucker**, *Sphyrapicus nuchalis*, 1st documented county record, uncommon resident (Farmington, 6 OCT 2000). GROSBEAKS: **Rose-breasted Grosbeak**, *Pheucticus ludovicianus*, 1st documented county record, a number of reports (Animas River near Colorado border, 15 MAY 2000, w/JW). SPARROWS: **Chestnut-collared Longspur**, *Calcarius ornatus*, 1st documented county record, 3rd report (BLM 21 Pit, Split Lip Flats, 4 MAY 2000)

INFLUENCE OF MIGRANT DENSITY AND WEATHER CONDITIONS ON MIGRATION PATTERNS OF NORTHERN SAW-WHET OWLS

Whalen, D.M., Dept. of Biology, University of New Mexico, Albuquerque, NM 87131

Numerous factors are known to influence bird migration patterns. Factors that influence bird movements away from high latitudes in the fall and winter may be divided into ultimate factors (e.g. seasonal food shortages) and proximate factors (e.g. weather conditions, geological features, etc.). Among irruptive migrants (i.e. species with large annual fluctuations in the number of individuals migrating), high consumer to resource ratios are believed to be an important cause of irruptive movements. High densities of irruptive migrants may lead to intense local competition for food resources and, hence, influence migration patterns. This paper will examine the effects of both migrant density and weather conditions on migration patterns in a species that has only recently been shown to migrate in

irruptive fashion. Recent banding efforts have shown that the annual number of Northern Saw-whet Owls migrating in the eastern United States fluctuates dramatically. Between 1994 and 2001, the number of Saw-whet Owls captured during autumn migration at the southern tip of the Delmarva Peninsula (near Cape Charles, Virginia) has ranged from a low of 22 owls in 1998 to a high of 1,002 in 1995. Our data suggest significant density-dependent effects on body condition and stopover patterns. The body condition of individual migrants, probability of recapture, and length of stopover were all negatively related to migrant density. These results suggest that competition for limited resources may be an important factor driving migration and stopover patterns. Saw-whet Owl movements are also influenced by weather patterns. Within a given year, peak nightly owl movements correspond with certain weather conditions. However, the number of relative peak flights within each year is independent of the annual magnitude of the migration. Hence, weather conditions seem to be a proximate cue influencing owl movements but do not seem to be related to irruptive migration patterns in this species.

BLACK-HAWK DOWN: A REPORT FROM THE GILA VALLEY

Sadoti, G., New Mexico Natural Heritage Program, Dept. of Biology, University of New Mexico, Albuquerque, NM 87131

The Cliff-Gila Valley is home to approximately 25% of New Mexico's estimated Common Black-Hawk (*Buteogallus anthracinus*) population. In 2000 and 2001, 20 nesting territories were found along 36 km of river (0.56 terr./km), a density exceeding all other reports from North America. Vegetation data from a total of 30 nest and 59 non-use microsites are presently being analyzed to determine if black-hawks are selecting nest-sites non-randomly within territories. Additionally, landscape-level comparisons are being made between the 20 territories and 1000 randomly-selected points in suitable nesting habitat to determine the effects, if any, of landcover types and other spatial features on the selection of nest patches. Methods and preliminary results will be discussed.

RETENTION OF AVIAN COMMUNITY REPRESENTATION IN THE RIO GRANDE CORRIDOR OF NEW MEXICO

Thompson, B. C., USGS-BRD, New Mexico Cooperative Fish and Wildlife Research Unit, Box 30003 MSC 4901, Las Cruces, NM 88003 (bthompso@nmsu.edu); D. A. Leal, US Fish and Wildlife Service, 911 NE 11th Ave., Portland, OR 97232; and R. A. Meyer, 226 W. Willoughby Avenue, Las Cruces, NM 88005.

Historic habitat changes and local resource conservation interests yielded a perception that bird species representation in the Rio Grande Corridor of New Mexico has changed markedly in the past century, especially through reduction and alteration of cottonwood-willow (*Populus-Salix*) woodlands, although corroborating evidence was lacking. We investigated avian composition, emphasizing neotropical migrant (NTM) species, in 47 vegetation communities over nearly 475 km of the Corridor floodplain. During spring, breeding season, and fall surveys of 74 transects, we detected 259 bird species, including 147 NTM species. Overall, there was >98% similarity between regularly-occurring species (all species and NTMs only) detected during our sampling and bird species reported present prior to 1900. However, historical literature review and our observations indicate 12 species appear to be declining and 14 species appear to be increasing. We detected 16 species (including 4 introduced, non-native species) not reported historically. Historical data were qualitative, thus no demographic comparisons were possible. While abundance and distribution of birds in the Rio Grande Corridor undoubtedly has changed, past characterizations of substantial loss of avian diversity were not substantiated. Retention of species representation to present day holds promise for species restoration with habitat enhancement in the Corridor.

POPULATION TRENDS OF THE MEXICAN SPOTTED OWL IN WEST-CENTRAL NEW MEXICO

Stacey, P. B., Department of Biology, University of New Mexico, Albuquerque, NM, 87131; and M. Z. Peery, Division of Ecosystem Science, University of California, Berkeley, CA 94720

The Mexican Spotted Owl (*Strix occidentalis lucida*) is a federally listed threatened species that occurs in many of the higher mountains of New Mexico. We examined population trends between 1991 and 1999 of the owls in four ranges in the west central part of the state: the Magdalena, San Mateo and Black Ranges, southwest of Socorro, and the Zuni Mountains southwest of Grants. The estimated annual rate of change in population size ("lambda"), for all areas combined, was 0.803 ± 0.04 . This estimate is significantly less than 1.0, the value of lambda when population size remains constant through time. When examined individually, the owls in the two larger populations (Black Range and San Mateos) also exhibited values of lambda significantly less than 1.0 ($\lambda = 0.841 \pm 0.05$ and 0.695 ± 0.10 , respectively). The two smallest populations (Magdalena and Zuni) declined to the point where all of the territories originally under observation became vacant. The estimated values of population decline in this study are similar to those reported in a recent analysis by Seamans et al. (1999) of two additional owl populations: in the Tularosa Mountains near Reserve, New Mexico and on the Coconino Plateau near Flagstaff, Arizona. The rapid decline of the smallest populations is mirrored by the recent reported losses of Spotted Owls from other small ranges, including the Sandia Mountains, the Manzano Mountains, and Mount Taylor. The reasons for the apparent decline of Spotted Owls over large portions of their range in the Southwest are unclear. As with many endangered species, loss of suitable habitat and prey base are the most likely explanations, although the specific habitat requirements and foraging behavior of this owl have not been well studied.

EXHIBIT PLANS FOR *DIATRYMA* AT THE NEW MEXICO MUSEUM OF NATURAL HISTORY AND SCIENCE

Root, M. A. and G. Morgan. New Mexico Museum of Natural History and Science, Albuquerque, NM 87104

A complete cast of the skeleton of the Eocene bird *Diatryma*, purchased with donations, had been on display in the New Mexico Museum of Natural History since July 2001. It is to be the centerpiece and focal point of the Tertiary Hall at the Museum. The natural setting of an Eocene environment will provide an insight into how *Diatryma* lived. Much more information is now available on the Tertiary Period, and other birds will be included in the exhibit. In the past, so little information was available on fossil birds that museums tended to ignore their presence. New Mexico has two type-specimens from the Tertiary: *Diatryma gigantea* Cope from the Eocene and *Paleoborus umbrosus* Cope from the Miocene. *Paleoborus* was an Old World vulture that is now extinct in the New World. It has been shown that *Paleoborus* was more closely related to eagles than to the New World vultures. Also, from the early Pliocene, there are fossils of flamingos from the Buckhorn marsh near Silver City. Fossils of Pleistocene birds are numerous in New Mexico, and in many cases, are identical to species of today.

CURRENT STATUS OF THE NEW MEXICO BREEDING BIRD ATLAS PROJECT: SPRING 2002 UPDATE

Fair, J. M., S. M. Fettig, G. Garber, J. Place, C. Rustay, R. Salazar, J. Travis, and R. Wechsler, New Mexico Breeding Bird Atlas Inc., 947 Quartz Street, Los Alamos, NM 87544

The New Mexico Breeding Bird Atlas Project is an effort primarily using volunteers to document the current distribution of breeding bird species within the State of New Mexico and to publish the data as a permanent record. The atlas block (5-km x 5-km) is the basic area unit of sampling used by the project. For each block volunteers develop a comprehensive bird list and confirm breeding of at least 50% of the observed species. Specific methods and definitions used for possible, probable, and confirmed breeding observations can be found at the <http://www.npwr.usgs.gov/nmbba/> web site. Habitat associations follow the GAP analysis vegetation cover type groups (Muldavin 1994). Fieldwork typically requires 20-30 hours of careful bird watching and listening during several visits at different times within the breeding season. Multiple years may be used to achieve

the 50% confirmation level. Because it is impractical to visit all of the over 14,000 blocks in a state with relatively few birding volunteers, 127 statistical priority blocks were established in 2001 using a systematic pattern with a random starting point. In the future, another tier of priority blocks based on habitats important to birds, such as riparian areas, will be available for volunteers. Through December 2001, 53 volunteers have provided information on 92 blocks (both priority and non-priority). These volunteers have reported 2,814 observations involving 201 species associated with 39 habitats. Of the total, 883 observations confirmed breeding, 651 indicated probable breeding, and 528 observations suggested possible breeding. In 2001, volunteers contributed approximately 1,174 hours of bird observations, in addition to more than 537 hours and 13,096 miles in transportation to and from their blocks. As an example of atlas data, consider the results for Black-headed Grosbeak. Breeding of Black-headed Grosbeak has been confirmed in 20 blocks with dates from May 11 to July 27. Breeding was confirmed in the following cover type groups: Urban Vegetated, Rocky Mountain/Great Basin Closed Conifer Woodland, Rocky Mountain Upper Montane Conifer Forest, Rocky Mountain Montane Broadleaf Shrub Wetlands, Rocky Mountain Lower Montane Conifer Forest, Chihuahuan Broadleaf Deciduous Desert Scrub, Rocky Mountain Forested Wetlands, Southwest & Plains Forested Wetland, Rocky Mountain/Great Basin Open Conifer Woodland (Savanna), and Southwest & Plains Shrub Wetland. Probable breeding for Black-headed Grosbeak was documented in seven blocks with dates between May 27 and July 8. Possible breeding was recorded in nine blocks between June 3 and July 22. Data such as these will be produced for all breeding species when fieldwork is complete.

COMPLEX INTERACTIONS BETWEEN CROSSBILLS, CONIFERS, INSECTS AND SQUIRRELS

Siepielski, A. M. and C. W. Benkman, Department of Biology, New Mexico State University, Las Cruces, NM 88003.

Parallel patterns in coevolving systems suggest that similar evolutionary and ecological forces are acting. Likewise, lack of such patterns in these systems would suggest that similar forces are absent, or additional ones are present. Coevolution between Red Crossbills (*Loxia curvirostra* complex) and lodgepole pine (*Pinus contorta* ssp. *latifolia*) typifies the ecological and evolutionary predictions from coevolving systems. In the absence of a preemptive competitor (Red squirrels *Tamiasciurus hudsonicus*), selection by crossbills causes the

evolution of larger cones with thicker distal scales. This in turn favors crossbills with deeper and stouter bills. The extent of such coevolution varies in relation to the area of lodgepole pine in isolated mountain ranges because the density of crossbills increases which leads to an increase in selective pressures on cone structure from crossbills. Throughout the majority of the crossbill-conifer coevolutionary mosaic this prediction holds. However, in one isolated range, the Little Rocky Mountains, distal scale thickness has diverged as expected, but cone mass has not. In this island, unlike others throughout the range of lodgepole pine, lodgepole pine cone borer moths (*Eucosma recissoriana*) are moderately abundant. Partial correlation analysis between various cone traits and moth predation suggests that the traits that apparently deter moth predation are some of the same traits that are elevated in the Little Rockies suggesting that selection by moths has, in part, driven cone evolution. These results demonstrate the importance of considering multiple levels of species interactions in diversifying selection mosaics.

ABSTRACTS
(Posters – alphabetical order)

INITIAL BREEDING BIRD SURVEY OF THE VALLES CALDERA NATIONAL PRESERVE --INCLUDING A POSSIBLE NEW HIGH ELEVATION RECORD FOR EASTERN MEADOWLARK

Stephen M. Fettig, Bandelier National Monument, HCR 1, Box 1, Suite 15, Los Alamos, NM 87544, Phone: 505-672-3861 ext. 546; Fax: 505-672-9607; E-mail: stephen_fettig@nps.gov; Christopher Rustay, Rocky Mountain Bird Observatory, 1824 Stanford Dr. NE, Albuquerque, NM 87106, E-mail: chrustay@aol.com; David Henderson, Audubon New Mexico, P.O. Box 9314, Santa Fe, NM 87504, E-mail: dhenderson@audubon.org.

Breeding Bird Survey (BBS) methodology (Droege 1990) was selected to provide an initial picture of bird species and their relative abundances within the major valleys of the Valles Caldera National Preserve. The strength of the system is its ability to detect common diurnal species with a minimum of effort and the ability to track changes in species abundance over time. Because the survey system uses roads, flat, dry, upland or valley habitats tend to be well sampled, while unbroken forests and riparian habitats tend to be undersampled. Use of the established BBS methodology will allow for comparisons of bird population trends with other areas in North America in the future. The BBS methodology, furthermore, provides a simple but statistically reliable method of measuring species abundance. Following BBS protocols, the route started at 5:20 a.m. MDT and ended at 10:18 a.m. on June 28, 2001 under fair weather with calm winds. Forty-three stops were between 8,500 and 9,000 feet elevation while 6 stops were between 9,000 and 10,000 feet. Stop number 50 was over 10,000 feet. At two places along the route where the route bends back on itself, consecutive stops were close enough to allow potential double counting of singing birds. Care was taken to avoid any double counting. We recorded 572 individual birds of 56 species. The five most recorded species were Western Meadowlark (42), Ruby-crowned Kinglet (39), American Crow (37), American Robin (36), and Violet-green Swallow (29). Recorded only once along the route were Mallard, Northern Goshawk, Swainson's Hawk, Red-tailed Hawk, Golden Eagle, Common Snipe, Red-naped Sapsucker, Downy Woodpecker, Hammond's Flycatcher, Say's Phoebe, Plumbeous Vireo, Black-billed Magpie, Red-breasted Nuthatch, Brown Creeper, Western Bluebird, Virginia's Warbler, and Brown-headed Cowbird. Furthermore, seven Savannah Sparrows and twenty-six Eastern Meadowlarks were recorded.

Given the scarcity of New Mexico breeding records for Common Snipe and Savannah Sparrow, these species are noteworthy and at least suggestive of local breeding. The occurrence and abundance of Eastern Meadowlarks is probably the most noteworthy find. They occurred in areas devoid of shrubby vegetation and tended towards the lower centers of the two valleys in which they were documented. Western Meadowlarks tended to sing from grassland areas closer to forested edges, at slightly higher and drier grasslands than the Eastern Meadowlarks, although there appeared to be significant overlap in habitat. Bird inventory work in the early 1900s for the Jemez Mountains did not report Eastern Meadowlarks (Bailey 1928). Similarly, Hubbard (1978) reports Eastern Meadowlarks locally north to about the center of the state, specifically listing the Grants, Moriarty and Portales areas as northern most localities. Eastern Meadowlarks have also been reported from the mesa west of Albuquerque, portions of the northeastern plains and occasionally south of Santa Fe. We are unaware of previous records of Eastern Meadowlark above 8000 ft in New Mexico. A compact disk recording of Eastern Meadowlark song and call notes from the Valle Caldera will be available for listening at the meeting. Follow-up and expanded work is planned for the summer of 2002 to verify continued presence.

DIET OF THE BOXELDER BEE-EATER (A.K.A. SOUTHWESTERN WILLOW FLYCATCHER) IN THE CLIFF-GILA VALLEY, NEW MEXICO.

Stoleson, S.H., USDA Forest Service, Rocky Mountain Research Station, Albuquerque, NM 87102; L.S. DeLay, New Mexico Natural Heritage Program, University of New Mexico, Albuquerque, NM 87131; and M. Farnsworth, Dept. of Fisheries and Wildlife Biology, Colorado State University, Fort Collins, CO 80523.

Food habits of the endangered Southwestern Willow Flycatcher (*Empidonax traillii extimus*) remain only poorly known. Two descriptive studies conducted in Arizona and California reported a wide range of arthropod prey taken, but it is unclear yet whether the bird should be considered a generalist insectivore. We present information on diet of Willow Flycatchers in the Cliff-Gila Valley, New Mexico, based on fecal samples of 23 birds. Birds at this large breeding site ate a variety of prey taxa, predominately bees and wasps (Hymenoptera), but also substantial amounts of true bugs (Hemiptera), true flies (Diptera), and beetles (Coleoptera). Proportions of arthropod orders in the Gila diet differed somewhat

from those reported from Arizona and California (overlap index 71-81%). We used sticky traps to sample the arthropod community on the Gila. Willow Flycatchers' diet on the Gila was more similar to diets reported elsewhere in the Southwest, from very different habitats, than it was to the general arthropod community on the Gila (overlap index 45%). We therefore suggest that the Southwestern Willow Flycatcher may be more of a diet specialist than a generalist. If so, the species may more vulnerable to potential food limitation than has been thought previously.

FOUNDING of the NEW MEXICO ORNITHOLOGICAL SOCIETY

and HISTORICAL MEMORABILIA

The first formal action to establish the New Mexico Ornithological Society (NMOS) was Boyd McLeod's solicitation letter of August 1961 sent to people suggested by Jim Findley asking for a response to the idea of a bird society.

After receiving a favorable response, Boyd arranged meetings at several places around the state including Carlsbad, Roswell, Las Cruces, Santa Fe and Los Alamos where he, with Al Moore, presented an outline for a provisional Constitution and By-Laws of the proposed New Mexico Ornithological Society. A call was put out to the respondents, and others interested, to gather in late autumn to form the society. At this meeting, chaired by Dale Zimmerman, a committee, headed by Dale, was asked to draft the Incorporation papers and By-Laws. The members of this committee, Boyd B. McLeod, James S. Findley, William S. Huey, Vester Montgomery, and Dale Zimmerman then acted as the Incorporators and served as the interim Board of Directors. The date of Incorporation was February 27, 1962. Al Moore was the agent for service of process on the corporation.

The 1st Annual Meeting was held on May 5, 1962 at the New Mexico Institute of Mining and Technology in Socorro, chaired by Bill Huey, with Boyd McLeod as Secretary. Twenty-eight members attended. The incorporators were elected as the Board of Directors with Bill Huey, President; Vester Montgomery, Vice-President; Boyd B. McLeod, Secretary-Treasurer; James S. Findley, Editor of Field Notes; and Dale Zimmerman, Member-at-Large. The members attending chose an annotated state checklist as the initial activity of the society. The state was divided into four quadrants, each with a Chief Recorder. Bird records were to be sent to Chief Reporters. Selected for the Reporters for Northeast, Adolph Krehbiel; Northwest, James Travis; Southeast, Vester Montgomery; and Southwest, James Sands.

The members who paid their dues at the meeting, or had prepaid, comprise the Charter Membership.

I have inserted a copy of McLeod's letter (next page) that led to our getting together.

CHARTER MEMBERS

R. C. Brummett	Barbara McKnight
John Durrie	Daniel McKnight
Jim Findley	Boyd McLeod
Tony Gennaro	Vester Montgomery
Bruce Harris	Al Moore
Nibs Hill	Alan Nelson
Walton Hawk	David Niles
Les Hawkins	Ralph Raitt
Bill Huey	Jim Sands
Adolph Krehbiel	Pat Snider
Laura Lefkowsky	James Sikes
Burt Lewis	James Travis
Bert Lindsay	Dale Zimmerman

August 9, 1961

Dear Sir:

This letter is addressed to you as a person who may be interested in the formation of a "New Mexico Ornithological Society." Your name was obtained through Mr. James S. Findley, Associate Professor of Biology at the University of New Mexico, who is interested in the formation of such a group.

It is our feeling that the time afforded us through these summer months could well be utilized in contacting individuals who share our interests. From such correspondence an organized effort could be developed for this Fall.

The purpose of this society may be any or all of the following:

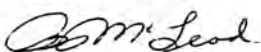
1. To make it possible for persons with a mutual interest to become acquainted.
2. The pursuit of studies common to such societies, and the support of the publication of bulletins, papers and check lists.
3. Organized field trips and unified pursuit of common interests.

The initial thinking is that the interests of this group should be diverse enough to serve and stimulate the support of the maximum number of people - from the casual bird watcher through the photographer to the serious student of ornithology.

If these ideas do interest you, then please send us your name, address, telephone number and occupation on the enclosed card. Also indicate your primary interest as suggested above. Ask anyone you know, who may also be interested, to do the same - of course. Or, if you prefer, send us their name (s) and we will be happy to contact them ourselves. If your interest is enough and you are able to assist in this initial effort, your letting us know will be greatly appreciated.

As a courtesy to you who respond, "Progress Reports" will be mailed to you as such are warranted. We sincerely invite you to join us in our endeavor and extend a warm welcome in anticipation that you will.

Sincerely yours,



Boyd B. McLeod
424 Hermosa Drive, S.E.
Albuquerque, New Mexico

The first seasonal report of the Society's Field Notes is in the mail to all members who have paid their dues for 1964.

Since this report covers the period of June - September 1962 and the original struggle to get "organized" is now behind us, it appears that subsequent reports will be coming out in fairly rapid order until the reports become current. You can receive your copy of this report and all reports published during the year by mailing your dues to the Secretary-Treasurer at 424 Hermosa Drive S.E., Albuquerque. Regular dues are \$4.00 per year and Student dues are \$2.00 per year.

Copies of the Catalog of Bird Specimens, Southwestern Museum of Natural History are also available for \$2.00 a copy. Orders for these should likewise be addressed to the Secretary-Treasurer.

Plans for the annual meeting are in the discussion stage. We will keep you posted and hope, in return, that you will keep the meeting in mind.

THE N.M.O.S. FIELD NOTES HAVE BEEN ESTABLISHED AS A MEDIUM FOR COMMUNICATING INTERESTING BIRD DISTRIBUTION DATA TO MEMBERS, AND AS A CONTRIBUTION TO RECORDING BIRD DISTRIBUTION IN NEW MEXICO. AS SUCH, THE USES TO WHICH THESE DATA ARE PUT RANGE FROM LIGHT READING FOR MANY OF US TO SOURCE DATA FOR SCIENTIFIC ORNITHOLOGICAL WORK.

BIRD IDENTIFICATION IN THE FIELD IS NOT AN EXACT SCIENCE BY ANY MEANS. MANY SPECIES AT VARIOUS STAGES OF THEIR LIVES CAN ONLY BE SEPARATED BY SUCH CLUES AS WING FORMULAS, PHYSICAL MEASUREMENTS, SONG, ACTIONS, ETC. PUBLISHED ILLUSTRATIONS CAN BE MISLEADING, ESPECIALLY WHERE THE BIRD IS SEEN UNDER ABNORMAL LIGHTING CONDITIONS OR AT CONSIDERABLE DISTANCE.

FIELD NOTES EDITING IS DONE BY NON-PROFESSIONALS, OF NECESSITY. THE BOARD OF DIRECTORS FEELS THAT FIELD NOTES SHOULD PRESENT AS MUCH DATA AS POSSIBLE, AND YET BE SELECTIVE ENOUGH TO BE OF USE TO WORKING ORNITHOLOGISTS. THIS PROCESS OF SELECTIVITY HAS IN THE RECENT PAST GIVEN RISE TO SOME DISSATISFACTION WITH EDITORIAL POLICY ON THE PART OF CORRESPONDENTS. THUS, THE UNPAID NON-PROFESSIONAL EDITORS' LOT IS NOT A HAPPY ONE! AT THE VERY LEAST, A COMPLETE STATEMENT FROM THE REPORTER OF THE CIRCUMSTANCES ATTENDANT TO AN UNUSUAL SIGHTING MUST BE PUBLISHED IF ONLY SO THE DIVERSE USERS OF THIS DATA MAY DRAW THEIR OWN CONCLUSIONS.

THE BOARD OF DIRECTORS, IN A MEETING AUGUST 20, 1966, THEREFORE ADOPTED THE FOLLOWING EDITORIAL POLICY:

WHEN A REPORT IS RECEIVED BY THE EDITORS FOR WHICH INSUFFICIENT INFORMATION IS SUBMITTED, OR WHICH IN ANY WAY RAISES QUESTIONS IN THE EDITORIAL MIND, A FOLLOW-UP QUESTIONNAIRE WILL AUTOMATICALLY BE SENT TO THE REPORTER. A COPY OF THIS FORM IS INCLUDED WITH THIS BULLETIN.

WHEN THIS FORM IS RETURNED, IF ANY QUESTION OF INCLUDING THE REPORT IN THE FIELD NOTES STILL REMAINS, ALL INFORMATION ON THIS PARTICULAR REPORT WILL BE SUBMITTED TO A SEVEN-MAN EDITORIAL BOARD. EACH MEMBER OF THIS BOARD WILL VOTE WHETHER OR NOT THE ITEM SHOULD BE INCLUDED IN THE FIELD NOTES. MAJORITY RULE WILL PREVAIL.

FOR PUBLICATION OF A RECORD OF A NEW SPECIES FOR THE STATE, ORDINARILY THE REQUIREMENT IS A SPECIMEN OR A RECOGNIZABLE PHOTOGRAPH. DEPENDING ON THE SPECIES AND THE CIRCUMSTANCES, INDEPENDENT REPORTS FROM TWO OR MORE OBSERVERS (WITHOUT SPECIMEN OR PHOTOGRAPH) MAY POSSIBLY BE ACCEPTED. DO NOT INFER THAT ELIMINATION OF A REPORT INDICATES DISBELIEF; MANY FACTORS ARE INVOLVED IN JUDGING THE DATA SUBMITTED, AND EDITORS ERR AS OFTEN AS ANYONE. FOR SCIENTIFIC VALUE IN THE LONG RUN, IT IS PERHAPS BETTER TO ERR ON THE SIDE OF OMISSION RATHER THAN COMMISSION.

IT IS SINCERELY HOPED THAT ALL REPORTERS WILL UNDERSTAND THE REASONS FOR SETTING UP THIS POLICY, AND WILL CONTINUE TO COOPERATE WITH THE FIELD NOTES, ENCOURAGING OTHERS TO DO LIKEWISE. NO SECTION OF THIS STATE IS COMPLETELY COVERED ORNITHOLOGICALLY; THE MORE REPORTS RECEIVED, THE MORE VALUABLE THE FIELD NOTES WILL PROVE TO BE.

THE MATTER OF THE FIELD NOTES IN ALL THESE CONSIDERATIONS WILL BE FULLY DISCUSSED AT THE NEXT N.M.O.S. ANNUAL MEETING IN FEBRUARY, 1967. IF YOU DISAGREE WITH THE PRESENT SYSTEM, PLEASE BEAR WITH US UNTIL THEN, MEANWHILE SHARPENING YOUR ARGUMENTS FOR A FRUITFUL DISCUSSION.

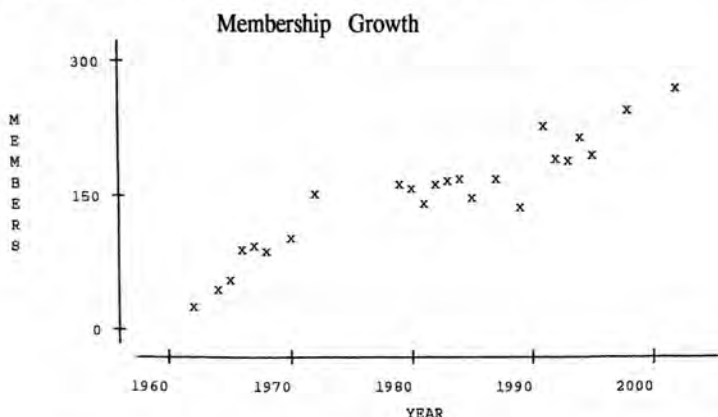
THE BOARD OF DIRECTORS:

JAMES R. TRAVIS, PRESIDENT
JAMES L. SANDS, VICE-PRESIDENT
BARBARA C. MCKNIGHT, SECRETARY-
TREASURER

W. BURTON LEWIS
PATRICIA R. SNIDER

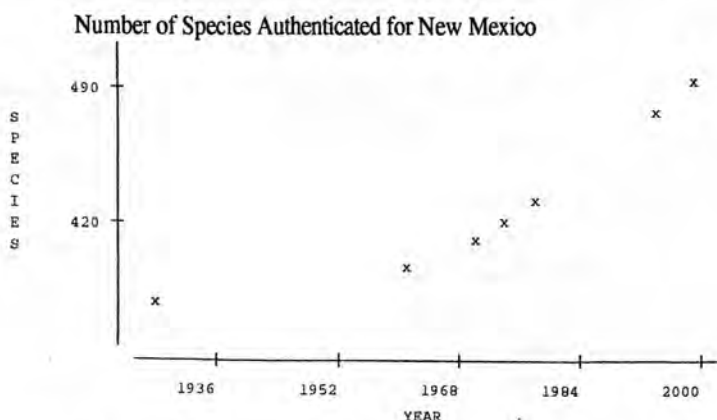
THEN AND NOW

The membership has grown over the years, from 28 in 1962 to 271 in the year 2002 at an average rate of 4% per year. I have not included institutional members. Some of the fluctuation from year to year may be due to special efforts in some years to increase membership and collect dues, and to dropping some delinquent members, who often paid later.



The annual dues also increased from 1962 to 2000: from \$4 to \$10 for a Regular Membership and from \$6 to \$15 for a Family Membership.

The next graph shows the increase in the number of species found in New Mexico over the years. These are raw data. They have not been corrected for the up-and-down effect of taxonomic changes, they come from different sources, and are from the printing year, which may be later than the cut-off year. Sources: 1928 Bailey, Birds of New Mexico (includes sub-species); 1961 Ligon, New Mexico Birds; 1970 Hubbard, Check-list of Birds of New Mexico; 1974 Hubbard, *NMOS Newsletter*; 1978 Hubbard, Check-list of Birds of New Mexico, Revised; 1994 Williams, Draft Checklist of the Birds of New Mexico (1992), up-dated; 1999 Williams, *NMOS Bulletin*.



The shape of this plot is surprising. At some point it must assume more of an s-shape, as there must be a limited pool of potential New Mexico birds.

HIGHLIGHTS of

SUBSEQUENT EARLY ANNUAL NMOS MEETINGS

2nd 1963 (April 20) Portales at Eastern New Mexico University with 12 members attending.

The current board was re-elected.

3rd 1964 (May 6-7), Albuquerque at University of New Mexico, 40 attendees.

Field trip: Banding Demonstration by Barbara McKnight at Cedar Crest.

Publication of Catalog of Bird Specimens by David Niles, NMOS No. 1.

Publication of *NMOS Field Notes*, Seasonal Report No. 1.

4th 1965 (February 27-28) Silver City at New Mexico Western University, 36 attendees.

Nest Record Card Program started.

Evening: Bruce Harris on Birds of Silver City and Grant County.

Field trip to Alameda in the North Valley on Sunday.

Spring Big Day Count (1st Census) in the Gila River Valley, May 8-9, 1965.

I have inserted a copy of the species list (170 species from noon May 8 to noon May 9) and pictures of some of the participants. How many species would we find in a similar census this year?

5th 1966 (February 19-20) in Albuquerque at University of New Mexico 40 attendees.

Evening: Films: The Gooney Bird and Frigatebirds & Boobies.

6th 1967 (February 25-26) in Albuquerque at University of New Mexico, 87+ attendees.

Evening: John Campbell on Birds of the Arctic.

Spring Field Trip: 2nd Gila River Bird Census, May 13 & 14.

7th 1968 (March 2) Albuquerque at University of New Mexico, 41 attendees.

Evening: Jim Sands on New Mexico Game Department trapping and banding of various game birds and waterfowl.

- 8th 1969 (March 1) Albuquerque at University of New Mexico.
Evening: Films on Phases of Bird Life.
Spring Field Trip: 3rd Gila River Bird Census, May 3.
- 9th 1970 (March 7-8) Albuquerque at University of New Mexico.
Evening: Dale Zimmerman on African Safari for Birds.
Published *Check-list of the Birds of New Mexico* by John Hubbard.
Spring Field Trip: 4th Gila River Bird Census May 9-10.
- 10th 1971 (March 6-7) Albuquerque at University of New Mexico, 70 attendees.
Evening: Bruce Hayward on Bird Life along the Gila.
Spring Field Trip: Bitter Lake NWR May 5-8.
- 11th 1972 (March 4) Albuquerque at University of New Mexico
Evening: Eliot Porter on Photographing American Birds.
Co-Host of Cooper Ornithological Society Meeting with NMSU in Las Cruces, April 20-23.
Spring Field Trip: San Juan County, May 13.
- 12th 1973 (March 3) Albuquerque at University of New Mexico.
The first issue of the *NMOS Bulletin* was sent out.
Evening: George Sutton on the Far, Far North.
- 13th 1974 (March 9) Albuquerque at University of New Mexico.
Evening: Wayne Hanson on Ecological Studies of Birds and Mammals of Northern Alaska.
- 14th 1975 (March 1) Albuquerque at University of New Mexico.
Evening: Ro Wauer narrated a film on the Big Bend area.
- 15th 1976 (April 9-11) Silver City at Western New Mexico University
Evening: D. Zimmerman—A vicarious trip to Baja California for strange plants & animals.
Field Trips: 1) Guadalupe Canyon led by John Hubbard 2) Redrock and Virden.

ABOUT 40 MEMBERS AND FRIENDS PARTICIPATED IN THE BIG-DAY COUNT IN SILVER CITY FROM NOON MAY 8 TO NOON MAY 9, AND BROUGHT IN A GRAND TOTAL OF 170 SPECIES! THANKS ARE DUE ALL THE SILVER CITY PEOPLE WHOSE PLANNING AND COOPERATION WENT TOWARD MAKING THIS A SUCCESSFUL EFFORT AND A VERY PLEASANT WEEK-END. THE COMBINED TOTAL LIST OF SPECIES SEEN BY THE SEVERAL PARTIES FOLLOWS:

EARED GREBE	WESTERN KINGBIRD	ORANGE-CROWNED WARBLER
GREAT BLUE HERON	CASSIN'S KINGBIRD	VIRGINIA'S WARBLER
GREEN HERON	ASH-THROATED FLYCATCHER	LUCY'S WARBLER
WHITE-FACED IBIS	WIED'S CRESTED FLYCATCHER	OLIVE WARBLER
MALLARD	SAY'S PHOEBE	YELLOW WARBLER
MEXICAN DUCK	BLACK PHOEBE	AUDUBON'S WARBLER
GREEN-WINGED TEAL	EMPIDONAX SP.	BLACK-THROATED GRAY WARBLER
CINNAMON TEAL	TRAILL'S FLYCATCHER	GRACE'S WARBLER
AMERICAN WIDGEON	GRAY FLYCATCHER	NORTHERN WATERTHRUSH
RING-NECKED DUCK	WESTERN WOOD PEWEE	MACGILLIVRAY'S WARBLER
LESSER SCAUP	OLIVE-SIDED FLYCATCHER	YELLOWTHROAT
RUDDY DUCK	VERMILION FLYCATCHER	YELLOW-BREASTED CHAT
COMMON MERGANSER	HORNED LARK	RED-FACED WARBLER
TURKEY VULTURE	VIOLET-GREEN SWALLOW	WILSON'S WARBLER
GOSHAWK	TREE SWALLOW	PAINTED REDSTART
COOPER'S HAWK	BANK SWALLOW	HOUSE SPARROW
RED-TAILED HAWK	ROUGH-WINGED SWALLOW	EASTERN MEADOWLARK
SWAINSON'S HAWK	BARN SWALLOW	WESTERN MEADOWLARK
BLACK HAWK	CLIFF SWALLOW	YELLOW-HEADED BLACKBIRD
GOLDEN EAGLE	PURPLE MARTIN	RED-WINGED BLACKBIRD
SPARROW HAWK	STELLER'S JAY	HOODED ORIOLE
SCALED QUAIL	MEXICAN JAY	SCOTT'S ORIOLE
GAMBEL'S QUAIL	SCRUB JAY	BULLOCK'S ORIOLE
HARLEQUIN QUAIL	COMMON RAVEN	BREWER'S BLACKBIRD
AFGHAN PHEASANT	WHITE-NECKED RAVEN	BROWN-HEADED COWBIRD
TURKEY	PIRON JAY	WESTERN Tanager
BLACK FRANCOLIN	MOUNTAIN CHICKADEE	HEPATIC Tanager
VIRGINIA RAIL	PLAIN TITMOUSE	SUMMER Tanager
AMERICAN COOT	BRIDLED TITMOUSE	CARDINAL
KILLDEER	VERDIN	BLACK-HEADED GROSBEAK
SPOTTED SANDPIPER	COMMON BUSH-TIT	BLUE GROSBEAK
LESSER YELLOWLEGS	WHITE-BREASTED NUTHATCH	LAZULI BUNTING
LEAST SANDPIPER	PYGMY NUTHATCH	INDIGO BUNTING
WESTERN SANDPIPER	BROWN CREEPER	HOUSE FINCH
WILSON'S PHALAROPE	DIPPER	PINE SISKIN
RING-BILLED GULL	HOUSE WREN	AMERICAN GOLDFINCH
BAND-TAILED PIGEON	BEWICK'S WREN	LESSER GOLDFINCH
WHITE-WINGED DOVE	CACTUS WREN	GREEN-TAILED TOWHEE
MOURNING DOVE	CANYON WREN	RUFOUS-SIDED TOWHEE
ROADRUNNER	ROCK WREN	BROWN TOWHEE
BARN OWL	MOCKINGBIRD	ABERT'S TOWHEE
GREAT HORNED OWL	CURVE-BILLED THRASHER	LARK BUNTING
ELF OWL	CRISSAL THRASHER	SAVANNAH SPARROW
LONG-EARED OWL	SAGE THRASHER	VESPER SPARROW
WHIP-POOR-WILL	ROBIN	LARK SPARROW
POOR-WILL	HERMIT THRUSH	RUFOUS-CROWNED SPARROW
WHITE-THROATED SWIFT	SWAINSON'S THRUSH	BLACK-THROATED SPARROW
BLACK-CHINNED HUMMINGBIRD	WESTERN BLUEBIRD	SAGE SPARROW
BROAD-TAILED HUMMINGBIRD	MOUNTAIN BLUEBIRD	OREGON JUNCO
BELTED KINGFISHER	BLUE-GRAY GNATCATCHER	GRAY-HEADED JUNCO
RED-SHAFTED FLICKER	RUBY-CROWNED KINGLET	CHIPPING SPARROW
GILA WOODPECKER	WATER PIPIT	BREWER'S SPARROW
ACORN WOODPECKER	LOGGERHEAD SHRIKE	BLACK-CHINNED SPARROW
YELLOW-BELLIED SAPSUCKER	STARLING	WHITE-CROWNED SPARROW
HAIRY WOODPECKER	HUTTON'S VIREO	LINCOLN'S SPARROW
DOWNY WOODPECKER	SOLITARY VIREO	SONG SPARROW
LADDER-BACKED WOODPECKER	WARBLING VIREO	



UNIVERSITY OF NEW MEXICO staffers were represented in the annual spring ornithological survey conducted in Grant County last Saturday. From left: John Durrle; J. C. MacGregor, registrar; Mrs. Frank Hibben and Mrs. Durrle. Mrs. Mary Cornell, 95-year-old Albuquerque participant, back to camera, claimed to be the "youngest" of the group.

(Burgess Photo)



FRED McCORMICK, of Bear Mountain Lodge, prepares a steak supper for participants in the annual spring survey conducted by ornithologists in this area Saturday. Supper scene is on the banks of the Gila River near Cliff. Waiting for service are Bruce Harris, left, field trip director; Janet Chism and Pat Stein, teachers from Los Alamos. The two youngsters are sons of Harris. (Burgess Photo)

PUBLICATIONS of the NMOS

The principal output of the NMOS is the regular publication of the Field Notes and the Bulletin. Compilation and evaluation of bird records began with the first meeting. The New Mexico Ornithological Society Field Notes, Seasonal Report #1, for June-September 1962 contained bird records from 28 members. Unusual waves of all migrants were noted. Most spectacular was the influx of warblers and other species on September 9 at Roswell "following a change of wind to the north and a drop in temperature. A count covering two blocks in about an hour included 62 Wilson's, 2 Townsend's, 2 Black-throated Gray, 2 Audubon's, and 3 MacGillivray's Warblers, 3 Warbling Vireos, 2 Ruby-crowned Kinglets, 4 House Wrens, 6 Black-chinned Hummingbirds, 10 Lesser Goldfinches, 4 Blue-gray Gnatcatchers, 4 Western Flycatchers, and 7 Olive-sided Flycatchers. The next day they were gone" (Montgomery and Carter). Other significant reports were the first US record of the Slate-colored Redstart (collected by Harris), a Ruddy Turnstone and a Varied Bunting (also collected by Harris), thought to be the first New Mexico records, and first New Mexico nesting records for the Mississippi Kite and Beardless Flycatcher.

The NMOS has published 37 volumes of the *New Mexico Ornithological Society Field Notes* (1962-1998) and Volume 38, Nos. 1 & 2.

The *NMOS Bulletin*, published four times a year, serves two primary purposes: 1) to publish articles of scientific merit concerning distribution, abundance, status, behavior, and ecology of the avifauna of New Mexico and contiguous regions and 2) to publish news and announcements deemed of interest to the New Mexico ornithological community. The *NMOS Bulletin* had a long gestation time. It began as a modest one-page *Bulletin* devoted to the society's business, such as announcements of meetings and reports of the proceedings. The two examples (on the next two pages), one from early 1964, the other from 1966, suggest some of the difficulties we faced, and although we have made great progress, persist to this day. This early *Bulletin* was succeeded in 1973 by the *NMOS Newsletter*, a much expanded version, which included summaries of bird occurrences in the different quadrants of the state and important news, such as the lumping of the flickers, bushtits, juncos, and orioles that had recently appeared in *The Auk*. After Volume 2, the *Bulletin* transformed into the *NMOS Bulletin* as it is today. The lead article, on a subject of interest to the first Editor, Bill Principe, was entitled "Harry C. Williams, Early New Mexico Birder. We now have 29 volumes (1973-2001) of the *NMOS Bulletin*, including the two Newsletter volumes.

New Mexico Ornithological Society Publications:

1. Catalog of Bird Specimens, Southwestern Museum of Natural History, David N. Niles (1963).
2. Observations on the Summer Birds of the Animas Mountains, New Mexico, David N. Niles (1966).
3. Check-list of the Birds of New Mexico, John P. Hubbard (1970).
4. Summer Birds of the San Juan Valley, New Mexico, Carl Gregory Schmitt (1976).
5. Breeding Birds of Elephant Butte Marsh, Charles A. Hundertmark. (1978).
6. Revised Check-list of the Birds of New Mexico, John P. Hubbard (1978).
7. Rare and Unusual Birds of New Mexico, Dustin and Sue Huntington (1983).

Breeding Birds of the Sandia Mountains and their Ecological Distributions, John L. Tatchl (1967).
 Reprints from The Condor, Vol. 69 (No. 5), pp 479-490, distributed to NMOS members.

New Mexico Bird Finding Guides

1. Bird-finding Localities in Southwestern New Mexico and Southeastern Arizona, Dale A. Zimmerman (1966).
 2. Bird-finding Localities in the Vicinity of Roswell, New Mexico, Vester Montgomery (1969).
- New Mexico Bird Finding Guide. Edited by Dustin Huntington and Dale A. Zimmerman (1984).
- New Mexico Bird Finding Guide, Revised Edition. Edited by Dale A. Zimmerman, Marian A. Zimmerman, and John Durrie (1992).

SOME OF OUR OFFICERS

PRESIDENT

William S. Huey	1962-1964
James R. Travis	1965-1972
Bruce J. Hayward	1973-1978
John P. Hubbard	1979-1980
Charles A. Hundertmark	1981-1982
Dustin Huntington	1983-1985
Steve West	1986-1988
Mary Alice Root	1989-1991
Sartor O. Williams III	1992-1993
James R. Travis	1994-1997
John Parmeter	1998-1999
Craig W. Benkman	2000-2002

SECRETARY

Boyd B. McLeod	1962-1963
Barbara McKnight	1964-1974
Claudia Hubbard	1975-1976
Henry Zeller	1977
Charles Hundertmark	1978
Mary Lou Arthur	1979-1980
Sue Huntington	1981-1983
W. Burton Lewis	1984
Patricia C. Stein	1985-1988
Paul Steel	1989-1995
Bill Willard	1996-1997
Nancy Cox	1998-2002

A Sampling of the EVENING SPEAKERS at the Annual meetings

- Craig Benkman — Crossbills on a Landscape 2002
 John Campbell — Birds of the Arctic 1967
 Rod Drewien — Foster Parenting Program for Whooping Cranes 1984
 Alan Feduccia — Age of Birds 1996
 Jim Findley — Biodiversity of New Mexico 1990
 Erick Greene — Coming of Age in Lazuli Buntings 1997
 Wayne Hanson — Ecological Studies of Birds & Mammals of Northern Alaska 1974
 Bruce Hayward — Dale Zimmerman's Slides of Kenya and Tanganyika 1964
 Bruce Hayward — Birds of the Gila Valley 1971
 David Ligon — Evolution of Cooperation in Birds 1992
 Pat Melhop & Sandy Williams — Status of the Gray Ranch 1991
 Robert Miller — Bird Adventures on Hudson Bay 1977
 Kathleen Milne — Neotropical Migrants: the North-South Connection 1993
 Catherine Ortega — Brown-headed Cowbirds, Scourge of Songbirds or Innocent Scapegoat 2000
 Eliot Porter — On Photographing *American Birds* 1972
 Kathleen Ramsay — Raptor Identification 1995
 Tim Reeves — San Juan County Birds: Recent Research and Discoveries 1999
 Terry Root — Where the Birds are at Christmas Time 1988
 Donna Cole Schmidt & Steve Zack — On Safari in East Africa 1981
 Walter Spofford — Roadside Raptors of Africa 1979
 George Sutton — The Far, Far North 1973
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 — Birds & Plants of New Mexico's Chihuahuan Desert 2001
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NORTH AMERICAN MIGRATION COUNT

Saturday 11 May 2002

The year 2002 marks the eleventh year of participation in the North American Migration Count (NAMC). This nationwide event occurs each year on the second Saturday in May, which falls this year on the 11th. Counts take place within the bounds of a single county.

Participants with all levels of skills are needed in all parts of the state. You may count in your own county or participate in a remote count. **Feeder-watchers are also welcome in any count.** Individuals interested in taking part in an already established count, or in initiating a count in a county not currently covered, are urged to contact Steve West at 1105 Ocotillo Canyon, Carlsbad, NM 88220 (wthrs swift@carlsbadnm.com), or the county compilers.

NMOS ANNUAL MEETING FOR 2003

The 41st Annual Meeting of the New Mexico Ornithological Society will be a **joint meeting** with the **Western Field Ornithologists** to be held in Silver City, New Mexico in late July of 2003. Watch the *NMOS Bulletin* for more information.

2001 NEW MEXICO NORTH AMERICAN MIGRATION COUNT RESULTS

STEVE WEST
1105 Ocotillo Canyon, Carlsbad, NM 88220

The year 2001 marked the tenth consecutive year for the participation of New Mexico birders in the North American Migration Count (NAMC). The primary goal of the NAMC is to provide "a picture in time" of migration on the same day across the continent of North America. The day chosen for this activity is always the second Saturday in May. This count is patterned after a variety of other bird censusing techniques including Christmas counts, Big Day Counts and other volunteer surveys. The difference is that the NAMC takes place on a single day across the continent and that the survey area is limited to a single county or parish. The results are a valuable addition to what we know about bird migration, distribution and population dynamics. While the surveys give us valuable information about migrants, all birds are counted, and population trends in resident species can be tracked as well. On a continent-wide basis, the NAMC provides researchers valuable information about neotropical migrants and their movements. With 10 years of data for many areas across the continent, this information grows in value each year.

The 2001 count occurred on Saturday 12 May with continued relatively high coverage in the state. In 2000, 23 counties participated, down one from the all-time high of 24 counties in 1999. In 2001, 23 counties again participated. Counties that participated in 2000 but not in 2001 were Mora, Otero, Quay and Union. New counties in the 2001 effort over 2000 were Colfax, Doña Ana, Los Alamos and Sierra. Seventy percent of the New Mexico counties had some degree of coverage.

Although large portions of each county remain uncovered, or at least undercovered, the 23 counties that participated on 12 May accounted for 65% of the surface area of the state, compared with 68% in 2000. While participation in all counties would be ideal, and all counties can use more coverage, the 2001 results still provide us with an excellent sample of what was happening on a given Saturday in May.

An important item that must be considered when interpreting the data gathered in these surveys is the lack of observers, resulting in undercoverage in many areas. With more county and individual participation than previously, this is not as critical as it once was. Coverage can be improved, even in areas that are

thought to be well covered. Participation in the lower Rio Grande Valley improved greatly this year with Doña Ana and Sierra County participating. In fact, we now have coverage of almost the entire Rio Grande and Pecos River valleys. Since the beginning of the NAMC in New Mexico, all but three counties have submitted data on at least one year. The three counties for which there has not yet been participation are Catron, Cibola and Curry.

Table 1 summarizes the 2001 results by county. The trend in 2001 was for most counties to have lower numbers of species and individuals. Counties with lower species totals in 2001 than 2000 were Bernalillo (-15), Chaves (-10), DeBaca (-32), Hidalgo (-20), Lea (-2), Roosevelt (-26), Sandoval (-5), San Miguel (-1), Santa Fe (-2), Socorro (-5), Taos (-12), and Valencia (-15). Only four counties had higher species counts in 2001 than 2000: Eddy (+5), Guadalupe (+4), McKinley (+23), and San Juan (+5). Two counties (Harding and Luna) had the same number of species both years.

The drop in species and individuals was often blamed on weather and wind conditions. In spite of so many counties having reduced species and individuals counts, the overall count was up in many respects. There were as many counties participating in 2001 as in 2000, the composite species list for the year rose from 309 to 311, the number of party-hours was up by 2.4%, the number of party-miles was up by 25.4% and the number of observers was up by 6%. Only the composite number of individuals was down, and that was by 19%. With just over 500 species verified in New Mexico, this means that on one Saturday in May, over 60% of all those species were found somewhere in New Mexico.

Table 2 illustrates the growth of the New Mexico NAMC from 1992 to the present. As in previous years, the best coverage comes in areas where there is a good population base (Bernalillo, Chaves, Doña Ana, Eddy, San Juan and Santa Fe Counties). However, because of the dedication of a few individuals, we are getting good coverage in more rural counties also (DeBaca, Guadalupe, Harding, Hidalgo, Lea, etc.). The result of this all is fairly good, state-wide coverage for this survey.

Participation continues to be a major factor in coverage and participation is still much less than on the longer established Christmas bird counts. Table 3 compares the 2001 NAMC results with the most recent Christmas count results (LeBaron 2001), although the two surveys are done at different times of the year under vastly different conditions of weather, bird activity, food availability and other factors. As expected, the Christmas counts, with far greater participation by birders (497 versus 194), found 1/3 fewer species and over 6 times as many individuals. Christmas counts again exceeded the number of party-hours on

NAMC counts by over 40%. There were more party-miles on NAMC counts than on Christmas counts by about 22%.

Last year San Miguel County had the high number of species after toppling Grant County, which had held the title for the previous eight years. Again, San Miguel County had the high count with 188 species. Following closely were Grant with 185, Socorro with 181 and Eddy with 175. Because of good coverage and a wide variety of habitats, it should be expected that these counties will always have high numbers, again depending on coverage and availability of participants. As is usual, Chaves County had the highest number of individuals followed by Eddy, Grant and San Miguel Counties.

San Miguel County had the most unique species with 10, followed closely by Socorro (8), Eddy (7) and Grant (7). Grant County again had the high count for individual species with 70, followed by San Miguel with 45.3, Eddy with 40.5 and Socorro with 35.1. In many instances there was a tie in the high count for an individual species. In tabulating this, this resulted in a fractional number. If two counties had the same number of Ross's Goose for example, each county would be marked as 0.5 for that species, if three counties tied, each county would be marked as 0.33 for that species and so on.

Mourning Dove was the only species seen on all 23 counts. American Kestrel, European Starling, Red-winged Blackbird and Bullock's Oriole were seen on 22 of 23 counts. As always, several unusual species were recorded on count day and some are discussed in the county summaries: Pacific Loon, Brown Pelican, Rough-legged Hawk, Merlin (in three counties), Eastern Wood-Pewee, Yellow-throated Vireo, Carolina Wren, Blue-winged Warbler, Blackburnian Warbler, Yellow-throated Warbler (in two counties), Mourning Warbler, Botteri's Sparrow and two very late American Tree Sparrows. In the following tabulations Ringed Turtle-Dove is included as it was in the Christmas count results. The origin of this species in the state is not clear but this year they showed up in Chaves and Santa Fe Counties.

The 2002 count will take place on 11 May, the second Saturday of the month and the results of that count will also appear in a future issue of *NMOS Bulletin*. Individuals interested in taking part in an already established count or in initiating a count in a county not currently covered are urged to contact the author at the above address or the county compilers.

Table 4 presents the complete species list by county for the 2001 count. Highlights are summarized here by county.

Bernalillo County. This county dropped below 100 species this year but still produced a good representation of area birds. High count was recorded for one

species. Unusual species included two Whip-poor-wills and two Lewis's Woodpeckers. With enough participation, this count could easily get 100 species annually.

Chaves County. Like many other counties, Chaves County dropped slightly in the number of species, and that may at least be partially attributed to a bad storm in the area on the night before the count. In spite of that, Chaves County produced 3 unique species (Black-bellied Plover, Baird's Sandpiper, American Tree Sparrow), had highs for 28 species and had high numbers of Stilt Sandpipers (311), Black Terns (72), and Red-headed Woodpeckers (9). Black Terns have dropped in numbers in the past few years in the Pecos Valley. The number of Stilt Sandpipers is likely a state high count for a single day. Chaves County had the highest number of individuals found on count day.

Colfax County. This first-year Colfax County count was compiled by Dave Cleary and had 4 participants. No unique species was found but high counts were recorded for 9 species. The most interesting find was a concentration of over 2000 Western Grebes on Eagle Nest Lake.

DeBaca County. Although fewer species were found on the DeBaca count than in recent years, the species found were a good sample of what might be expected in that area during spring. No unique species or high counts was recorded. Only one observer was able to cover the county. Hoppe reported that several species departed just before the count, including an Eastern Phoebe and several warblers. The number of Eurasian Collared-Doves continues to increase markedly with birds now nesting at Lake Summer.

Doña Ana County. Although Doña Ana County had been covered twice in the past, this was the first time that a group covered the county for the entire day rather than just part of the day. The two observers recorded 86 species and 1,771 individuals. No unique species was record, but two high counts were noted in the county. Some species of interest include: Cattle Egret (16), Phainopepla (29), and a single Cassin's Finch.

Eddy County. Eddy County experienced a slight rise in the number of species. Six unique species (Brown Pelican, Harris's Hawk, Semipalmated Plover, Sanderling, Caspian Tern, Eastern Wood-Pewee and Prothonotary Warbler) and high counts for 40.5 species were recorded. As in recent years, few shorebirds were found at the Loving salt lakes where once thousands occurred. Other

unusual species included Least Bittern, Chimney Swifts, Eastern Phoebe, and Yellow-throated Warbler.

Grant County. Grant County was barely edged out by San Miguel County in the number of species, being only 3 species behind. Grant County continues to hold the all-time high count for NAMC counts in New Mexico with 202 species in 1999. Grant County continued to dominate the count in many other aspects including high counts for 70 species. Grant also had 7 unique species: Northern Goshawk, Spotted Owl, Magnificent and Costa's Hummingbirds, Black-tailed Gnatcatcher, Painted Redstart and Abert's Towhee. Although the compiler reported that there were few migrants in general, they were still able to come up with 16 species of flycatchers (one more than last year) and 14 species of warblers. Encouraging were 4 Spotted Owls and 7 Flammulated Owls. An Eastern Kingbird was unusual that far west in the state.

Guadalupe County. A second-year effort in Guadalupe County found 38 species, up four from the previous year. High counts were noted for 13 species and no unique species was found. The compilers reported that water and shorebird numbers were lower due to high water in the Pecos. Also mentioned was the ongoing impact of "black-water," which was a result of the 2000 Pecos Wilderness fires.

Harding County. Another single-observer count was sent in from Harding County. This is the third year of this count in Harding County, a county that is one of the poorest known in the state. Fifty species (the same as last year) were found, which included high counts for two species and no unique species. As last year, very high numbers of Spotted Towhees were found (350) and better conditions on the ground seemed to cause an increase in Lark Buntings in the area. The single Scott's Oriole was found in the Canadian River Canyon.

Hidalgo County. Hidalgo County dropped a few species this year but again produced a fine list for an area with few birders and little surface water. Six unique species were found (Montezuma Quail, Common Ground-Dove, Broad-billed Hummingbird, Dusky-capped Flycatcher, Thick-billed Kingbird and Botteri's Sparrow). High counts were recorded for 10 species. By the date of the count, most of the migrants had already passed through. This count has a tremendous potential with enough observers; obviously it is impossible to cover Hidalgo County with two observers but the two who do cover it do an excellent job.

Lea County. A single party again surveyed Lea County and found 44 species, 2 fewer than the previous year. No unique species was found, but high counts were noted for 1.5 species. A late Ross's Goose was found along with White-faced Ibis, Franklin's Gull and Rose-breasted Grosbeak. A New Mexico NAMC high of 33 Scissor-tailed Flycatchers was noted.

Los Alamos County. Los Alamos returned after a year's absence due to the Cerro Grande Fire. They had an excellent count with more observers than normal (16), which resulted in high numbers of Turkey Vulture, White-winged Dove, Broad-tailed Hummingbirds and others. The compiler also reported low number of Brown-headed Cowbirds. Los Alamos County found highs for 5.5 species and one unique species (Blue Grouse).

Luna County. Luna County again found 75 species, the same as the previous year and, again, with only a single observer. No unique species was found, but high counts for two species were noted. Several late montane species (Sharp-shinned Hawk, White-breasted Nuthatch, Townsend's Solitaire, Cedar Waxwing, Dark-eyed Junco, Cassin's Finch, Pine Siskin and American Goldfinch) were noted.

McKinley County. With 9 observers in 2001, the McKinley County count found 144 species, up from 121 in 2000. High counts were recorded for 8.8 species and one unique species (Sage Sparrow) was found. Several unusual species were documented with photographs: Least Tern, White-winged Dove, an early Yellow-billed Cuckoo and Black-chinned Sparrow. Dave Cleary has compiled this count for a number of years and has relocated in a different part of the state. He should be congratulated for a fine job over the years with excellent documentation of unusual sightings.

Roosevelt County. The Roosevelt compiler reported a general lack of birds, and rainfall the previous night prevented him from visiting the Lesser Prairie-Chicken leks. In spite of that, the count turned in a respectable 51 species including an amazing 4 unique species (Yellow-throated Vireo, Blackburnian Warbler, American Redstart and Mourning Warbler). High counts were noted for 8 species. The four unique species plus several other typically eastern birds were found at the Melrose Trap.

Sandoval County. Sandoval County dropped only five species from last year and ended up with 109. High counts were noted for five species, and the count had one unique species (Blue-winged Warbler). Two Three-toed Woodpeckers were found, one of only two counts to find this species. With the recent fires, this species should be easier to find for several years to come.

San Juan County. San Juan increased by five species over 2000 to 131 and ended up with the 6th highest species count in the state. The count turned in highs for 10.3 species and 3 unique species (a very late Rough-legged Hawk, Willet and Winter Wren). Also late was a slate-colored form of the Dark-eyed Junco. White-winged Doves were again found at this northern outpost for this species.

San Miguel County. For the second year in a row, a 10-person effort in San Miguel County recorded the highest number of species in 2001 with 188. High counts were recorded for 45.5 species (second highest in the state), and 10 unique species were recorded: Pacific and Common Loons, Bufflehead, Red-breasted Merganser, Marbled Godwit, California Gull, Cassin's Vireo, Brown Thrasher, Northern Parula and Hermit Warbler. This was the fifth year for participation from San Miguel, and 16 new species were added to the all-time totals for the county. All of this was done with 7 fewer species of shorebirds and 3 fewer species of warblers than the previous year.

Santa Fe County. Two fewer species were recorded on the Santa Fe County count in 2001, which still produced a respectable 116 species. High counts were recorded for 10 species, and no unique species was recorded. Numbers on many species were reported as lower than normal. Ring-necked Pheasant, Ring-billed Gull, and Eastern Kingbird were all considered unusual. Two species new to the count were Prairie Falcon and Three-toed Woodpecker. Again, Santa Fe County had the highest number of participants of any county in the state with 30 counters.

Sierra County. A new count this year was Sierra County, which was compiled by Randy Gray, who fortunately ran into several other birders that day who also provided him with a list. A first-time effort produced a respectable 77 species. Two Rose-breasted Grosbeaks provided the only high count (in a tie with 4 other counties), and no unique species was found. This count has a tremendous amount of potential.

Socorro County. Like many counties, Socorro County dropped a few species. Dropping 5 species from 2000 still gave Socorro County a very good total of 181

species, one of the highest of any NAMC count. Socorro County had the fourth highest count of individuals and eight unique species: Tricolored Heron, Greater Scaup, Common Moorhen, Least Sandpiper, Red-necked Phalarope, Carolina Wren, and Olive and Nashville Warblers. Amazingly, only Socorro County found Least Sandpiper on count day. Other unusual species included Mississippi Kite, Least Tern, Scissor-tailed Flycatcher and Bronzed Cowbird. Fourteen species of warblers were found on count day.

Taos County. Taos County dropped 12 species from the previous year and finished at 110, but still ended up finding several interesting species. High counts were recorded for 15 species, along with two unique species (American Bittern, American Dipper). As in recent years, high numbers of Marsh Wrens (35) were found. An Orchard Oriole was unusually far north.

Valencia County. A second-year count in Valencia County produced 64 species. No high count or unique species was found. No unusual species were found. As with many counts, this one is short of participants. With varied habitat this count could consistently get 100 species easily each year with enough participants.

ACKNOWLEDGMENTS

Thanks are extended to Bruce Neville who has been instrumental in getting additional counties to participate in this effort and in helping with this article and others of this type.

LITERATURE CITED

LeBaron, G. S. 2001. One-hundred First Christmas Bird Count. *American Birds*. National Audubon Society. New York, New York.

Table 1. County summary of 2001 North American Migration Count in New Mexico

County	# of species	# of individ.	# of high counts	# of unique species	party-hours	party-miles	# of observ.	compiler
1 Bernalillo	94	1,002	1.0	0	21.70	215.2	5	Jim Place
2 Chaves	118	8,808	28.0	3	43.25	445.5	19	Sherry Bixler
3 Colfax	72	3,741	9.0	0	19.00	152.0	5	David Cleary
4 DeBaca	56	743	0.0	0	11.00	54.0	1	Roger K. Hoppe
5 Dona Ana	86	1,771	2.0	0	12.50	213.5	2	Marcy Scott & Jimmie Zabriskie
6 Eddy	175	7,547	40.5	7	103.30	870.0	22	Bob Nieman
7 Grant	185	6,675	70.0	7	70.00	385.0	28	Robert Wilcox
8 Guadalupe	38	342	1.3	0	7.50	5.0	2	Jane and Rick Lewis
9 Harding	50	869	2.0	0	6.00	65.0	1	Robert G. Cates
10 Hidalgo	106	911	10.0	6	21.50	160.0	2	Alan Craig
11 Lea	44	661	1.5	0	9.00	84.0	2	Pat McCasland
12 Los Alamos	81	1,477	5.5	1	34.75	156.3	14	Stephen Fettig
13 Luna	75	1,296	2.0	0	14.00	210.0	1	Larry K. Malone
14 McKinley	144	2,917	8.8	1	40.50	471.0	9	David Cleary
15 Roosevelt	51	451	8.0	4	12.00	121.0	1	Lawry Sager
16 Sandoval	109	1,023	5.0	1	21.00	330.0	3	Terry Brownell
17 San Juan	131	3,015	10.3	3	46.25	628.5	18	John Rees
18 San Miguel	188	6,298	45.5	10	66.00	876.0	10	Bill West
19 Santa Fe	116	3,235	10.0	0	76.75	537.0	30	Linda Mowbray
20 Sierra	77	833	0.2	0	14.00	117.0	5	Randy Gray
21 Socorro	181	4,167	35.1	8	57.50	343.0	7	Doug Emkalns
22 Taos	110	2,431	15.0	2	39.00	381.0	5	Karen R. Epperson
23 Valencia	64	553	0.0	0	10.50	107.0	2	Celestyn M. Brozek
	102.22	60,765	311.0	53	757.00	6627.0	194	

Table 2. Historical comparison of New Mexico NAMC results

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Counties Surveyed	3	5	10	11	13	14	16	24	23	23
Total Species	222	218	260	256	268	268	278	307	309	311
Total Individuals	13,969	15,538	33,374	40,584	43,246	38,504	54,996	80,040	75,013	60,765
Party-Hours	182	118	445	500	467	484	478	838	739	757
Party-Miles	894	676	2,251	2,768	2,468	3,097	3,761	5,281	5,284	6,627
Total Observers	33	59	101	151	139	137	170	197	183	194

Table 3. Comparison of New Mexico 2000-2001 Christmas Count and 2001 NAMC Results

	# of counts	total # of species	avg. # of species	total # of individuals	party-hours	total party-miles	total observers
Christmas counts	27	237	85.93	375,605	1,349.25	5,420.9	497
NAMC counts	23	311	102.22	60,765	757.00	6,627.0	194

NOTE: "Total Observers: for Christmas count is not corrected for duplicate observers. Party-hours and party-miles totals do not include feeder watching or owling

Table 4. New Mexico North American Migration Count, 12 May 2001

Species	BERN	CHAV	COLF	DEBA	DONA	EDDY	GRAN	GUAD	HARD	HIDA	LEA	L AL	LUNA
1 Pacific Loon													
2 Common Loon													
3 Pied-billed Grebe						2	5				3		
4 Eared Grebe		1	2			2	2						
5 Western Grebe		1	2002		1	1	3						
6 Clark's Grebe				2		22							
7 Amer. White Pelican				21		56							
8 Brown Pelican						2							
9 Double-crested Cormorant	1	4	2	8		2	1	4					
10 Neotropic Cormorant													
11 American Bittern													
12 Least Bittern						1							
13 Great Blue Heron	1	2	3	2		29	17		1				2
14 Great Egret						9							
15 Snowy Egret		24			3	47	1						
16 Little Blue Heron		1											
17 Tricolored Heron													
18 Cattle Egret					16	22							
19 Green Heron	1	10			1	13	1						
20 Black-crowned Night-Heron	1	5			1	15	1				1		
21 White-faced Ibis		110	106	3	8	59	19				4		
22 Turkey Vulture		63	3	29	7	384	117	24	6	38		49	5
23 Snow Goose		3			1								
24 Ross' Goose					1						1		
25 Canada Goose	18	4	23						2				
26 Wood Duck	2												1
27 Gadwall		49	3			2	1						
28 American Wigeon	2		8				2						3
29 Mallard													
Mallard form	13	167	61	5		28	40		2	14			1
Mexican form					22					20			28
Mallard X hybrid	1	3											
30 Blue-winged Teal	2	32	11			33	4	5					3
31 Cinnamon Teal	8	21				2							
32 Northern Shoveler		25	57			20							1
33 Northern Pintail		1											
34 Green-winged Teal		64	2			21				1			3
35 Canvasback	2	1											
36 Redhead		15	39		1		10						
37 Ring-necked Duck				2		2	2						
38 Greater Scaup													
39 Lesser Scaup		1	44										1
40 Bufflehead													
41 Common Goldeneye		3											
42 Common Merganser							12						
43 Red-breasted Merganser													
44 Ruddy Duck	4	30		3	11	150	19				2		1
duck species		11											
45 Osprey					1	5							
46 Mississippi Kite		36									2		
47 Northern Harrier		5				1							
48 Sharp-shinned Hawk							2						1
49 Cooper's Hawk	3		2			1	5			2			
50 Northern Goshawk							2						
Accipiter species												2	
51 Common Black-Hawk							11			1			

Table 4. New Mexico North American Migration Count, 12 May 2001

Species	MCKI	ROOS	SAND	SJUA	SMIG	S FE	SIER	SOCO	TAOS	VALE	Totals
1 Pacific Loon					1						1
2 Common Loon					3						3
3 Pied-billed Grebe	7		1	4	4			19			45
4 Eared Grebe	21		15	4	169			2			218
5 Western Grebe	28		5	106	34		1	2			2184
6 Clark's Grebe					149		4	4			181
7 Amer. White Pelican	1		18	2	15						113
8 Brown Pelican											2
9 Double-crested Cormorant			45	2	10		3	2			84
10 Neotropic Cormorant							2	35			37
11 American Bittern									1		1
12 Least Bittern								2			3
13 Great Blue Heron	1			3	2		1	12		1	77
14 Great Egret					1		1	24			35
15 Snowy Egret	3				2			150		1	231
16 Little Blue Heron								1			2
17 Tricolored Heron								1			1
18 Cattle Egret							8	15			61
19 Green Heron			3				3	5		3	40
20 Black-crowned Night-Heron				22	7			13	2	6	74
21 White-faced Ibis	48			8	32		1	142	3	2	545
22 Turkey Vulture	12		9	13	84	28	17	27	12		927
23 Snow Goose					1			2			7
24 Ross' Goose											2
25 Canada Goose	30		7	32	53			78	2	2	251
26 Wood Duck			4					5			12
27 Gadwall	16		2	3	61			74	31		242
28 American Wigeon					4			2	2		23
29 Mallard											
Mallard form	96	6	39	69	89	40	8	71	30	18	797
Mexican form											70
Mallard X hybrid											4
30 Blue-winged Teal	3		6	4	23			37			163
31 Cinnamon Teal	20		1	1	15	2		22	16	4	112
32 Northern Shoveler	24		1	2	65			17	19		231
33 Northern Pintail	2			3	7			2			15
34 Green-winged Teal	60		2	3	43			109	2		310
35 Canvasback	5				4						12
36 Redhead	59		2		91			58			275
37 Ring-necked Duck					3			4	1		14
38 Greater Scaup								1			1
39 Lesser Scaup	8		1		14			2			71
40 Bufflehead					6						6
41 Common Goldeneye				5							8
42 Common Merganser	2								4	1	19
43 Red-breasted Merganser					1						1
44 Ruddy Duck	23		11	10	200			27	16		507
duck species											11
45 Osprey	2										8
46 Mississippi Kite					2		1	1			42
47 Northern Harrier	1			1				1			9
48 Sharp-shinned Hawk						1					4
49 Cooper's Hawk	3		4	1	4	1		2			28
50 Northern Goshawk											2
Accipiter species											2
51 Common Black-Hawk											12

Table 4. New Mexico North American Migration Count, 12 May 2001

	Species	BERN	CHAV	COLF	DEBA	DONA	EDDY	GRAN	GUAD	HARD	HIDA	LEA	LAL	LUNA
52	Harris' Hawk						4							
53	Swainson's Hawk	1	2	16	1	2	4	9		1	6	10		11
54	Zone-tailed Hawk						2	4			2		1	
55	Red-tailed Hawk	2	3		1	1	10	16	3	1	6	1	2	1
56	Ferruginous Hawk													
57	Rough-legged Hawk													
	hawk species		2											
58	Golden Eagle						1							
59	American Kestrel	2	13	7	1	6	2	23	4	1	16		6	2
60	Merlin		1						1					
61	Prairie Falcon			1										
62	Peregrine Falcon							2	1					
63	Ring-necked Pheasant	1	7				2							
64	Blue Grouse												1	
65	Wild Turkey			31			14	3			6			
66	Northern Bobwhite													
67	Scaled Quail	3	19			2	42	6	1		4	7	2	7
68	Gambel's Quail					21		291			67			33
69	Montezuma Quail										1			
70	Virginia Rail							4						
71	Sora						2	1						
72	Common Moorhen													
73	American Coot	12	52	87	3	3	55	80			5	15		5
74	Black-bellied Plover		2											
75	Snowy Plover		69				12							
76	Semipalmated Plover						4							
77	Killdeer	2	68	8	2	16	51	25	3		10	17		2
78	Black-necked Stilt	4	81				10							
79	American Avocet		58	6			48			1				
80	Greater Yellowlegs		5				18							
81	Lesser Yellowlegs		1				2							
82	Solitary Sandpiper													
83	Willet													
84	Spotted Sandpiper	2	12			3	29	31	2		3	4		4
85	Long-billed Curlew		1				1							
86	Marbled Godwit													
87	Sanderling						1							
88	Western Sandpiper				3		17							
89	Least Sandpiper													
90	Baird's Sandpiper		3											
	unidentified peeps													
91	Still Sandpiper		311				2							
92	Long-billed Dowitcher		48				24							
93	Common Snipe						1							
94	Wilson's Phalarope		445	20			120	23						
95	Red-necked Phalarope													
96	Franklin's Gull		7				2					1		
97	Bonaparte's Gull				1		13							
98	Ring-billed Gull		31	1	13		5	2						
99	California Gull													
100	Caspian Tern						1							
101	Forster's Tern		2				4							
102	Least Tern		6				11							
103	Black Tern		72		17		12							
104	Rock Dove	34	337	2		18	109	25				3	6	4
105	Band-tailed Pigeon							68					23	

Table 4. New Mexico North American Migration Count, 12 May 2001

	Species	MCKI	ROOS	SAND	SJUA	SMIG	S FE	SIER	SOCO	TAOS	VALE	Totals
52	Harris' Hawk											4
53	Swainson's Hawk		6			13		2	7		3	94
54	Zone-tailed Hawk											9
55	Red-tailed Hawk	2		1	10	13	6	3	2	7		91
56	Ferruginous Hawk				2	1	1					4
57	Rough-legged Hawk				1							1
	hawk species											3
58	Golden Eagle				4					1		6
59	American Kestrel	9	6	2	13	25	18	2	8	7	8	181
60	Merlin				1							3
61	Prairie Falcon				1	4	1					7
62	Peregrine Falcon	2					1					6
63	Ring-necked Pheasant		1	5	3				11		7	37
64	Blue Grouse											1
65	Wild Turkey				2	6			1			63
66	Northern Bobwhite		2			11						13
67	Scaled Quail		8			1	7		10			119
68	Gambel's Quail			4	12			15	31			474
69	Montezuma Quail											1
70	Virginia Rail	4			9				5			22
71	Sora	1										4
72	Common Moorhen								2			2
73	American Coot	174		7	23	1198	16		176	23	1	1935
74	Black-bellied Plover											2
75	Snowy Plover											81
76	Semipalmated Plover											4
77	Killdeer	19	6	3	35	28	9	1	24	3	4	336
78	Black-necked Stilt				3				5		14	117
79	American Avocet	8	2		20	53			13			209
80	Greater Yellowlegs					5			4			32
81	Lesser Yellowlegs								9			12
82	Solitary Sandpiper	1	1						1			3
83	Willet				1							1
84	Spotted Sandpiper	21	1		2	11	3	6	19	4		157
85	Long-billed Curlew					13						15
86	Marbled Godwit					3						3
87	Sanderling											1
88	Western Sandpiper	15										35
89	Least Sandpiper								1			1
90	Baird's Sandpiper											3
	unidentified peeps								2			2
91	Stilt Sandpiper								12			325
92	Long-billed Dowitcher	1			2	4			70			149
93	Common Snipe									2		3
94	Wilson's Phalarope	44	4		117	280			33	28		1094
95	Red-necked Phalarope								1			1
96	Franklin's Gull	3				3			24			40
97	Bonaparte's Gull					1						15
98	Ring-billed Gull	3		50	3	28	12					148
99	California Gull					4						4
100	Caspian Tern											1
101	Forster's Tern	4				8						18
102	Least Tern	1							1			19
103	Black Tern					12			3			116
104	Rock Dove	26		44	43	20	110		20	50		851
105	Band-tailed Pigeon					8						99

Table 4. New Mexico North American Migration Count, 12 May 2001

Species	BERN	CHAV	COLF	DEBA	DONA	EDDY	GRAN	GUAD	HARD	HIDA	LEA	L AL	LUNA
106 Ringed Turtle-Dove		3											
107 Eurasian Collared-Dove	4	34		21		1	1				2		
108 White-winged Dove	21	300		5	93	256	54			28		5	48
109 Mourning Dove	79	691	17	24	130	676	504	20	30	50	37	23	339
110 Inca Dove		5		2	2	30					1		2
111 Common Ground-Dove										1			
112 Yellow-billed Cuckoo				1		2							
113 Greater Roadrunner		4			4	8	5						4
114 Barn Owl						1	1				1		
115 Flammulated Owl	2						7						
116 Western Screech-Owl						1	2			1			
117 Great Horned Owl		1	7			3	6			3	2		
118 Northern Pygmy-Owl													
119 Elf Owl						6	4			3			
120 Burrowing Owl	1	14	4		1	3	1				1		3
121 Spotted Owl							4						
122 Lesser Nighthawk					11	15	2			1			1
123 Common Nighthawk		2	7			64							
124 Common Poorwill						1	1			1			
125 Whip-poor-will	2						11						
126 Chimney Swift		3				5							
127 White-throated Swift	1					15	35		20	2		18	10
128 Broad-billed Hummingbird										1			
129 Magnificent Hummingbird							1						
130 Black-chinned Hummingbird	34	17		12	15	26	106	2		2		2	3
131 Costa's Hummingbird							1						
132 Broad-tailed Hummingbird	5		4			4	48			1		83	
hummingbird species						1			1			10	
133 Belted Kingfisher			1	1			1						
134 Lewis' Woodpecker	2		3									2	
135 Red-headed Woodpecker		9		2									
136 Acorn Woodpecker							14			3		9	
137 Gila Woodpecker							12			19			
138 Red-naped Sapsucker							4						
139 Williamson's Sapsucker												1	
140 Ladder-backed Woodpecker					8	21	7			5	1		3
141 Downy Woodpecker							2					2	
142 Hairy Woodpecker			3				6					9	
143 Three-toed Woodpecker												1	
144 N. (red-shafted) Flicker	4		5			3	30			5		22	
145 N. Beardless-Tyrannulet										2			
146 Olive-sided Flycatcher						7	2			1			
147 Greater Pewee							8						1
148 Western Wood-Pewee	5	4	2	1	3	11	49		1	2		7	3
149 Eastern Wood-Pewee						1							
150 Willow Flycatcher							4						
151 Hammond's Flycatcher						1	1					4	1
152 Dusky Flycatcher						1	1					1	
153 Gray Flycatcher							4			1			
154 Cordilleran Flycatcher							3		1			3	1
Empidonax species					2		7					2	1
155 Black Phoebe	5	1			1	12	34		1	3			
156 Eastern Phoebe						1			2				
157 Say's Phoebe	3	1	6	1	1	38	41	12	4	6		6	3
158 Vermillion Flycatcher						15	69			17			
159 Dusky-capped Flycatcher										19			

Table 4. New Mexico North American Migration Count, 12 May 2001

	Species	MCKI	ROOS	SAND	SJUA	SMIG	S FE	SIER	SOCO	TAOS	VALE	Totals
106	Ringed Turtle-Dove						1					4
107	Eurasian Collared-Dove					1						64
108	White-winged Dove	2			3	1	2	44	45		1	908
109	Mourning Dove	93	87	29	119	117	104	20	94	24	90	3397
110	Inca Dove								6			48
111	Common Ground-Dove											1
112	Yellow-billed Cuckoo	1										4
113	Greater Roadrunner		1	3		1	1	4	5		5	45
114	Barn Owl		4		1	2			1			11
115	Flammulated Owl	2							2			13
116	Western Screech-Owl			2			2		3			11
117	Great Horned Owl	1	2	4		3			4	1		37
118	Northern Pygmy-Owl	1							1			2
119	Elf Owl											13
120	Burrowing Owl	1	26	1					1		3	60
121	Spotted Owl											4
122	Lesser Nighthawk								14			44
123	Common Nighthawk					15			4			92
124	Common Poorwill	3				3			2			11
125	Whip-poor-will					1			6			20
126	Chimney Swift											8
127	White-throated Swift	7		15	5	11	1		6	7		153
128	Broad-billed Hummingbird											1
129	Magnificent Hummingbird											1
130	Black-chinned Hummingbird	34		69	41	14	32	10	42	1	35	497
131	Costa's Hummingbird											1
132	Broad-tailed Hummingbird	13		6	10	56	82	1	7	85		405
	hummingbird species											12
133	Belted Kingfisher				1	2	1		1	5	2	15
134	Lewis' Woodpecker	1			2	11	2			3	3	29
135	Red-headed Woodpecker					3						14
136	Acorn Woodpecker	6		1					4			37
137	Gila Woodpecker											31
138	Red-naped Sapsucker	2			1	6	4			2		19
139	Williamson's Sapsucker			1		1	2					5
140	Ladder-backed Woodpecker					6		7	5			64
141	Downy Woodpecker			2		7	1			4	2	20
142	Hairy Woodpecker	8		4	1	4	4		2	1		42
143	Three-toed Woodpecker			2		2	1					6
144	N. (red-shafted) Flicker	14		9	9	43	37		7	16	4	208
145	N. Beardless-Tyrannulet											2
146	Olive-sided Flycatcher			1			1					12
147	Greater Pewee											9
148	Western Wood-Pewee	11		7	1	4	9	2	17	1	1	141
149	Eastern Wood-Pewee											1
150	Willow Flycatcher											4
151	Hammond's Flycatcher			4		1	3					15
152	Dusky Flycatcher	2		12		1				7		25
153	Gray Flycatcher	4			4	6			3			22
154	Cordilleran Flycatcher	2					7		3	2		22
	<i>Empidonax</i> species				1		3					16
155	Black Phoebe	5		4		2	14	2	15	1	1	101
156	Eastern Phoebe					3						6
157	Say's Phoebe	7		2	3	22	37		5	4		202
158	Vermillion Flycatcher					2		6	1		2	112
159	Dusky-capped Flycatcher											19

Table 4. New Mexico North American Migration Count, 12 May 2001

Species	BERN	CHAV	COLF	DEBA	DONA	EDDY	GRAN	GUAD	HARD	HIDA	LEA	LAL	LUNA
160 Ash-throated Flycatcher	7	1		2	9	28	61		2	19	2	7	
161 Brown-crested Flycatcher							10			3			
162 Cassin's Kingbird	2	8	17	5	1	43	103			36		18	1
163 Thick-billed Kingbird										3			
164 Western Kingbird	12	1,243	52	37	136	475	122	22	58	6	133		171
165 Eastern Kingbird			4				1						
166 Scissor-tailed Flycatcher						4					33		
167 Loggerhead Shrike		4			1	6	9			5	1		4
168 Bell's Vireo					1	21	37			2			
169 Gray Vireo													
170 Yellow-throated Vireo													
171 Plumbeous Vireo	1					16	61					24	
172 Cassin's Vireo													
173 Hutton's Vireo							7			2			
174 Warbling Vireo	3				1		81			2		5	
175 Steller's Jay	5						19					23	
176 Blue Jay		27				20							
177 Western Scrub-Jay	15		1			23	41		4			17	
178 Mexican Jay							40			23			
179 Pinyon Jay							3					1	
180 Clark's Nutcracker												1	
181 Black-billed Magpie			53					11				2	
182 American Crow	26		16				9	6	12			23	
183 Chihuahuan Raven		15		2	38	63	141			9	65		24
184 Common Raven	16		23	3			103	15	10	6		69	
raven species										3			
185 Horned Lark			28		3	3	33		2	33			
186 Purple Martin							12						
187 Tree Swallow						4							
188 Violet-green Swallow						19	183		10	2		95	
189 N. Rough-winged Swallow	2	56	2		57	30	34			8		1	
190 Bank Swallow	20	10										4	
191 Barn Swallow	3	76	70	27	86	230	47		2	34	6		6
192 Cliff Swallow		155	60	179	173	645	351	21	50	5			
193 Cave Swallow					14	802							
swallow species		2											
194 Black-capped Chickadee	1												
195 Mountain Chickadee	6						9		2			32	
196 Bridled Titmouse							9			2			
197 Juniper Titmouse	3					2	7			1		4	
198 Verdin					11	1	46			3			
199 Bushlit	3	4				12	57	6		2		4	
200 Red-breasted Nuthatch	2												
201 White-breasted Nuthatch	3					16	17		1			22	1
202 Pygmy Nuthatch							2					10	
203 Brown Creeper		1					7					1	
204 Cactus Wren					4	12	17			1	3		18
205 Rock Wren					2	3	8		1			5	1
206 Canyon Wren				1		12	5	1	2	3		4	
207 Carolina Wren													
208 Bewick's Wren	6				1	16	78	2		15		1	
209 House Wren		1	2			3	12			2		2	1
210 Winter Wren													
211 Marsh Wren		1				1							
wren species		1											
212 American Dipper													

Table 4. New Mexico North American Migration Count, 12 May 2001

	Species	MCKI	ROOS	SAND	SJUA	SMIG	S FE	SIER	SOCO	TAOS	VALE	Totals
160	Ash-throated Flycatcher	19	1	10	11	37	26	7	17	4		270
161	Brown-crested Flycatcher											13
162	Cassin's Kingbird	12		6	24	46	31		3	13		369
163	Thick-billed Kingbird											3
164	Western Kingbird	3	40	6	29	87	13	174	117			2936
165	Eastern Kingbird					2	1		1			9
166	Scissor-tailed Flycatcher		21						1			59
167	Loggerhead Shrike	1	5		4	2		6	4		1	53
168	Bell's Vireo											61
169	Gray Vireo	6			3							9
170	Yellow-throated Vireo		1									1
171	Plumbeous Vireo	20		4	7	14	7	1	9	17		181
172	Cassin's Vireo					1						1
173	Hutton's Vireo											9
174	Warbling Vireo	6		31	6	25	29	2	14	47		252
175	Steller's Jay	11		6	4	19	20		5	35		147
176	Blue Jay		1			1						49
177	Western Scrub-Jay	9		16	19	17	47		2	18		231
178	Mexican Jay											63
179	Pinyon Jay	16		2	13	17	10			21		83
180	Clark's Nutcracker	2								1		4
181	Black-billed Magpie			1	51	43	92			115		368
182	American Crow			15	4	34	112		2	47	7	313
183	Chihuahuan Raven		11	18				3	8		5	402
184	Common Raven	124			118	84	115	7	15	64		772
	raven species								8		3	14
185	Horned Lark	25			38	93	14		4		1	277
186	Purple Martin	2										14
187	Tree Swallow								4			8
188	Violet-green Swallow	77		48	29	192	52	2	41	125		875
189	N. Rough-winged Swallow	9		3	102	26	32	32	77	35	2	508
190	Bank Swallow	1		2		2			2			41
191	Barn Swallow	30	4	4	5	21	25	53	152	11	32	924
192	Cliff Swallow	59		2	802	253	229	25	354		211	3574
193	Cave Swallow											816
	swallow species											2
194	Black-capped Chickadee			2	7	8	72		1	1	1	93
195	Mountain Chickadee	20		7	4	10	34		9	46		179
196	Bridled Titmouse											11
197	Juniper Titmouse	8			3	4	10			8		50
198	Verdin							3	4			68
199	Bushtit	4		8	2	14	15		10	4		145
200	Red-breasted Nuthatch	2		1	1	3			2			11
201	White-breasted Nuthatch	10		11	3	4	12		9	4	1	114
202	Pygmy Nuthatch	10		7	2	3	11					45
203	Brown Creeper											9
204	Cactus Wren							1				56
205	Rock Wren	8			9	21	2	4	6	13		83
206	Canyon Wren	4			2	4	1	1	1	4		45
207	Carolina Wren								1			1
208	Bewick's Wren	5		10	13	8	8	3	8			174
209	House Wren	13	1	6	1	28	9			4		85
210	Winter Wren					1						1
211	Marsh Wren									30		32
	wren species											1
212	American Dipper									2		2

Table 4. New Mexico North American Migration Count, 12 May 2001

Species	BERN	CHAV	COLF	DEBA	DONA	EDDY	GRAN	GUAD	HARD	HIDA	LEA	L AL	LUNA
213 Ruby-crowned Kinglet	2						1						1
214 Blue-gray Gnatcatcher	2					1							2
215 Black-tailed Gnatcatcher							5						
216 Western Bluebird			7			5	23						35
217 Mountain Bluebird			3										
218 Townsend's Solitaire					1	1	1			1		1	5
219 Swainson's Thrush										1			
220 Hermit Thrush	4						14					4	
221 American Robin	36	91	14	14	18	19	75	3	1			78	5
222 Gray Catbird													
223 Northern Mockingbird	9	132	18	17	59	285	50	3	2	10	38		19
224 Sage Thrasher							1						
225 Brown Thrasher													
226 Curve-billed Thrasher	2	6				4	25			2			4
227 Crissal Thrasher	4				1	3	6			1			1
228 European Starling	42	472	3	19	41	147	35	3	5	11	4	12	18
229 American Pipit							1						
230 Cedar Waxwing		12				28	2						12
231 Phainopepla					29		4			19			
232 Olive Warbler													
233 Blue-winged Warbler													
234 Orange-crowned Warbler							1					2	
235 Nashville Warbler													
236 Virginia's Warbler	3				1		14					12	
237 Lucy's Warbler					4		72			3			
238 Northern Parula													
239 Yellow Warbler		2			1	10	69	7		13			
240 Yellow-rumped Warbler													
Myrtle													
Audubon's	15					13							2
undifferentiated	1				5		31					11	
241 Black-thr. Gray Warbler	1						7						
242 Townsend's Warbler						3	1	1					
243 Hermit Warbler													
244 Blackburnian Warbler													
245 Yellow-throated Warbler						1							
246 Grace's Warbler	3					7	37					21	
247 American Redstart													
248 Prothonotary Warbler						1							
249 Northern Waterthrush						1							
250 Mourning Warbler													
251 MacGillivray's Warbler		3					3			1		3	1
252 Common Yellowthroat		1			3	7	28			18			
253 Wilson's Warbler			1		4	7	13						4
254 Red-faced Warbler							19						
255 Painted Redstart							7						
256 Yellow-breasted Chat	4				1	30	88						
warbler species		1											
257 Hepatic Tanager			1		1	14	20		1	5		1	
258 Summer Tanager	2				4	38	50			4			
259 Western Tanager	6	4			3	28	19					21	
260 Green-tailed Towhee	1	1					2						
261 Spotted Towhee	17		1			9	90		350	3		73	
262 Canyon Towhee	4			2	5	10	62		2	4		42	7
263 Abert's Towhee							10						
264 Cassin's Sparrow		5				26		2			1		

Table 4. New Mexico North American Migration Count, 12 May 2001

	Species	MCKI	ROOS	SAND	SJUA	SMIG	S FE	SIER	SOCO	TAOS	VALE	Totals
213	Ruby-crowned Kinglet			8		4	10			1		27
214	Blue-gray Gnatcatcher	2		2	7	1			2	17	1	37
215	Black-tailed Gnatcatcher							2				7
216	Western Bluebird	29			7	13	23		5	13		160
217	Mountain Bluebird	14			7	19	10			6		59
218	Townsend's Solitaire					2	4		2			18
219	Swainson's Thrush		1									2
220	Hermit Thrush	3	2			8	1		9	3		48
221	American Robin	27	1	22	37	130	82	15	26	113	3	810
222	Gray Catbird					1			4			5
223	Northern Mockingbird	12	11	3	14	41	6	10	63		7	809
224	Sage Thrasher	3					2			1		7
225	Brown Thrasher					1						1
226	Curve-billed Thrasher		5			1	1	1	2			53
227	Crisal Thrasher							1	2			19
228	European Starling	32		38	138	95	128	49	22	123	49	1486
229	American Pipit								2			3
230	Cedar Waxwing					14	132					200
231	Phainopepla							9	6			67
232	Olive Warbler								2			2
233	Blue-winged Warbler			1								1
234	Orange-crowned Warbler	6				7	4		3	31		54
235	Nashville Warbler								1			1
236	Virginia's Warbler	15					10		5	37		97
237	Lucy's Warbler							3	1			83
238	Northern Parula					1						1
239	Yellow Warbler	19	1	1	1	49	5	6	6	26	7	223
240	Yellow-rumped Warbler											
	Myrtle		1		1		2					4
	Audubon's	10		23	8		48	7	15	40		181
	undifferentiated	2				70			4			124
241	Black-thr. Gray Warbler				5				5	23		41
242	Townsend's Warbler			1								6
243	Hermit Warbler					1						1
244	Blackburnian Warbler		1									1
245	Yellow-throated Warbler					1						2
246	Grace's Warbler	3		4		10	2		21	2		110
247	American Redstart		1									1
248	Prothonotary Warbler											1
249	Northern Waterthrush					1			1			3
250	Mourning Warbler		1									1
251	MacGillivray's Warbler		1	2		4	5		1	2	1	27
252	Common Yellowthroat	17		1	2	2	3	6	31	1	4	124
253	Wilson's Warbler	11	1	1		1	2	1	7	1		54
254	Red-faced Warbler								5			24
255	Painted Redstart											7
256	Yellow-breasted Chat	21		6	1	6	4	3	17	14	2	197
	warbler species								2			3
257	Hepatic Tanager	2				5		2	7			59
258	Summer Tanager					7		4	20		3	132
259	Western Tanager	10		9	9	18	16	1	16	34		194
260	Green-tailed Towhee	13				2				4		23
261	Spotted Towhee	44		9	20	72	105		45	62	9	909
262	Canyon Towhee	4		2		5	15	5	1	3		173
263	Abert's Towhee											10
264	Cassin's Sparrow		2			24						60

Table 4. New Mexico North American Migration Count, 12 May 2001

Species	BERN	CHAV	COLF	DEBA	DONA	EDDY	GRAN	GUAD	HARD	HIDA	LEA	LAL	LUNA
265 Botteri's Sparrow										2			
266 Rufous-crowned Sparrow	2	1				2	4	3		1			1
267 American Tree Sparrow		2											
268 Chipping Sparrow	7	5				13	78	2	2	1		18	4
269 Clay-colored Sparrow													
270 Brewer's Sparrow							22				2		
271 Black-chinned Sparrow	3						6						
272 Vesper Sparrow			6		1		1		2			1	
273 Lark Sparrow	3	8	20	17	2	24	25	8	4	11	8		
274 Black-throated Sparrow	2				8	10	53			6			11
275 Sage Sparrow													
276 Lark Bunting		206	99	17		11	21		50	7	37		56
277 Savannah Sparrow									4				
278 Grasshopper Sparrow			3						2	1			
279 Song Sparrow						1	1		2				
280 Lincoln's Sparrow													
281 White-crowned Sparrow		36		5		22	75	6		1		1	1
sparrow species		3											
282 Dark-eyed Junco													
slate-colored													
Oregon									2				
pink-sided												4	
gray-headed						1				1		2	1
undifferentiated	3	1			1		27					1	
283 Northern Cardinal						21	70			5			
284 Pyrrhuloxia					2	20	1				2		
285 Rose-breasted Grosbeak		2				2	1			1	1		
286 Black-headed Grosbeak	30	1	1		11	14	138		50	11		23	2
287 Blue Grosbeak	4	9		2	5	43	35	3		3			
288 Lazuli Bunting							3		1				1
289 Indigo Bunting		3			2	2	3	21					
290 Painted Bunting						14							
bunting species													
291 Red-winged Blackbird	54	324	339	32	213	269	110	59		37	24	1	8
292 Eastern Meadowlark		2				9	8			13			3
293 Western Meadowlark	18	16	28	13	7	7	14	19					
meadowlark species		111				4			100		4		
294 Yellow-headed Blackbird		24				13	13				6		
295 Brewer's Blackbird		13	85			15	6					16	
296 Common Grackle	23	42	10	32		22			40				
297 Great-tailed Grackle	21	1,016	1	5	62	264	44			4	45		73
298 Bronzed Cowbird		2			1	3	4			4			3
299 Brown-headed Cowbird	14	19	10	28	4	63	285	4		18	4	9	2
blackbird species		5											
300 Orchard Oriole						37							
301 Hooded Oriole						1	16			6			
302 Bullock's Oriole	1	23	8	13	32	33	115	24		29	20	4	13
303 Scott's Oriole	2			1	4	3	2		1	2			2
304 Cassin's Finch		2			1		32					8	2
305 House Finch	75	482	40	38	102	235	331	8		27	14	161	205
306 Red Crossbill													
307 Pine Siskin	10	9		5	3	1	165			7		57	6
308 Lesser Goldfinch													
green-backed			6										
black-backed				2		6							
undifferentiated						8	58					2	4

Table 4. New Mexico North American Migration Count, 12 May 2001

Species	MCKI	ROOS	SAND	SJUA	SMIG	S FE	SIER	SOCO	TAOS	VALE	Totals
265 Botteri's Sparrow											2
266 Rufous-crowned Sparrow		2			7			1			24
267 American Tree Sparrow											2
268 Chipping Sparrow	22		5	13	46	26		7	28		277
269 Clay-colored Sparrow		3			1						4
270 Brewer's Sparrow	13			1	5	1		8	8		60
271 Black-chinned Sparrow	1		2						5		17
272 Vesper Sparrow	52			8	12	1					84
273 Lark Sparrow	32	2	3	18	42	27	5	9	1	5	274
274 Black-throated Sparrow				1		2	3	13			109
275 Sage Sparrow	2										2
276 Lark Bunting		27		5	63	2		8		2	611
277 Savannah Sparrow	3			3							10
278 Grasshopper Sparrow		2									8
279 Song Sparrow	7			2	5	2			26		48
280 Lincoln's Sparrow					3						3
281 White-crowned Sparrow	6	3		8	5	2	18	17		3	209
sparrow species											3
282 Dark-eyed Junco											
slate-colored				1							1
Oregon											2
pink-sided											4
gray-headed	4		7	5				7			28
undifferentiated	3				12	15			11		74
283 Northern Cardinal					6						102
284 Pyrrhuloxia								2			27
285 Rose-breasted Grosbeak		2		1	2		2				14
286 Black-headed Grosbeak	31		19	25	54	52	6	55	47	6	576
287 Blue Grosbeak	1	3	4	1	25	7	3	31	1	3	183
288 Lazuli Bunting	6		2	4	6	7		9	3	1	43
289 Indigo Bunting	1				1		1	5			39
290 Painted Bunting					2						16
bunting species		1									1
291 Red-winged Blackbird	133	19	58	86	265	119	60	472	130	78	2890
292 Eastern Meadowlark								7		4	46
293 Western Meadowlark	61	4	6	65	95	33	2	23	9	26	446
meadowlark species		50						1			270
294 Yellow-headed Blackbird	53		6	15	139			9	65		343
295 Brewer's Blackbird	67		11	25	57	35		3	64	3	400
296 Common Grackle				15	79	9		9	7		288
297 Great-tailed Grackle	7	34	17	18	9	56	5	85	13	4	1783
298 Bronzed Cowbird								1			18
299 Brown-headed Cowbird	64		6	59	39	29	19	130	43	13	862
blackbird species											5
300 Orchard Oriole									1		38
301 Hooded Oriole											23
302 Bullock's Oriole	24	15	1	12	70	44	50	20	22	15	588
303 Scott's Oriole	1				4			1			23
304 Cassin's Finch	8		3	4	1				3		64
305 House Finch	66		17	98	30	280	14	39	45	11	2298
306 Red Crossbill				1		1		3			5
307 Pine Siskin	123			19	123	76	3	51	86		744
308 Lesser Goldfinch											
green-backed				22							28
black-backed											8
undifferentiated	36		12		3	4		5			132

Table 4. New Mexico North American Migration Count, 12 May 2001

	Species	BERN	CHAV	COLF	DEBA	DONA	EDDY	GRAN	GUAD	HARD	HIDA	LEA	L AL	LUNA
309	American Goldfinch	15	5		17		46	2		5				5
310	Evening Grosbeak	3						41			2		68	
311	House Sparrow	128	682	103	26	174	305	214		12	4	92	104	45
	Species	94	118	72	56	86	175	185	38	50	106	44	81	75
	Individuals	1,002	8,808	3,741	743	1,771	7,547	6,675	342	869	911	661	1,477	1,296
	Party-Hours	21.7	43.25	19	11	12.5	103.3	70	7.5	6	21.5	9	34.75	14
	by foot	13.5	4	13.5	4	0.5	66	40	7.5	4	12.5	2	26	6
	by car	8.2	39.25	5.5	4	12	37	30	0	2	9	7	7.25	8
	by horseback	0	0	0	0	0	0	0	0	0	0	0	0	0
	by bike	0	0	0	0	0	0	0	0	0	0	0	1.5	0
	by boat	0	0	0	3	0	0	0	0	0	0	0	0	0
	Party-Miles	215.2	445.5	152	54	213.5	870	385	5	65	160	84	156.3	210
	by foot	10.2	3.5	2.7	3	0.5	28	21	5	5	9	4	19.25	7
	by car	205	442	149.3	40	213	842	364	0	60	151	80	107	203
	by horseback	0	0	0	0	0	0	0	0	0	0	0	0	0
	by bike	0	0	0	0	0	0	0	0	0	0	0	30	0
	by boat	0	0	0	11	0	0	0	0	0	0	0	0	0
	Observers	5	19	5	1	2	22	28	2	1	2	2	14	1

Table 4. New Mexico North American Migration Count, 12 May 2001

[illegible]

REPORTING NEW MEXICO BIRD OBSERVATIONS

It is common knowledge that birders have added greatly to our understanding of the bird life of New Mexico. In fact, birders now account for the majority of new data on species distribution and field identification of North American birds generally. However, unless field observations are properly documented and submitted for consideration, they have no way of becoming part of the ornithological record. For New Mexico, bird records are published seasonally in Field Notes, the National Audubon Society's journal dedicated to documenting the continent's bird life, and in the NMOS Field Notes, published quarterly by the New Mexico Ornithological Society.

Sandy Williams is New Mexico's Regional Editor for the NAS Field Notes; he is also responsible for maintaining the NMOS Archives, including all written bird sighting submissions as well as the Photo/Tape File. Contributors are asked to submit their records to Sandy by (AND PREFERABLY BEFORE) the deadlines listed below. After the information has been summarized for the NAS Field Notes, it is used by the NMOS Field Notes Committee to compile the more detailed NMOS Field Notes. All submissions become part of the NMOS Archives; even if all your reports are not published, they remain on file and available to future workers.

All New Mexico birders are encouraged to submit their sightings, especially of uncommon species and early, late or out-of-range birds. Please submit your records in taxonomic order and make sure all records include date, exact location, numbers of birds, age and sex/color morph, if applicable, and name(s) of observer(s).

Please provide details for unusual records. Details are usually needed for sightings of birds appearing in light-faced type in the NMOS Birds of New Mexico Field Check-list. Details can be submitted on a Rare/Unusual Report Form available from Sandy Williams. A copy of this report form can be found in most issues of the NMOS Bulletin.

If slides are submitted, please be sure to include ON THE SLIDE your name, date the picture was taken, and the exact location. Your original slide will be returned to you, while a duplicate will remain in the Photo File.

NAS Field Notes and the NMOS have the year broken down into four reporting periods:

Season	Period	Due
Autumn	1 Aug-30 Nov (=4 months)	31 Dec
Winter	1 Dec-28 Feb (=3 months)	31 Mar
Spring	1 Mar-31 May (=3 months)	30 Jun
Summer	1 Jun-31 Jul (=2 months)	31 Aug

Records should be submitted to Dr. Sartor O. Williams III at the New Mexico Department of Game and Fish, P.O. Box 25112, Santa Fe, NM 87504.

NMOS BULLETIN

The *Bulletin* is published four times a year; 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 urged to submit articles and news. Articles received are subject to review and editing. Published articles are noted in major abstracting services (e.g., the AOU's "Recent Ornithological Literature" section of *The Auk*). Please submit news and articles (**double-spaced**) (hard copy, disk, or email) to Mary Alice Root (maroot@unm.edu) or Bruce Neville (bneville@unm.edu).

ANNUAL DUES

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 \$10, Family \$15, Student \$5, Supporting \$35 and Life \$300.

Address for the New Mexico Ornithological Society: P.O. Box 3068, Albuquerque, New Mexico 87190-3068

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NEW MEXICO RARE BIRD ALERT

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NEW MEXICO RARE BIRD ALERT

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