

PROGRAM & ABSTRACTS



NEW MEXICO ORNITHOLOGICAL SOCIETY 47TH ANNUAL MEETING

25 April 2009
Los Alamos, New Mexico

**NEW MEXICO
ORNITHOLOGICAL SOCIETY
47TH ANNUAL MEETING**

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Fuller Lodge
Los Alamos, New Mexico



- 8:00 – 9:00 a.m. **REGISTRATION**
- 9:00 – 9:30 **NMOS BUSINESS MEETING**
- 9:30 – 10:00 Coffee/snacks available –
Finish registration
- 10:00 – 10:20 **NMOS Greeting** - Roland
Shook (President)
- Announcements
- 10:20 – 12:00 **NMOS GENERAL SCIENCE SESSION**
- Martha Desmond (NMSU), Session Chair
- 10:20 – 10:40 **Can Wildlife Transplants Really Cure Cancer?**
- Bill Dunn (University of New Mexico)
- 10:40 – 11:00 **The Effects of Fire on Avian Abundance and Diversity in an Arizona Oak
Savanna** – C.T. Nichols and Z. Jones (Eastern New Mexico University)
- 11:00 – 11:20 **Breeding Birds of Animas and Berg Parks, Farmington, NM**
- Tim Reeves (San Juan College)
- 11:20 – 11:40 **Falcons as Neighbors: 13 Years of Observations of nesting American
Kestrels in El Dorado at Santa Fe, NM** – Dale Stahlecker (Eagle
Environmental, Inc.)
- 11:40 – 12:00 **Winter Site Fidelity of the three Rosy-Finch species found in the Sandia
Mountains of Central New Mexico** – Raymond Van Buskirk, Michael
Hilchey, Steve Cox, and Nancy Cox (Rio Grande Bird Research)
- 12:00 – 1:30 p.m. **LUNCH**

- 1:30 – 5:00 **NMOS GENERAL SCIENCE SESSION** (cont.)
- Martha Desmond (NMSU), Session Chair
- 1:30 – 2:45 **The Preparation of a Scientific Bird Specimen: What Happens to the Dead Birds I Donate to the Museum?** - Andrew B. Johnson, C. Jonathan Schmitt, and Christopher C. Witt (Museum of Southwestern Biology)
- 2:45 – 3:15 BREAK
- 3:15 – 3:40 **A Historical Look at Populations of Southwestern Willow Flycatchers found along the Gila River in Southwestern New Mexico** – Roland Shook (Western New Mexico University)
- 3:40 – 4:00 **Catastrophic Avian Mortality during Heat Waves and Drought: the Role of Climate Change and Extreme Events** – Blair Wolf (University of New Mexico) and Andrew McKechnie (University of Pretoria)
- 4:00 – 4:40 **Changes in Latitude, Changes in Attitude: Global Warming and the Changing Distribution and Status of New Mexico’s Birds** – Sandy Williams (Museum of Southwestern Biology)
- 4:40 – 5:00 **Discussion on Climate Change and its Impact on Avian Populations**

POSTER

Spatial Variation in Gray Vireo Habitat Attributes – C.L. Hayes (University of New Mexico and New Mexico Department of Game and Fish)

5:00 p.m. **ADJOURN** until Banquet

6:30 p.m. **NMOS BANQUET BUFFET**

7:30 p.m. **KEYNOTE PRESENTATION**

Thinking Like a Mountain: How Fire Influences Bird Communities in the Rockies - Dr. Natasha Carr (USGS Fort Collins Science Center)

ORAL PRESENTATIONS

CAN WILDLIFE TRANSPLANTS REALLY CURE CANCER?

WILLIAM C. DUNN, Department of Biology, University of New Mexico, Albuquerque, NM 87131

Transplants have become an increasingly ubiquitous management tool to reverse declines of imperiled wildlife species. As such, they often are considered a panacea for all things wrong in the natural world. The truth is that most transplanted populations do not become self-sustaining, but either fail in the first few generations or need regular management intervention. The main reason for this is that little forethought is given to quality of the habitat in which organisms are placed and factors that affect that quality. Recovery efforts for the imperiled Lesser Prairie-Chicken (*Tympanuchus pallidicinctus*) will undoubtedly include transplants possibly even to southeastern New Mexico, an area dominated by oil and gas development. Given the impact of this type of development, an in-depth investigation is essential to determine if there is a reasonable probability of success. In this paper, I explain how I am applying niche and competition theory and techniques of Landscape Ecology to determine (1) how well the natural environment of southeastern New Mexico can support prairie-chickens and (2) if a balance exists that will allow predictable availability of oil and gas reserves and enough habitat to maintain a viable metapopulation of prairie-chickens. The framework I present will be useful for recovery of any wildlife species, but will be unable to elevate transplanting wildlife to the level of curing all of nature's ills.

THE EFFECTS OF FIRE ON AVIAN ABUNDANCE AND DIVERSITY IN AN ARIZONA OAK SAVANNA

C.T. NICHOLS and Z. F. JONES, Department of Biology, Eastern New Mexico University, Portales, NM 88130

Following the 2002 occurrence of the 37,000 ha Ryan Fire in southeastern Arizona, we established sixteen (eight each in burned and unburned habitat) 4-ha plots to study the impact of fire on an oak-savanna avian community. Plots were sampled for grassland height and cover, tree cover, and avian abundance and diversity. By 2008, the herbaceous vegetation was taller on burned plots (33.34 cm) than unburned plots (29.3 cm), and the tree canopy cover was less on burned plots (8%) than unburned plots (12.5%). In 2003, there was a drastic difference in average herbaceous vegetation cover between burned (8%) and unburned plots (77%), but that difference was gone by 2008 (burned 81% and unburned 82%). In 2003, 2004, and 2008 burned plots had an average avian species richness of 17.6, 17.6, and 14, while the unburned plots averaged 18.3, 18.7, and 16.5, respectively. Burned plots had an average bird abundance per count of 15.22, 11.35, and 14.81 over the 3 sampling periods, whereas unburned plots had an average of 16.5, 16.95, and 16.97 for the same years. Also, 3 types of species responses to the fire were observed; no response (N = 2), positive response (N = 8), and negative response (N = 5). Overall, the Ryan Fire has apparently resulted in a long-term decrease in percent tree canopy cover, and short-term negative effects on the herbaceous vegetation. For the avian community, the Ryan Fire altered species composition, but had little effect on richness and abundance.

BREEDING BIRDS OF ANIMAS AND BERG PARKS, FARMINGTON, NEW MEXICO

TIM REEVES, Computer Science and IT Department, San Juan College, 4601 College Blvd., Farmington, NM 87401

Photographs taken by the author of the species of birds known to breed or suspected of breeding in contiguous Animas and Berg Parks in Farmington, NM will be shown. The breeding birds in this riparian woodlands along the Animas River and irrigation ditches at about 5350 feet elevation are: Green Heron, Canada Goose, Mallard, Common Merganser, Sharp-shinned Hawk, Cooper's Hawk, Ring-necked Pheasant, Mourning Dove, Great Horned Owl, Western Screech-Owl, Black-chinned Hummingbird, Broad-tailed Hummingbird, Belted Kingfisher, Downy Woodpecker, Northern Flicker (red-shafted), Western Wood-Pewee, Ash-throated Flycatcher, Western Kingbird, Black-Billed Magpie (American Magpie), Northern Rough-winged Swallow, Barn Swallow, Black-capped Chickadee, White-breasted Nuthatch, House Wren, Bewick's Wren, American Robin, European Starling, Cedar Waxwing, Yellow Warbler, MacGillivray's Warbler, Yellow-breasted Chat, Spotted Towhee, Song Sparrow, Black-headed Grosbeak, Blue Grosbeak, Indigo Bunting, Lazuli Bunting, Indigo X Lazuli Bunting hybrid, Common Grackle, Brown-headed Cowbird, Bullock's Oriole, House Finch, Lesser Goldfinch, and House Sparrow. All these species spend the summer here, a number have been seen carrying food, nests of many species have been found, quiet a few have been observed feeding nestlings, some have been seen tending fledglings, and fledglings of various species have been observed. The list is based on my frequent observations during the summers of 2006 and 2007, as well as the careful and thorough records kept by Donna Thatcher, Director of the Riverside Nature Center. Many other birders accompanied me on weekly walks through the park and contributed to the list. Many park visitors also report nests to the Nature Center staff.

FALCONS AS NEIGHBORS: 13 YEARS OF OBSERVATIONS OF NESTING AMERICAN KESTRELS IN ELDORADO AT SANTA FE, NEW MEXICO

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

American Kestrels (*Falco sparverius*) began to nest in the nest boxes I provided on my 0.7 ha lot when I moved to Eldorado at Santa Fe (actually 15 km south of the famous plaza) in 1995. They nested 11 of 13 years in the "yard" territory, and 9 of 11 years in a nearby greenbelt. All 20 known nesting attempts were successful; 62 young banded from 18 nest attempts were equally split between males and females. Only three unhatched eggs were found during banding, so that hatching rate was likely higher than 90%. The mean number of young fledged between 1995 and 2001 (5.0 fledglings/attempt, $n = 9$) was significantly higher than between 2004 and 2008 (3.9 fledglings/attempt, $n = 8$). Adult kestrels were tolerant of general human activity in the neighborhood. In 1995 the "yard" female clearly recognized me after I banded the young, and subsequently circled and called whenever I was outside. Other neighborhood humans were ignored. In 1997, the initial "yard" female, captured and banded in early March, subsequently nested in the Greenbelt territory with her banded mate while an unbanded pair occupied the "yard" territory. Thereafter nestling banding involved my leaving home and returning in disguise. In 2006 and 2007 adults that had dived repeatedly on me during banding did not recognize me without disguise later the same day. These and other anecdotal observations suggest to me that breeding American Kestrels are sensitive to handling and visits to nest boxes. Yet grabbing incubating females from nest boxes remains the standard means of capturing them for banding during demographic and nest site fidelity studies.

WINTER SITE FIDELITY OF THE THREE ROSY-FINCH SPECIES FOUND IN THE SANDIA MOUNTAINS OF CENTRAL NEW MEXICO

RAYMOND L. VANBUSKIRK, MICHAEL O. HILCHEY, STEVE W. COX, and NANCY S. COX,
Rio Grande Bird Research, Inc. 4426 San Isidro Street NW, Albuquerque, NM 87107

Black Rosy-Finches (*Leucosticte atrata*), Gray-crowned Rosy-Finches (*L. tephrocotis*), and Brown-capped Rosy-Finches (*L. australis*) migrate south in winter to high elevation areas, generally staying above 7,000 feet. The Sandia Crest in Bernalillo Co., New Mexico hosts these three species of Rosy-Finches. The Sandia Mountains has been considered the southern limit of their range. For the past six winters, from 2004 to 2009, we have been live trapping and banding rosy-finches in order to study their site fidelity. We have documented the first known winter site fidelity for all three species of rosy-finches, and have documented that many site devoted birds exhibit over-winter site fidelity by recapturing the same individuals during the same season. (In dedication to Ryan D. Beaulieu.)

THE PREPARATION OF A SCIENTIFIC BIRD SPECIMEN: WHAT HAPPENS TO THE DEAD BIRDS I DONATE TO THE MUSEUM?

ANDREW B. JOHNSON, C. JONATHAN SCHMITT, and CHRISTOPHER C. WITT, Museum of Southwestern Biology, Division of Birds, Department of Biology, University of New Mexico, Albuquerque, NM 87131

Each year the Museum of Southwestern Biology Division of Birds receives hundreds of bird specimens from a variety of sources, including birds salvaged by NMOS members and other citizens with a naturalist's eye and a loathing for waste of a good specimen. This presentation will attempt to answer the question we often receive from the donors of such specimens: "What do you do with these things?" During the course of this presentation, we will convert real bird carcasses into museum specimens complete with labels and frozen tissue samples. We will also cover some of the uses of museum specimens, and the role that specimens still play in understanding biodiversity, biogeography, and a host of other biological questions.

A HISTORICAL LOOK AT POPULATIONS OF SOUTHWESTERN WILLOW FLYCATCHERS FOUND ALONG THE GILA RIVER IN SOUTHWESTERN NEW MEXICO

ROLAND SHOOK, Western New Mexico University, Silver City, NM 88062

The Southwestern Willow Flycatcher (*Empidonax traillii extimus*) is a subspecies of one of ten North American members of the genus *Empidonax*. Evidence of declining populations in the West, and associated declines in their favored riparian habitat, led to the Southwestern Willow Flycatcher being listed as a Federally Endangered species by the U.S. Fish and Wildlife Service in 1995. Records of Willow Flycatchers have been verified in New Mexico since 1886, but it was not until 1959, that breeding was confirmed along the Gila River near Redrock, and since then, this species has been shown to be a regular summer breeder in the Redrock and Cliff/Gila areas. Beginning in 1994, and continuing annually since, extensive, systematic Willow Flycatcher surveys have taken place in riparian habitat along the Gila River in the Cliff/Gila Valley and over the past few years along the Gila River downstream of Redrock. This presentation will present the historical data of populations found along the Gila River and the implications for their management.

CATASTROPHIC AVIAN MORTALITY DURING HEAT WAVES AND DROUGHT: THE ROLE OF CLIMATE CHANGE AND EXTREME EVENTS

BLAIR O. WOLF and ANDREW E. MCKECHNIE, UNM Biology Department, MSC03-2020, 1 University of New Mexico, Albuquerque, NM 87131-0001
DST/NRF Centre of Excellence at the Percy FitzPatrick Institute, Department of Zoology and Entomology, University of Pretoria, Pretoria 0002, South Africa

Predicting how human-induced climate change will affect animal distribution, abundance and diversity requires an understanding of the mechanisms underlying both the direct and indirect effects. Although little studied, among the most important direct effects may be catastrophic mortality associated with extreme heat and drought. Climate models predict an increase in both the frequency and severity of these extreme climate events, and historical records demonstrate the potential for catastrophic mortality. Here we quantify the functional mechanisms underlying avian mortality associated with heat stress and the lack of water. We develop a physiological model that predicts rates of evaporative water loss and survival times as a function of body mass and dehydration tolerance. Current and historical accounts already document catastrophic mortality caused by hyperthermia or through dehydration. Our projections suggest that increasing global temperatures, combined with increased frequency and intensity of heat waves and drought, will result in more frequent catastrophic mortality, and could depopulate regional bird communities.

CHANGES IN LATITUDE, CHANGES IN ATTITUDE: GLOBAL WARMING AND THE CHANGING DISTRIBUTION AND STATUS OF NEW MEXICO'S BIRDS

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

Global climates are undergoing rapid change, apparently due to the effects of human activity on the atmosphere. These changes are predicted to have dire consequences for life on Earth, and birds are often used as examples of what may be in store, including changes in distribution, changes in phenology, changes in population size and recruitment, and changes leading to local extirpation or outright extinction. Many predictions are based on climate models and general life history attributes of species, but a growing number of studies have begun to quantify these changes. New Mexico currently has 523 verified species, and in recent decades many of these have experienced changes in range, timing of migration and breeding, and population size, and these involve permanent residents, summer and winter residents, and through migrants. Many of these changes may be related to global climate change, although the precise mechanisms (e.g., warmer summers, warmer winters, increases or decreases in habitat, etc.) undoubtedly vary among species and/or species groups. Using New Mexico bird data from multiple sources, I will provide numerous examples of recent and ongoing changes, and discuss these in relation to global climate change and the future of New Mexico's avifauna.

POSTER PRESENTATION

SPATIAL VARIATION IN GRAY VIREO HABITAT ATTRIBUTES

C.L. HAYES, University of New Mexico, Department of Biology and New Mexico Department of Game and Fish, One Wildlife Way, Santa Fe, NM 87507

The Gray Vireo (*Vireo vicinior*) is a state-threatened species whose habitats appear to be relatively widespread and variable. Known territories of Gray Vireos are highly clustered, with over 80% of documented territories in New Mexico occurring at 12 clusters. I examined landscape variables associated with clusters (sites) of Gray Vireo locations using GIS, with an objective on identifying landscape-level patterns of habitat use. Sixty-one percent of mapped Gray Vireo locations occurred on gentle and toe slopes. Elevation, slope, and distance to edge of juniper distribution all differed significantly among sites. Variation in elevation, slope, and distance to juniper edge did not vary in consistent patterns among sites, and did not show a directional (e.g., south-north) gradient. Selection of habitats by Gray Vireos may be location-specific, as opposed to occurring at a broader landscape scale.