Patterns of Gray Vireo Occurrence at Kofa National Wildlife Refuge: Gale Was Right, And Other Musings

Arnett, J.E., 5226 W. Harmont Drive, Glendale, AZ 85302, treerunner AT yahoo.com

Kondrat-Smith, C., 27324 N 219 Ave, Wittmann, AZ 85361, azdesertbird AT gmail.com

The winter distribution of Gray Vireo (Vireo vicinior) closely matches the distribution of small trees in the genus Bursera, particularly elephant tree (Bursera microphylla), that produce calorie-rich fruits. Thus, it is surprising that Gray Vireos have been reported by Gale Monson and others during the winter at Kofa National Wildlife Refuge (Kofa) where no Bursera occur. In addition, recent data suggest that Kofa is an important early (e.g., late February and early March) migration stopover for north-bound vireos. Aided by an AZFO Gale Monson Research Grant, we conducted call-playback surveys for Gray Vireos seven times, from December 2012 to May 2013, at five sites within Kofa. Sample sites included two low-elevation xeroriparian washes, one low-elevation canyon, and two mid- to high-elevation canyons. In December 2012, we found a surprisingly high number of vireos at the low elevation washes and a small number at two of the canyons. Following a period of freezing temperatures in January 2013, the number of vireos dwindled. During April and May 2013 we detected a few vireos but not as many as expected. Our results indicate that wintering Gray Vireos can occur where Bursera is absent and where sufficient arthropod prey is available. Freezing temperatures likely reduce the availability of arthropod prey and cause the vireos to move southward. In addition, the timing of the vireo’s spring migration through Kofa varies from year to year and is likely driven by regional-scale, rather than local, factors.

The Distribution and Extent of Heavy Metal Accumulation in Song Sparrows of the Upper Santa Cruz River Watershed

*Lester, M. B., 1110 E. South Campus Dr., Room 123, Tucson, AZ 85721, mlester126 AT gmail.com

van Riper, C., III., 1110 E. South Campus Dr., Room 123, Tucson, AZ 85721

Riparian ecosystems in arid environments provide critical habitat for breeding, migratory, and wintering birds, yet are often at risk of contamination with heavy metals. Birds and other animals living in contaminated areas are susceptible to adverse health effects as a result of long-term exposure and bioaccumulation of heavy metals. Our study took place as part of a collaborative effort to quantify the level of contaminants in the upper Santa Cruz River watershed. We chose to examine five study sites and a reference site that reflect different potential sources of contamination. We investigated the extent of heavy metal accumulation in blood and feathers of Song Sparrows (Melospiza melodia) over two breeding seasons. Birds at our five study sites typically had higher metal concentrations than birds at our reference site, though most metals were below background concentrations determined from previous studies. Copper, mercury, nickel, and selenium in Song Sparrows did exceed background levels. Song Sparrows generally showed lower heavy metal concentrations compared to Killdeer (Charadrius vociferus) collected along the Santa Cruz River in 1998, however concentrations tended to be higher for Song Sparrows compared to Abert’s Towhees (Melozone aberti) and Yellow-breasted Chats (Icteria...
*Presenting author

Exploring the Effects of Wildfires on the Avifauna Within Arizona’s Life Zones: The Sky Islands and Beyond

Hough, E. R., P.O. Box 2842, Overgaard, AZ 85933, thebirdwhisperer22 AT yahoo.com

Populations of bird species are adapted to particular biotic communities and are thus affected when environmental disturbances occur. Fires are a naturally-occurring disturbance within arid ecosystems and are intertwined with secondary seral succession. However, due to decades of fire suppression by humans, altered seasonality of fires, invasion by exotic-invasive plant species that alter fire regimes, and increased occurrence and severity of drought conditions associated with climate change, fires have now become more frequent, larger scale, and are burning with higher intensity. Avian communities are thereby also affected in response to changing fire regimes, with many species being either positively or negatively impacted across the landscape in regards to suitable nesting substrates and microclimates, food availability, and predation risk. The state of Arizona is one such arid region that has experienced more catastrophic fires across the landscape in recent years than during historical conditions, which are already impacting the state’s diverse avifauna. This presentation will explore how fire will likely impact the avifauna within Arizona’s several life zones, including the representative southeastern Arizona “sky islands” as well as other affected areas of the state, and which bird species are likely to be winners or losers following these disturbances.

Common Black-Hawk Riparian Migration Corridors in Arizona

Collins, Peter 13934 E Placita flor del Desierto Vail, AZ 85641, pcollins AT houston.com

In the mid 2000s, local birders detected a Common Black-Hawk spring migration route along the Santa Cruz River near Tubac. In 2008 over 40 Black Hawks were recorded in 90 minutes. This led to increasing efforts to quantify the migration, pooling reports from two observation sites, the Tubac Bridge and the Ron Morris County Park. In 2012 a 13 day count was conducted from the bridge, counting 92 Black-Hawks, 28 Zone-tailed Hawks and a variety of other raptors. Count days typically covered three hours each morning. Careful merging of reports from the park and nearby sites indicated 109 Black-Hawks could be observed, a large percentage of the Arizona population estimate. This year a 31 day count was conducted from Ron Morris Park. Over twice as many Black-Hawks (231) were observed during 188 observation hours, suggesting this area of the Santa Cruz River is a significant riparian migration corridor. Overnight roosts along the river south of the park in an otherwise barren area are likely concentrating migrating birds near the park. An exploratory count organized by Erika Wilson at the Charleston Bridge on the San Pedro River well east counted 9 Black-Hawks over 18 March mornings, many emerging from overnight roosts along the river, supporting the premise that Black-Hawks are using riparian migration corridors when returning to Arizona. All Black-Hawks at these two counts were adults. There are reports of immature hawks in late April along the Santa Cruz, encouraging an extended count period in future years.
Mexican Spotted Owls and Fire in Southern Arizona

Moors, A. K., Moors Wildlife Management Services, 1217 Crestwood Drive, Globe, AZ 85501, amoors AT cableone.net, 928-200-0544

Stand replacing wildfires are listed as a major threat to the continued existence of Mexican Spotted Owls, according to the 2012 Mexican Spotted Owl Recovery Plan. Arizona has seen an increasing number of large wildfires in the last decade. However, it is unclear how Mexican Spotted Owls actually respond to fire. During the last decade, I have been monitoring Mexican Spotted Owl territories in several mountain ranges in southern Arizona both before and after major wildfires. Owl surveys were conducted using the standard survey protocol developed by the USFS and USFWS. I have found that most pairs of Mexican Spotted Owls will continue to live and reproduce in territories that have burned, as long as the roosting and nesting groves still remain intact. Because Mexican Spotted Owls tend to select the coolest and moistest areas to roost and nest, those areas are more likely to survive a fire than other parts of their territories. I have found that in the years post-fire, Mexican Spotted Owls will often have exceptionally high reproductive rates.

Observations on the Occurrence of Breeding White-Eared Hummingbirds in Miller Canyon, Huachuca Mountains, Arizona

Melton, C.W., PO Box 592, Hereford, AZ 85615, cwmelton AT nearfamous.com

The White-eared Hummingbird (Hylocharis leucotis) is a rare summer resident anywhere north of Mexico, and is most easily observed by birdwatchers at feeding stations in just a few locations in southeastern Arizona. Even more rare are observations of nesting individuals. During the Arizona Breeding Bird Atlas, only two nests were confirmed. During the spring and summer of 2013, observations were made of White-eared Hummingbirds in Miller Canyon. One nest was observed and its progress was followed. Shortly after the young fledged a second nesting attempt was begun. Utilizing photographs and video for comparison, at least four different individuals were seen, excluding nestlings and recent fledglings. These observations will be summarized and presented, and will also include comments on wing molt.

Arizona Important Bird Areas Program's Most Important Partner: Birders!

MacFarland, J., Conservation Biologist, Tucson Audubon Society, 300 E. University Blvd., #120, Tucson, AZ 85705, jmacfarland AT tucsonaudubon.org

There are currently 43 identified Important Bird Areas in Arizona. 13 of these areas have been officially recognized as Global IBAs and are part of an international network of sites that maintain the long-term viability of wild bird populations while engaging the public to conserve those areas of critical habitat. This would not have been possible without the help of over 500 skilled birders generously giving their time over the past 10 years. Thousands of surveys containing hundreds of thousands of observations made by trained volunteer birders make up the Arizona IBA database. Examples of this successful partnership will be presented here, along with a summary of the IBA program itself, the amazing contributions of its volunteers, some of the great expeditions we have done with partners such as AZFO and some of the data we have collected.
Poster Abstracts

Preliminary Findings: The Diet of Arizona’s Golden Eagle (*Aquila chrysaetos*)

*Losee, M.J., Antioch University New England, 2850 Blue Horizon, Sedona, AZ 86336, Michele.losee AT gmail.com, 571-271-1193

Jacobson, T., Licence, K. and McCarty, K., Arizona Department of Game and Fish, 5000 W. Carefree Highway, Phoenix, AZ 85086

In Arizona, the Golden Eagle (*Aquila chrysaetos*) has been largely unstudied. In 2011, Arizona Game and Fish Department (AZGFD) began a two-year nest survey for cliff nesting Golden Eagles throughout the state. Golden Eagle occupancy and diet assessments began in 2013. During the 2013-nesting season, we collected prey remains from six active Golden Eagle nest in the northern region of the state. The number of prey items ranged from 3 to 29 with the number of different species ranging from 2 to 6. The Black-tailed Jack Rabbit (*Lepus californicus*) was the only prey species found in all six nests and the highest percentage (33-81%) of total species found in each nest as well as contributing to the highest biomass (2.7-5.9kg) for each nest. The two heaviest, single prey species were a Pronghorn Antelope (*Antilocapra americana*) fawn (3kg) and a juvenile Gray Fox (*Urocyon cinereoargenteus*) (3.2kg). The more unique prey species were snake, an adult Raven (*Corvus corax*), domestic feline and a juvenile Pinyon Jay (*Gymnorhinus cyanoccephalus*). The nest with most diversity of prey species (6) was the only nest with two nestlings. These preliminary findings revealed important information pertaining to the dietary habits of Golden Eagles nesting in Northern Arizona. This information as well as data collected from next year’s nesting season will help describe the dietary and foraging requirements for Golden Eagle pairs nesting in Arizona. These requirements coupled with occupancy data will assist AZGFD to generate better conservation action and policy recommendations.

*Presenting author

The Expansion of Tropical Kingbirds (*Tyrannus melancholicus*) in Arizona

Jenness, D., 4375 E. Rollins Rd., Tucson, AZ 85739, d_jenness AT hotmail.com, 520-909-1529

"Based on their history in the state, the nesting distribution of Tropical Kingbirds is expected to continue expanding in Arizona." This forecast by Troy Corman in the *Arizona Breeding Bird Atlas* (2005) has proved to be accurate. For the past five decades Tropical Kingbirds have been gradually moving northward, primarily along the San Pedro and Santa Cruz rivers. At the time of the *Atlas* surveys in the 1990s and early 2000s they had reached the confluence of the San Pedro and Gila rivers at Winkelman and had moved northward along the Santa Cruz River valley to Marana and a pecan grove south of the Pinal Air Park. Outlier pairs were also found nesting near Yuma, at Organ Pipe Cactus National Monument, and the Hassayampa River Preserve near Wickenberg. The latter was the most northern site up to that time. Since then new nesting sites, farther north and west, have been discovered along the lower Colorado River valley in Mohave and La Paz counties. Moreover, they have continued expanding along the Santa Cruz River valley, most notably at the Sweetwater Wetlands in Tucson and farther north into the primarily agricultural Santa Cruz Flats area of Pinal County. The latter area is particularly intriguing as an estimated 15 to 20 pairs of Tropical Kingbirds have been discovered nesting in rows of healthy pecans along farm roads. It’s not clear when nesting began in this area. This study pulls together

*Presenting author
nesting data that shows the continued expansion of Tropical Kingbirds since the Atlas surveys were completed with special attention to the Santa Cruz Flats area.

Wintering Grasshopper Sparrows in the Verde Valley

*Grahame, J., jdgrahame AT gmail.com; *Linda, T., roughlegged AT gmail.com; Crouse, J., Joseph.Crouse AT nau.edu; and Drost, C., Charles_drost AT usgs.gov, Flagstaff, AZ

Abstract: The winter distribution of the Grasshopper Sparrow (Ammodramus savannarum) in the United States is rather poorly known. Monson and Phillips (1981) describe the species as “fairly common” in southeastern Arizona in the winter, but they note that the species is “lacking in central Arizona; uncommon and irregular ... farther west, even to the Colorado River, where there are about six records, including two specimens...” Museum records and historical surveys from the Verde Valley of north-central Arizona do not show any reports of Grasshopper Sparrows. However, three were captured and banded in Verde Valley grassland habitat on 4 April 2000, and one individual was recorded in similar habitat on the Verde Valley Christmas Bird Count of 26 December 2010. We made a concerted effort to search this habitat for the species during the winter and early spring of 2013. Seventy-eight sightings of Grasshopper Sparrows were made over the course of 14 visits between 7 January and 4 May. The birds were regularly found in lightly to moderately grazed grasslands with low shrub density. We believe the birds to be the widely-distributed western subspecies, A. s. perpallidus. The authors hope that their work will result in an increase in winter surveying for Grasshopper Sparrows in north-central Arizona grasslands.

Sonoran Desert Breeding Bird Surveys: A Coordinated Approach

*Juarez, E., and Corman, T., Arizona Game and Fish Department, 5000 W. Carefree Highway, Phoenix, AZ 85086. Ejuarez AT azgfd.gov, 623-236-7516

Arnett, J. 56th Range Management Office, 7101 Jerstad Lane, Building 500, Luke Air Force Base, AZ 85309-1647


Over 60 species of birds breed in the Sonoran Desert and many populations are naturally small and typically at low density. As a result, these species may be particularly vulnerable to progressively growing threats, including habitat loss and fragmentation. These threats have made a robust monitoring program necessary to assess the status and trends of these desert-dwelling species, inform conservation strategies for priority species, and help keep common species common. Through the Arizona Bird Conservation Initiative (ABCI, a partnership coordinated by the Arizona Game and Fish Department) various partners have joined to promote the development of a unified breeding bird monitoring strategy. The study area includes native Sonoran Desert habitats (Upper and Lower Sonoran), including dry washes in southern and western Arizona. This 3-year project began in 2012 and will run through the 2014 breeding season, with additional 3-year cycles to be repeated in the future to quantify long-term trends. We have established monitoring plots (16 or 24 hectares) across the desert and are using a double sampling methodology (with an area search approach) for surveying plots. To date, we have recorded over 130 species. An important component of this project is the high level of
coordination across the landscape. This coordination facilitates pooling of resources to work at a much larger scale than would be possible otherwise. It also helps resource managers in the region to better understand their level of stewardship for Sonoran Desert birds.

*Presenting author

**Birding Off The Beaten Track: Identifying Spatial Gaps in Arizona’s eBird.Org Data**

*Arnett, J.E., 5226 W. Harmont Drive, Glendale, AZ 85302, treerunner AT yahoo.com*

*Harter, L.B., 2841 McCulloch Blvd N #1, Lake Havasu City, AZ 86403 lbharter AT gmail.com*

The mission of Arizona Field Ornithologists includes increasing the knowledge of the distribution of Arizona’s birdlife. Currently, eBird.org is a website used by many to enter bird observations and is an increasingly important tool for monitoring the spatial and temporal patterns of bird distributions. In this poster we show that many parts of Arizona have little to no eBird data. We also demonstrate different methods for how eBird users can find areas where no checklists have been submitted. We acknowledge that practical concerns such as land ownership may impede our ability to obtain complete eBird coverage of the state. However, we encourage Arizona’s birding and ornithological community to visit areas where little or no data have been collected, to enter eBird checklists for these data-poor areas, and to attempt to fill in the eBird data map for Arizona.