

ELISABETH M. AMMON. Department of Biology, University of Nevada, Reno NV 89557. **Fall-out in Nevada: mist nets provide new glimpses at riparian migrant composition in the western Great Basin.**

In the xeric lowlands of the western Great Basin, only three rivers provide the majority of riparian stop-over sites for migrating songbirds. Two mist netting and banding stations, located at the lower Carson and Truckee Rivers, provide the first systematic attempt to characterize the fall migrant songbird community and their habitats at western Great Basin rivers. Here I present the findings of a three-year study of fall migrants, representing data from over 4,000 net-hours. I discuss migrant composition in comparison to breeding bird composition, as well as capture rates, recapture rates, and age structure in relation to data from other banding stations and to habitat data collected at both banding stations. Among the new findings, my data suggest that small land birds commonly associated with montane coniferous woodlands engage in irruptive migration into lowland riparian habitats of the Great Basin in some years. Moreover, one of their predators, the Sharp-shinned Hawk, may participate in the irruptive migration event by simultaneously visiting lowland riparian sites in high numbers. The study also suggests that some western migrants previously associated with the Pacific slope, such as the Western Palm Warbler, Black-and-White Warbler, and American Redstart, also travel, in small numbers, through the Great Basin lowlands.

DAVE ARSENAULT. Harding ESE Environmental Consultants, 1572 East College Parkway Suite 162, Carson City NV 89706. **Natal and breeding dispersal of Flammulated Owls (*Otus flammeolus*).**

I banded 56 Flammulated Owls (*Otus flammeolus*) on a 175 ha study area in the Zuni Mountains, New Mexico, to study dispersal patterns. Over five years, thirty percent of banded owls (including juveniles) were recaptured, some in multiple years. I documented natal dispersal for one male and one female owl banded as nestlings. The female moved 695 m, and the male 180 m, from birth site to first known breeding site. Of adults, 64% of banded males and 38% of banded females were recaptured. In the majority of cases, adult males bred in the same nest cavity between years (60%, $n=15$), but most often not with the same female (60% of cases, $n=10$). In cases where males bred in a different cavity between years, it was on average 176 m (± 133 s.d.) away from the previous nest cavity. Therefore, males were site-faithful, moving relatively short distances to new cavities that were generally exclusive to that male's territory. Females bred in a different nest cavity than the previous year 70% of the time ($n=10$), most often with a new male (56% of cases, $n=9$). I documented females moving up to 875 m between nest cavities and twice as far as males on average (356 m ± 294 s.d., $n=7$). My data suggest that when a female's previous mate did not return, she paired with a nearby available male generally moving one or two territories over from her previous nest. However, I documented two cases of divorce where neighboring females switched males between years. Therefore, despite strict monogamy within a season, between-season pair bonds may not be the rule for this species.

DANIEL S. COOPER. National Audubon Society, The Audubon Society, 6042 Monte Vista Street, Los Angeles CA 90042. **A site-based conservation plan for California: Audubon's Important Bird Areas program.**

The Important Bird Areas (IBA) program was begun by BirdLife International in the 1980s as a way of recognizing hotspots for bird diversity around the world. This designation recognizes sites for exceptional numbers or diversity of birds, or for their importance in conserving rare species, although it confers no legal or regulatory authority. BirdLife selected the American Bird Conservancy (ABC) and National Audubon Society (Audubon) as partners for the U.S. program in the 1990s, which relied on interested groups nominating sites by filling out forms that documented avian use at each site. Under an MOU between ABC and Audubon, these forms were submitted to ABC, which would deem them as being of either "Global", "Continental", or "National" importance based on numbers of individual birds occurring throughout the year. Those that did not qualify would then be evaluated by Audubon for importance at the "State" level, using criteria developed by Audubon's state offices. In 2000, BirdLife dropped ABC as a partner, and Audubon elevated the IBA program as a key component of its conservation mission. As of 2001, many states had begun IBA programs, four of which have produced books cataloging and describing theirs. California's IBA Program began with ABC in 1995, and by 1998, 50 had been recognized here. In

2000, I realigned the program as a research project whereby bird distribution experts were interviewed about sites that would fit IBA criteria tailored for California. Eventually, an estimated 250 IBAs will be identified in California, and result in a network that will serve to organize and effect local conservation action.

DANIEL S. COOPER. National Audubon Society, The Audubon Society, 6042 Monte Vista Street, Los Angeles CA 90042. **Signs of life from the concrete jungle: shorebird use of the lower Los Angeles River, California.**

The Los Angeles River runs for 82 kilometers from the western San Fernando Valley, through downtown Los Angeles, and into the Pacific Ocean in Long Beach. It flows year-round, owing to discharge from water treatment plants and urban runoff. Aside from three sections of channel that were never paved (Sepulveda Basin, "Glendale Narrows", and the "Los Angeles River Estuary"), water passes over concrete for most of its length. Along a 15 kilometer stretch of the lower river through Paramount, Compton, and north Long Beach, the configuration of the channel is such that water spreads in a shallow film from a central conduit in mid-channel to either side, with sediment and irregularities in the concrete forming sandbar-like features. This habitat mimics aspects of the vast wetlands that once characterized southern Los Angeles County, and is apparently ideal for certain species of shorebirds, particularly Western Sandpiper (*Calidris mauri*), Least Sandpiper (*C. minutilla*), and Black-necked Stilt (*Himantopus mexicanus*). From August to October 2000, a systematic census along a 15 kilometer stretch of the Los Angeles River quantified the surprising diversity and number of shorebirds utilizing the concrete-lined flood control channel (25 species, 15,000+ birds). Several counts at other times of the year help clarify the year-round use of the habitat by shorebirds, and these numbers are compared with those of other sites along the Pacific Flyway in California.

LISA S. CRAMPTON. Department of Biology, University of Nevada, Reno NV 89557. **Determinants of Phainopepla (*Phainopepla nitens*) distribution and abundance in southern Nevada.**

In southern Nevada, Phainopeplas (*Phainopepla nitens*) and their principal food, desert mistletoe, are at the edge of their range, where cold and drought may produce fluctuations in bird and berry abundance not observed in the range core. My objective is to determine the influence of food availability and various habitat and landscape parameters on over-wintering and breeding Phainopeplas in this region from 2000-2003; I present here the preliminary season's work. From October 2000 – June 2001, I estimated Phainopepla and mistletoe abundance along line transects in mesquite and catclaw acacia patches by visiting each site several times. Phainopeplas were more abundant in sites with high mistletoe infection and were absent from sites with low infection. Abundance within some sites changed over the year. In spring, I found nests or fledglings at a total of 13 sites. I conducted nest searches, estimated nest success, and measured nest site characteristics at four of these sites. Fifteen of the 28 nests (53%) that contained eggs were successful (fledged ≥ 1 young; clutch size = 2–3 eggs). Within sites, the proportion of successful nests ranged from 0.20–0.71. I saw evidence of nest predation and abandonment, but not parasitism. Many pairs apparently started two nests, even if the first was successful, and several pairs may have raised two successful broods; I will color band next year to better assess this behavior. Results to date suggest that Phainopeplas choose sites by the degree of mistletoe productivity, but that among sites with berries, other factors may also influence Phainopepla abundance and breeding. Also, the distribution and abundance of Phainopeplas among habitat patches is dynamic, even within years.

JON DUNN. RR2 Box 52R, Bishop CA 93514. **Identification and migration of Baird's Sparrow (*Ammodramus bairdii*).**

This talk will cover in detail the identification of Baird's Sparrow (*Ammodramus bairdii*), and will then cover what little is known about the timing of migration in this species. All known vagrant records, of which there are fewer than ten, will be discussed.

First, distribution. Very few legitimate records, although from coast to coast. Part of the problem, of course, is great difficulty in finding, coupled with the fact that they're going through the plains of e. CO and w. KS. Then ID: difficult Ammodramus to start with. Runs through the grass. Superficial similarity with Savannah Sparrow especially grievous. And watch for similarities with Grasshopper Sparrow. Watch for facial markings, especially involving preloral and postloral area and post occipital spotting.

JIM EIDEL. Great Basin Bird Observatory, One East First Street Suite 500, Reno NV 89501. **Avian citizen science: making a difference in Nevada.**

Citizen scientists have made important contributions to ornithological research in Nevada, through projects such as MAPS (Monitoring Avian Productivity and Survivorship) bird banding stations, Nevada Partners in Flight, the North American Breeding Bird Survey, Project Feeder Watch, Christmas Bird Counts, and the Nevada Bird Records Committee. The largest effort to date in Nevada has been the Great Basin Bird Observatory's Nevada Breeding Bird Atlas that utilized more than four hundred (400) citizen-scientist volunteers that were initially thought to be unavailable in Nevada. The National Audubon – Lahontan Audubon Important Bird Area program will monitor bird populations in the future using some of the BBA volunteers. Citizen scientists include enthusiastic high school students, middle-age adults and parents that devote weekends and evenings, and a dedicated cadre of retirees with a larger block of time to contribute. Citizen scientists can help in small or large ways from their backyards to the remotest and grandest corners of Nevada. The significance of citizen science contributions to ornithological research in Nevada cannot be underestimated and should continue to flourish as long as interest in birding continues to grow.

TED FLOYD. Great Basin Bird Observatory, One East First Street Suite 500, Reno NV 89501. **The Nevada Breeding Bird Atlas: a major revision of our knowledge of the status and distribution of Nevada's breeding birds.**

The fourth and final season of field work for the Nevada Breeding Bird Atlas was completed in 2000, and publication of the forthcoming *Atlas of the Breeding Birds of Nevada* is scheduled for 2003. Prior to the Atlas, range maps for most of Nevada's breeding birds were based primarily on anecdote and conjecture. In many instances, of course, the pre-Atlas range maps were largely correct, albeit fuzzy and imprecise. An immediate contribution of the Atlas, then, has been to fine-tune basic distributional information in cases such as these. In many other instances, though, pre-Atlas range maps were flat-out wrong, and the new Atlas range maps have caused us to redraw the Nevada range maps for a variety of bird species. To be fair, bird distributions are dynamic: in the case of birds such as colonial water birds, doves, and hummingbirds, there have been major distributional shifts in Nevada in recent decades. The Atlas provides a clear summary of recent changes. Importantly, the Atlas also enables us to look into the future, via predictive models that are being developed with field data.

MIKE GREEN. U.S. Fish & Wildlife Service, 911 Northeast Eleventh Avenue, Portland OR 97232-4181. **The FWS list of non-game species of concern: the 2001 edition.**

The 1988 amendment to the Fish and Wildlife Conservation Act (1980) requires the U.S. Fish and Wildlife Service (FWS) to compile a list of Birds of Conservation Concern every five years. The year 2001 marks the third such publication. The process for compiling this most recent list was substantially modified from previous editions in several respects: birds were selected mainly by using priority scores from Partners in Flight, the US Shorebird Conservation Plan, and the Water Bird Conservation Plan; three geographic scales were addressed in 45 lists (1 National, 7 FWS Regional, and 37 Bird Conservation Region lists); and subspecies were included at the Bird Conservation Region (BCR) level. The national list has 144 species, the FWS Region 1 list has 72 species, and the Great Basin BCR has 27 species. The list is used by FWS and its partners to coordinate monitoring, research, and restoration projects for species and habitats most in

need of conservation attention. This talk will discuss several of the major changes with relevance to the WFO region.

REBECCA LYON HILL AND CLAYTON M. WHITE. Department of Zoology, Brigham Young University, Provo UT 84604. **Three-toed Woodpecker (*Picoides tridactylus*) ecology in a managed Engelmann spruce forest.**

Woodpeckers are keystone species in ecosystems as they create habitat for other cavity nesting birds. The Three-toed Woodpecker (*Picoides tridactylus*) is an uncommon bird of the boreal forest that is dependent on recent burns and spruce bark beetle (*Dendroctonus rufipennis*) infestation for foraging. Populations of Three-toed Woodpeckers in south-central Utah have increased recently due to the large-scale spread of spruce bark beetle infestation. Subsequently, much of this area has been targeted for salvage logging. We studied habitat use and behavior of Three-toed Woodpeckers in logged and unlogged portions of beetle-infested Engelmann spruce (*Picea engelmannii*) forest on Monroe Mountain, Utah, Fishlake National Forest, in 2000 and 2001. Micro- and macro-habitat data and bird behavior were recorded at sites where Three-toed Woodpeckers were observed. Comparisons of habitat parameters were made among feed, nest, and drum trees. Engelmann spruce was used most heavily for feeding and comprised 97% of feed trees. Forty-four percent of nest trees were in aspen (*Populus tremuloides*), with the remaining 56% in broken top conifers. Average forest canopy cover differed among the three types of trees ($p < 0.05$), with feed trees having the highest canopy cover ($69.7 \pm 16\%$), and nest trees the lowest ($19.9 \pm 18\%$). Canopy cover was also less in logged than in unlogged areas ($p < 0.001$). Outer debarking was significantly greater ($p < 0.05$) on feed ($55 \pm 27\%$) and drum trees ($31 \pm 34\%$) than on nest trees ($6 \pm 10\%$). Nest trees were found to occur in less aggregated stands of surrounding random trees than were feed and drum trees ($p < 0.05$). Distance to habitat edge was less in logged areas than in unlogged areas ($p < 0.10$). These findings suggest that according to certain habitat parameters, Three-toed Woodpeckers use different types of trees for feeding, nesting, and drumming, and in logged and unlogged areas. This indicates that perpetuation of mature aspen and old-growth Engelmann spruce is important in maintaining Three-toed Woodpecker populations.

STEVE N.G. HOWELL AND MARTIN T. ELLIOTT. Point Reyes Bird Observatory, 4990 Shoreline Highway, Stinson Beach CA 94970. **Identification of and variation in winter adult Thayer's Gulls (*Larus thayeri*), with comments on taxonomy.**

We describe characters of and variation in adult presumed Thayer's Gulls (*Larus thayeri*) wintering in central California. We also discuss the separation of adult Thayer's Gulls from potentially similar taxa, and comment on the taxonomic status of the Thayer's Gull – Iceland Gull (*L. glaucoides*) complex. Our main aim is to attempt an objective, quantifiable definition that can be used to identify Thayer's Gull in the field. We recognize that identifying gull taxa away from the breeding grounds carries an inherent implication of uncertainty. In this case, however, the wintering grounds may be at least as well defined as the breeding grounds. That is, on the breeding grounds we cannot learn how much Thayer's and Kumlien's (*L. g. kumlieni*) interbreed until we can distinguish them, but we cannot distinguish them because they appear to interbreed.

DON MCIVOR. Nevada Important Bird Areas Program, 4375 South Carson Street, Carson City NV 89701. **The Nevada Important Bird Areas program: A habitat-based conservation initiative.**

The Nevada Important Bird Areas program is a conservation initiative focusing on the identification, protection, and long-term monitoring of critical bird habitats. The program will integrate the conservation goals established by the Nevada Bird Conservation Plan, which was developed by Nevada Partners in Flight, and The Nature Conservancy's newly developed eco-regional plans. The IBA program in Nevada is also informed by the extensive data collected for the Nevada Breeding Bird Atlas, as well as the predictive models derived from the BBA sampling effort. The program will further draw upon data from the Nevada GAP analysis. To identify IBAs across the state, the program will solicit input from resource specialists

from state and federal agencies and NGOs with land stewardship or wildlife management responsibilities. The program will also rely heavily on input from citizen-scientists who will be asked to nominate sites and provide significant participation in the monitoring effort. Conservation objectives will be attained through MOUs, conservation easements, and by working with private landowners to establish land stewardship priorities. A handful of globally and continentally significant IBAs have been designated in Nevada as a result of the American Bird Conservancy's and the National Audubon Society's initial efforts. Under the Nevada IBA Program, the National Audubon Society and the Lahontan and Red Rock Audubon Society chapters will continue the program to identify IBAs in Nevada of national and state-level significance.

LARRY A. NEEL. Nevada Division of Wildlife, 1100 Valley Road, Reno NV 89512. **Shorebirds in the Lahontan Valley, Nevada: a fifteen-year perspective.**

In 1986, the Lahontan Valley Wetlands were designated by the Western Hemispheric Shorebird Reserve Network as a shorebird site of hemispheric importance. The two major components of Lahontan Valley Wetlands that contribute the most shorebird habitat over the long term are Stillwater NWR (including the ephemeral Carson Sink) and Carson Lake. Other sites that contribute shorebird habitat to a lesser extent and with varying degrees of importance include the Canvasback Gun Club, Big Soda Lake, and several regulating reservoirs associated with the Newlands Irrigation Project. Peak shorebird numbers hit 200,000+ early in 1987 just as the Lahontan Valley Wetlands were receding from the flood years 1984 – 1986. A comprehensive shorebird monitoring program was initiated in 1986 and modified in 1988 to conform with the Point Reyes Bird Observatory Shorebird Count protocol. A drought cycle ensued from 1987 to 1993, when shorebird counts at Lahontan Valley wetlands bottomed out at 10,000. Recovery of habitat began in 1994 with the onset of a wet climatic cycle, and the recovery of shorebird use was documented up to the present. Total shorebird numbers peaked in August, 1998 just under 80,000 birds, twenty percent shy of our projected target, and sixty percent below the 1987 peak. Different species peaked at different points in the water quality regime, with both American Avocets and Black-necked Stilts peaking at or above historical (pre-1986) peaks. Concern remains for the lack of site recovery for Long-billed Dowitchers. One-day spikes in excess of 100,000 birds were recorded before the drought, and a long-term population target of 30,000 was expected, but not maintained or recovered during the wet cycle. Western and Least Sandpipers have exhibited a delayed recovery that seems to be extending beyond the present time.

T. WILL RICHARDSON, PETER PYLE, RYAN BURNETT, AND PHIL CAPITOLO. Point Reyes Bird Observatory, 4990 Shoreline Highway, Stinson Beach CA 94970. **Occurrence and seasonal distribution of migratory birds on Southeast Farallon Island, California.**

The small size and open terrain of Southeast Farallon Island, located 42 km west of San Francisco, provide ideal conditions for monitoring bird migration (DeSante D.F. & Ainley D.G. 1980. *Stud. Avian Biol.* **4**; DeSante D.F. 1983. *Auk* **100**:826-852). Recognizing this, ornithologists from the Point Reyes Bird Observatory (PRBO) have conducted standardized censuses of all migrant bird species daily since 3 April 1968. DeSante and Ainley (1980) summarized the occurrence patterns of 331 species recorded on the island from 1854 to 2 April 1976 and noted an additional 15 species observed through 2 October 1979. A more recent update (Pyle P. & Henderson R.P. 1991. *W. Birds* **22**:41-84) listed a total of 375 species recorded on the island through 31 December 1989 and summarized the occurrence patterns of 359 species, 20 intraspecific forms, and 4 interspecific hybrids recorded from 3 April 1968 through 31 December 1989. Here we update prior works, noting a total of 400 species recorded on Southeast Farallon Island through 31 December 1999, with an additional 2 species recorded in 2000. We have summarized the occurrence patterns of 384 migratory species, 13 intraspecific forms, 7 interspecific hybrids, 5 species pairs (*e.g.*, Lesser Golden-Plover), and one species triplet (*viz.*, Solitary Vireo) recorded from 3 April 1968 through 31 December 1999. For each migratory species we provide seasonal arrival data for both spring and fall, which should reflect movement patterns along the adjacent California coast. Winter arrivals and over-wintering residents are also addressed.

LOUIS D. THOMPSON. Walker Lake Working Group, P.O. Box 867, Hawthorne NV 89415. **Saving Nevada's other lake: preserving an important bird habitat.**

Walker Lake, an important habitat for dozens of species of birds year round and for many species of migrating water birds, particularly Common Loons (*Gavia immer*), is threatened with dessication. This presentation discusses the circumstances threatening the lake and the potential impact on its viability as a bird habitat, fishery, and recreation area. Diversions have been bad. Low precip in recent years has hurt.

HANSPETER WALTER. California Department of Water Resources, 3251 "S" Street, Sacramento CA 95825. **Natural history and ecology of the Chukar (*Alectoris chukar*) in the American West.**

The Chukar (*Alectoris chukar*) has thrived in the western United States since its introduction earlier this century. Despite its success and popularity as a game bird, there has been little research conducted on wild Chukar populations. Much of what is known about Chukar ecology stems from anecdotal accounts; and the Chukar, while here to stay, remains an unfamiliar resident of the West. The Chukar's journey from Asia to North America was remarkable and its establishment was facilitated by opportunistic use of man-made and altered landscapes, providing a sharp comparison to the concomitant decline of some native species such as the Greater Sage-Grouse (*Centrocercus urophasianus*). I conducted a research project in eastern Oregon to document movements, habitat use, reproduction, survival, and diet. Chukars were trapped, radio-tagged, tracked and observed from February to October 1996-1998. Chukar nests favored the southeast ($p < 0.01$). Mean 90% MCP home range was 17–25 ha. Average daily movement of adults was 282 m. Predators were raptors (59%) and mammals (41%). Adults used steep annual grass and rock cover types most, but broods spent significantly more time in shrub cover types on gentler slopes and less time in rock cover types ($p < 0.025$). Diet and crop analysis of 200+ crops identified 72 items, but 6 items comprised 82.2% of dry weight. Disturbingly, ingested lead shot pellets were discovered in 4.9% of crops and 5.7% of gizzards. Results suggest that adults thrive in rugged terrain with cheatgrass (*Bromus tectorum*), but nesting cover and brood habitat requirements include additional habitats –indicating landscape heterogeneity may also be important to Chukars as well as to native species.

WALTER WEHTJE. University of California at Riverside, 2286 Barbara Drive, Camarillo CA 93012. **Great-tailed Grackles (*Quiscalus mexicanus*) in the western United States: range expansion and subspecies interactions.**

In the western United States the rapid expansion of the Great-tailed Grackle (*Quiscalus mexicanus*) during the twentieth century is unprecedented for a non-introduced passerine. From a first nesting record near Las Cruces New Mexico in 1913, this species now breeds in every western state except Washington. This expansion is especially noteworthy as it involves two morphologically and phenotypically distinctive subspecies, *Q. m. nelsoni* and *Q. m. monsoni*. These taxa invaded the United States from different source areas and first came into secondary contact in Arizona in the mid 1950s. Since then, the two subspecies have continued their respective expansions while hybridizing with each other. This study focuses on whether the rapid expansion of this species may be related to the interaction between the two subspecies; specifically, whether the dominance of the larger *monsoni* birds in colonial situations compels the smaller *nelsoni* birds to disperse in order to breed successfully. To test this hypothesis, the spread of the species in the western states was mapped using published reports and museum specimens. Museum specimens were also measured and assigned to one of three groups: *nelsoni*, *monsoni*, or hybrids between the two. Finally, over 120 birds were collected in California, Arizona, and Nevada. Each bird was turned into a museum specimen, measured, and assigned to one of the three groups. Results from this work indicate that hybrids between the two subspecies are most common throughout the northern portion of the species' range with "purer" *nelsoni* and *monsoni* birds found in southern and eastern Arizona, respectively.

BRIAN D.C. WILLIAMS. Consulting Wildlife Ecologist, 8200 Turner Drive, Granite Bay CA 95746. **Purple Martins (*Progne subis*) in oak woodlands.**

The Purple Martin (*Progne subis*) once nested fairly widely in California's oak woodlands but are now very rare in that habitat. The Tehachapi Range in the southern Sierra Nevada may now host the last oak woodland-nesting martins, with notes from two field ornithologists suggesting that there may be as many as 100-200 pairs or about 15% of the estimated California population. In summer 2000 we censused portions of the northern Tehachapis and measured over 30 variables at nest sites and randomly-determined paired sites in order to determine why martins still use this area. We found a remarkable 57 nests in 46 valley (*Quercus lobata*) and blue oaks (*Q. douglasii*) in six days. Preliminary results have indicated that nest trees averaged 104.3 cm dbh (*s.d.*=23.8, range 57-175, *n*=42), were the largest diameter trees on 65% of the 0.1 ha plots with more than one tree, and were also taller and more prominent than expected by chance. Nests were most often within the upper third of the landscape at various scales. European Starlings (*Sturnus vulgaris*) were uncommon where martins concentrated and no starlings were observed at one area with 18 pairs of martins; this was the only area > 1 km from any residential development. Martins may persist in portions of the Tehachapi Range because of a unique set of habitat and landscape conditions including factors that seem to limit starlings to low densities. Results of this study are consistent with the martin's apparent preference elsewhere for very large trees in prominent positions in open landscapes.