Nature Notes

Pajarito Environmental Education Center
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Your Nature Center in Los Alamos

Bird Migrations of Several Types

Article and photo by David Yeamans

I used to ask the oddest question. A robin in winter? I thought they migrated! How is it that a bird that is supposed to migrate is found in my yard any day of the year?

For the American Robin and many more birds, their migration is like a blanket, sort of. Each of the birds (just imagining, now, not literally) is pinned to an invisible blanket that gets pulled south in fall and north in spring. That means a robin that summers in Alaska might spend its winter in New Mexico and a bird that summers in New Mexico might winter in Central America. The birds in my yard might appear not to have migrated but in all likelihood they did and will continue to do so throughout the season except during their in-residence nesting time.

Of course there are wrinkles and stretches in the fabric of that "blanket migration." Climate, water, food, shelter, and sunlight are all important to the migrators. A species might find a suitable winter habitat by migrating only a few miles "as the crow flies" but changing in elevation about a mile. That's particularly easy on the Pajarito Plateau because we have a relatively warm White Rock Canyon nearby, filled with water and food at a time when the icy mountains become too inhospitable. In winter, thrushes, robins, chickadees, solitaires, juncos, and some others might be found within a few miles of their summer homes but they have indeed migrated to a new home in a new neighborhood.

Ah, but all is not so simple. Is the robin in your neighborhood this spring the one that wintered in the canyon or did it come from Mexico? Did the one in the canyon come up to the mesa or did it return to its former summer home in Idaho? Without a way of recognizing individual birds it's impossible to tell. Well, almost impossible. We can see from data sources like *ebird.com* that American Robins, for example, pile up in some places and times but not in others. If we compared the population densities in all locations at all times, we could probably determine some sort of average distance that those birds fly to find new homes each season. I'll save that for the experienced mathematicians and biologists.

There's another kind of geographical control on this blanket migration. The southward moving blanket is stopped dramatically along the Gulf Coast of the United States. Some birds such as the Loggerhead Shrike, an expected but uncommon visitor to the Pajarito Plateau, become quite abundant along the coast in winter because it's just too far to fly across the Caribbean Sea for their needs. (continued on page 2)

There are plenty of insects, other birds, lizards, mice, and such to feed it right there along the Gulf Coast. Similar wrinkles in the fabric come from mountain ranges and islands like the Jemez or Sangre de Cristo mountains. Consider that the Rosy Finches find their most southerly winter habitat around Sandia Crest and they don't just fly a pre-determined number of airline miles south (or east or west) of their summer grounds. No, they fly to the next appropriate spot.

In addition to blanket migration there is what I'd call a point-to-point migration where birds have a well-defined southern and/or northern end point. Our beloved Sandhill Crane that thrills us spring and fall with thermal assisted noisy flights has point destinations at both ends. The central Rio Grande Valley is the winter home for a large percentage of the birds that have summered in Idaho or Alaska. They might have several winter and several summer destinations but you don't find them scattered evenly throughout the suitable habitats. They are concentrated. Ducks, geese, and other water birds are known for point-to-point migrations. We are blessed when a few of them are seen flying over or resting for a night and day near us before they continue the journey to their, should I say, habitual end point. And just to complicate the issue, some animals such as the monarch butterfly have a small winter destination but very broad summer dispersal – point-to-area, so to speak. Think of a species that does the opposite – widely spread wintering grounds but concentrated summer breeding grounds. Snow Geese come to mind as an area-to-point migrator.

When we see a species that we "thought" migrated (and therefore we thought because it used to be here that it shouldn't be here now), maybe it is actually migrating via the blanket method. Or maybe it's not. Maybe it's in post-breeding dispersal. That's a kind of migration where the birds that have no more need of the nest disperse to find new sources of food, water, and shelter. Then they can be found flying randomly or generally toward a destination or a non-destination where things seem about right for them. The dispersal can send interesting and unusual species our way. It's one way that a species will change its historical range. You've heard of the wayward moose that finds its way into a swimming pool in Florida? Expect the same uncharacteristic behavior from a bird or two as well. If a bird individual has wandered far out of its normal migration flight area, getting back on track might involve flying into your yard. At that point, your feeder might just be a seasonal island for a Varied Thrush, a Rufous Hummingbird, or Gray Catbird that would otherwise be on its way south.

Raptors such as Swainson's, Zone-tailed, or Ferruginous Hawks can leave wide summering areas and then concentrate in astoundingly dense strands as they head for the wintering habitat. They go from area to area but migrate through narrow corridors. Imagine counting half a million of them in a day at Veracruz, Mexico, but seeing only one or two in an entire county once they reach their end continent.

Get set for a spectacle in our area in September and in May. In my yard in one day I've seen as many as 46 species of birds, over 60 in a week. Most of those birds aren't going to breed or winter here but they are on their way to somewhere else, stopping for much needed rest, food, and water. I can hardly wait for the next migration. ☼

Nature Notes in Color on Our Web Site

PEEC is grateful to the Viswanathans for unique opportunities to view local animal behavior at night (see the next page), and to Dave Yeamans for showing us sandhill cranes in flight on the cover of this issue. Many excellent photographers contribute to all PEEC publications.

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See all issues of *Nature Notes* and/or subscribe at: //www.pajaritoeec.org/publications/newsletter.php ☼

Coyote Howls

The coyote is one of the few wild animals whose vocalizations are commonly heard. At night coyotes both howl (a high quavering cry) and emit a series of short, high-pitched yips.

Howls are used to keep in touch with other coyotes in the area. After hearing a family group of coyotes howl, it is easy to get the impression that the woods must be overflowing with coyotes. In reality there are probably five or six animals present (i.e., two adults and young of the year).

Types of coyote vocalizations include the following:

Howling – communications with others in the area. Also, an announcement that "I am here and this is my area. Other males are invited to stay away but females are welcome to follow the sound of my voice. Please answer and let me know where you are so we don't have any unwanted conflicts."

Yelping – a celebration or criticism within a small group of coyotes. Often heard during play among pups or young animals.

Barking – The scientific name for coyotes, "canis latrans," means "barking dog." The bark is thought to be a threat display when a coyote is protecting a den or a kill.

Huffing – usually used for calling pups without making a great deal of noise.

Long-range vocalizations change form, pitch, and pattern to communicate meanings.

Challenge howls – territorial howls, territorial warning howls, laughing and whooping noises for intimidation

Howls indicating danger – directional short barks and crying to identify or point out danger or a territory intruder.

Howls indicating loneliness.

Locator howls – chants that celebrate reuniting with other pack members, chants celebrating a pack kill, mating howls (to attract or compete for a mate).

Territorial barks – barks in combination with throat ululations for scolding another coyote (less violent form of territorial communication), yelping to signify submission, yelps to signify distress, yips to taunt.

A few coyotes make a tremendous amount of noise [when they want to]. Sometimes [when it is first heard,] the listener may experience a tingling fear of primitive danger, but to the seasoned outdoor person the howl of the coyote is truly a song of the west.

Sources:
www.desertusa.com/animals/coyote.html
www.creaturecontrol.net/Coyotes
//predatorhuntingforums.com/forums/index.php?/topic/232-the-art-and-science-of-coyote-vocalizations-and-their-application-to-calling/

Coyotes Visit Warbler Pond

Past issues of Nature Notes have featured photographs of animals at the "Warbler Pond" that was created by the Viswanathan family in their garden on Baranca Mesa. Birds and animals drink year-round and photos of night visitors are taken with motion-sensitive lights and camera.

This winter the pond was visited more than once by two coyotes. At first one coyote tried to break the ice on the pond (see photo) while the other watched, eyes caught by the light. Hari Viswanathan then installed a special heater to keep ice from forming. Subsequent photos have shown coyotes drinking at the pond. ☼

Ashley Pond is a Certified Wildlife Habitat

Article and photo by Craig Martin

The natural depression on Los Alamos Mesa that became Ashley Pond started filling with irrigation overflow water in the early 1920s, when Los Alamos was still a private school called "The Los Alamos Ranch School." Cattails grew around its edges, and the pond occasionally attracted waterfowl.

As Los Alamos grew, the pond became a central feature of downtown, but in an increasingly sterilized way. Under the direction of then Parks Manager Dick McIntyre, the County of Los Alamos began a pond revitalization project in 2011. The community expressed an interest in returning to a more natural pond and the redesigned park includes cattails, pond lilies, native grasses, and berry-bearing trees and shrubs.

In September, PEEC's Community Wildlife Habitat subcommittee approached me with the idea of adding Ashley Pond to their list of certified properties. Certifying a public park would be a great help in getting the entire county certified as a Community Wildlife Habitat. To be a National Wildlife Certified Habitat, a property must provide wildlife with food, cover, places to raise young, and water. As a test case, in 10 minutes I certified my yard, an easy thing to do when certifying private property on the edge of a national forest.

Ashley Pond wasn't quite so simple. Oh, the pond certainly meets the qualifications, but there are lots of people and committees with a vested interest in the pond. The Parks staff asked if they could still mow the grass around the pond, or take out dead trees. The Recreation folks wondered if the summer concerts would have to be limited. Because the pond is part of the Downtown Historic District, the Fuller Lodge/Historic Districts Advisory Board had to approve any signage that identified the pond as a NWF certified habitat. Because a sign would be placed in a public park, the Parks and Recreation Board also needed to weigh in.

Hey, my job can't be all fun in the outdoors. Two months later and a half-dozen meetings after PEEC's subcommittee came to me with the request, all the stakeholders had been consulted and I put in my 10 minutes online to complete the certification process for the County.

All of those who had a say in the process agreed that the pond's certification sign should be one of the fancier, faux-engraved signs. It's due to arrive any day. It will be installed on the east side of the pond so that visitors who read the sign will have the pond and the Jemez Mountains as the backdrop.

Is the pond truly a wildlife habitat? In the past year, local birdwatchers have reported on *eBird* 18 new bird species at the pond, almost doubling the previous total. Pretty nice!

(continued on next page)

(continued from page 4)
Editor's note: The concerns and questions raised about the pond's management and usage are not National Wildlife Federation issues.
The photograph shows rockwork edging the pond and outlining a wetlands using plants, plus the improved fountain that keeps ice away from paddling ducks. ☼

Juniper Berries on Kwage Mesa

A walk on the Kwage Mesa trail in November led to the discovery of plentiful, plump blue berries (actually cones) on the juniper trees. The abundance is not always the case and some years see a very sparse production, which brings hardship for both animals and people.

Southwest locals often refer to juniper trees as "cedars." Towns like Cedar City, Utah, or Cedaridge, Colorado, reflect this localism. Where this misnomer started is unknown. Probably some early settlers mistakenly were associating the overlapping, scalelike leaves or the shredded-bark-look or the reddish wood of a juniper with that of a cedar... One big difference between the trees is that cedars produce small woody cones and junipers produce a bluish berrylike cone.

Junipers occur from sea level to 10,000 feet in elevation across the West. In the Southwest, they are common on the mesa tops and ridges, often found in association with the pinyon pine. Though they may grow in pure stands, the trees are spaced apart because of their shade intolerance. The trees become established in over-grazed lands due to the lack of competition and dispersal of their seeds by wildlife. *(//www.desertusa.com/mag09/sep09/junipers.html)*

Since the herbal, cooking, and medicinal use of juniper berries is widely known, it's good to be sure to identify them correctly and avoid using similar berries that are poisonous. The web site, "Why Are Juniper Trees Called Cedar Trees?" has a three-step instruction for identifying juniper trees, plus some cooking methods, medicinal uses, and pointers on poisonous look-alikes. *(//www.ehow.com/about_6638095_juniper-trees-called-cedar-trees_.html).*


Photo by Esta Lee Albright

A bumper crop of juniper berries can mean inches more fat on wildlife getting ready for winter. Toxicity is said to be minimal, though eating even a few may bring on nausea in small animals

In doing research about southwest flora, one PEEC staffer read that a juniper berry has 315 calories! If that is correct, some of our wildlife might be looking very plump this year. However, a scientist on the staff explained, quoting the online *Wikipedia:*
"The problem here is the confusion between the use of 'calorie' as a scientific measure, versus 'calorie' as a measure of food. The calories in human food are actually kilocalories. A juniper berry has 0.315 kilocalories, which are the ordinary everyday "calories" that we talk about in reference to food."

In a completely different category is a use of juniper berries by the Navajos and Utes. Stringing colorful glass beads and dried berries, they create lovely necklaces called "spirit beads," or "ghost beads," which are believed to ward off negative energy, and to protect the wearer from nightmares. The artists are assisted by ants, who nibble off one end of the berry and eat the meat inside. The harmony that results from the interconnection of earth, tree, animal and human is believed to ensure tranquility and keep evil spirits away from the wearer.
(//www.simplybeadsusa.com/product-p/5ghostbeads.htm)☼

The Banner Cloud, A Mountain Peak's Flag

With luck, on days of clear visibility, a mountain top across the Rio Grande Valley may seem to be "waving its flag." There would be a cloud streaming back from its very tip, resembling a banner or plume. Probably the most famous and frequent banner cloud in the world is associated with the Matterhorn in the Alps in Switzerland.

Photo by Robert Ford of a banner cloud at the tip of the Matterhorn, used with permission.

A banner cloud can be one of different types of orographic clouds.

Orographic comes from the Greek word for "hill,' which means these clouds are caused by the shape of the land. Wind flowing over or around a land form determines such things as microclimates, temperatures, rainfall around the hill or mountain, and clouds.

Wind blowing **against** a mountain is forced to rise and may go over the top. Pushed high enough, the air has the cooling and condensation appropriate for forming a cloud. As the wind continuously flows from one direction, the rising air and wind create the banner or plume shape that seems to remain stationary. From Los Alamos we see the almost solid barrier of the long range of the southern Rockies marching south from Colorado. Air flow would tend to go over these mountains. This might be helped by unstable or cross-barrier flow. Clouds associated with air moving over a mountaintop have quite descriptive names: cap clouds, banner clouds, lenticular clouds, rotors, chinook arch, and billow clouds, as well as blowing snow and cornice build up. Web searches on any of these terms make for interesting reading.

A single, isolated mountain, or one of the higher peaks in a range, causes wind to blow **around** it. When wind blows around a mountain, vortices are formed and pushed upward toward the top of the back (lee side) of the peak to form a cloud. This type of flow is uncommon for the Rocky Mountains and the Appalachians because of the length and formation of those ranges.

Either type of land form can cause banner cloud formation. Santa Fe Baldy in the Sangre de Cristo range has been seen to carry a plume usually associated with high, craggy peaks. Regardless, banner-watching needs a word of caution, for this type of cloud must not be confused with snow which is blown off a mountain summit and carried downwind.

A comment from the Cloud Appreciation Society wonders, "With a true banner lifting above and behind the crest, could the mighty mountain and the ephemeral cloud possibly have less in common? And yet, they are faithful companions, who proclaim their friendship whenever they unfurl their glorious banner to the wind."

Sources: Cloudappreciationsociety.org/ flying-the-flag
www.metoffice.gov.uk/learning-about-the-weather/clouds/banner-clouds
www.inscc.utah.edu/~steenburgh/classes/6250/lectures/DynamicallyDrivenFlows.key.pdf
www-das.uwyo.edu/ngeerts/csx/notes
//fineartamerica.com [*photo*]

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Nature Notes is the quarterly newsletter of the
Pajarito Environmental Education Center, Los Alamos, New Mexico 87544

From the Executive Director
Katherine Watson

You are amazing. If you're reading this newsletter, you are the foundation of PEEC! You're a PEEC member, or a donor, or a volunteer, or all three. You have astounded all of us here at PEEC this year with the depth of your generosity and the strength of your support.

You've supported our capital campaign beyond what we ever dreamed could be possible. The funds you've donated will build indoor and outdoor exhibits that you can be proud of for years to come. You've funded the nature photography gallery, the Clues in the Canyon interactive exhibit, the ant farm and the fish tank, the Los Alamos Trails App, the children's discovery area play-on diorama, and so much more. You, your fellow residents, and your visiting family and friends are going to love to explore these exhibits over and over. You've funded the discovery gardens, the wildlife observation garden, the nature play area, the mud kitchen, and the picnic area. You've funded a state-of-the-art planetarium projector that will bring the sky inside for thousands of kids and adults every year. Wow!

With all that generosity already streaming towards the Los Alamos Nature Center, we were prepared to tighten our belts. We thought, people are so great and so generous, but we can't expect them to give as generously to our annual fund drive this year, since they've done such a fantastic job of supporting the capital campaign. Maybe people won't even understand why we need an annual fund drive, we thought, and they'll be upset that we're asking them to help us again.

Boy, were we wrong! Not only did you understand exactly why we need the annual fund drive, you supported it in record numbers. When you look at the program flyer included in this newsletter, you can feel proud knowing that YOU are what makes it possible for us to offer trips to Nacimiento Mine, talks on mountain lions and bird photography, wildflower identification classes, Hiking 101, and all the other programs that you and your fellow-citizens love. And you do even more—you allow us to get classes of kids outside, exploring their bug traps to see who lives in their playground, and holding birds while learning about scientific data collection. You get kids and adults outside, and you strengthen their connections with nature.

So, thank you from all of us here at PEEC. We depend on you, and you never let us down. ☼

Presenting PEEC's Staff

In the staff photo below:
Top - Katherine Watson, *Executive Director*;
Left to right - Siobhan Niklasson, *Education Programs Director*; Jonathan Creel, *Director of Interpretation;* Beth Cortright, *Nature Center Administrator;* Linda Boncella, *Volunteer Coordinator;* Laura Loy, *Communications Coordinator.*
All on PEEC's staff can be contacted by phone at (505)662-0460 or email to center@PajaritoEEC.org.

PEEC
Pajarito Environmental Education Center
3540 Orange St. P.O. Box 547
Los Alamos, NM 87544
www.PajaritoEEC.org

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Enriching people's lives by strengthening their connection to our canyons, mesas, mountains and skies.

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