Tuesday, November 19, 2019

Sponsored by BRANT Nature Tours

Owling Expedition Intensive
4:15 p.m. to 9:00 p.m.

TU-oew $95

Refuge Expo Conference Tent

Elusive and beautiful, owls are highly sought-after birds on any birder’s life list. Their mysterious nocturnal lifestyle captures our imagination and fuels our desire to find them. For that same reason, they are often hard to find and even harder to see - unless you know how to look for them, that is. This workshop is not focused on owl ID (although we will definitely cover that too) but, rather, how to find owls. We hope to improve your owling skills to the point that you feel confident to plan and execute a productive owling adventure on your own! This workshop consists of a one hour class followed immediately by a guided tour of the refuge in search of owls. This trip is part of our “Birder’s Corner” and is sponsored and guided by BRANT Nature Tours. This tour will include light walking. Offered Tuesday, Wednesday, Thursday and Saturday. Transportation and dinner provided. Limit 40.

Sponsored by SIGMA

VLA Nighttime Photography
Photographing the Nighttime Landscape
5:30 p.m. to 8:30 p.m.

TU-vlan $130

VLA, Visitor Center

Join Roman Kurywczak a photography Sigma Pro, for an educational how-to program on the possibilities of photographing landscapes with the star-filled sky as a backdrop. The Very Large Array Radio Telescope (VLA), one of the world’s premier astronomical radio observatories, consists of 27 radio antennas in a Y-shaped configuration on the Plains of San Agustin, west of Magdalena. Each antenna is 25 meters (82 feet) in diameter. At this location, the National Radio Astronomy Observatory (NRAO) and VLA, in partnership with Friends of Bosque del Apache and Sigma Camera, offer this nighttime photography workshop of spectacular magnitude. Learn about camera equipment, tips, techniques, and settings for star points. Explore “light painting” of a foreground subject, as well as overcoming obstacles presented by less-than-ideal conditions. The workshop begins with an equipment check and camera set-up at 5:30 p.m. in the VLA cafeteria. Bring a flashlight/headlamp with a red filter. You are required to leave your electronic communication equipment (cell phones, tablets, and computers) in your vehicle and turned off, as they interfere with the VLA’s telescope data collection, which occurs continuously. Dress warmly and in layers; bring water and a sack dinner. You will be walking in the desert at night up to 0.3 miles to the antennas, so consider your equipment weight and wear good walking shoes. This event will have an optional photo contest. Details about photo contest will be emailed post-Festival in December. Offered Tuesday, Thursday and Saturday, with Sunday as a backup for poor weather. A partial refund of $85 will be available if the weather is prohibitive on scheduled nights and you cannot participate in the Sunday event. Limit 30.

Expo Tent Complimentary Hors d’oeuvre Schedule

Wednesday 10:00 AM sponsored By Canon
Wednesday 3:00 PM Sponsored by Tamron

Thursday 10:00 AM sponsored by Canon
Thursday 3:00 PM sponsored by FujiFilm

Friday 10:00 AM sponsored by Canon
Friday 1:00 PM Come join Friends of Bosque del Apache for birthday cake - Bosque del Apache turns 80 today!
Friday 3:00 PM sponsored by FujiFilm

Saturday 10:00 AM sponsored by Canon
Saturday 11:00 AM sponsored by Ted Turner Reserves
Saturday 3:00 PM sponsored by Zeiss Optics
Wednesday, November 20, 2019

Walk Out to Fly Out
5:30 a.m. to 7:30 a.m.  T  $10
Refuge Bus Stop
It’s early, it’s dark, and it’s cold, but this is one event you shouldn’t miss. When thousands of cranes and geese take flight, the sights and sounds are spectacular! Meet at the visitor center bus stop for a short bus ride and walk to the roost area to view this spectacular scene. Wear comfortable shoes and dress warmly. Often there are seats on the bus for walk-ons, though this is not guaranteed; exact change is appreciated. This tour will include light walking. Offered Wednesday, Thursday, Friday, and Saturday. Transportation provided. Limit 44.

Sponsored by Morning with Cranes
5:30 a.m. to 10:00 a.m.  W  $70
Refuge Bus Stop
The experience of the evening crane fly in is very dramatic but don’t miss the other great show – dawn fly out. With guides Paul Tebbel and Keanna Leonard, watch and listen as the cranes awaken and the night slowly becomes day. There is no better time to pick out different vocalizations, see body language, and learn about the different life histories of the lesser and greater sandhill cranes. Learn how to recognize juveniles by sound and sight, identify the different subspecies and become familiar with many communications, like the unison call. Once all the cranes have departed, we’ll return to the refuge visitor center for 45 minutes to shed some layers and you’ll have time to grab breakfast from one of the vendors or eat what you brought. Then we’ll head back into the refuge to observe cranes in the field and learn more about their behavior while watching them feed, dance, and interact. This workshop is geared toward first-time viewers, but even experienced crane watchers will learn a lot. This tour will include light walking. Offered Wednesday, Thursday, Friday, and Saturday. Transportation provided. Limit 18.

*NEW*
Sponsored by Hunt’s
Early Bird Shoot Out
6:00 a.m. to 9:30 a.m.  W  $80
Refuge Bus Stop
Join wildlife photographer and guide Kathryn Dow for some early morning focus on bird photography. Explore exposure and histograms to master your

Watch for this sign – it indicates areas where no people are allowed, whether by vehicle, foot or bicycle. Obey all posted signs, barricades, and barriers.

A few cautions and suggestions…

① Weather is variable in November. Mornings are usually very cold and afternoons can reach into the 70s. Layered clothing is recommended. Dress warmly for early morning events.

② If you are arriving for early morning activities (before 6:30 a.m.), bring a flashlight or a headlamp to navigate the parking lot.

③ Allow enough time to reach your destination safely.

④ There is more traffic on and near the refuge during Festival; watch for vehicle doors opening, birders and photographers in roadways, and other hazards.

⑤ Birders and photographers: move your vehicle to the side of the road if you are stopping. Watch for other vehicles when entering or exiting your vehicle. Set up cameras and spotting scopes off the roadway.
manual settings. Learn how to read the light and select focus points on still and moving subjects. Uncertain about framing, splatter vision, and angles? We’ll cover those too! Master the skills needed to capture emotion and set the tone of your birding photography. Transportation provided. Limit 9.

Sponsored by TAMRON
A Flight to Remember: Birds in Flight and Motion
6:00 a.m. to 9:30 a.m.    W    $80
Refuge Bus Stop
Photographing birds in flight and motion can be challenging for even the most experienced photographers. Determine which settings and techniques work best for you with the help of Tamron professional Lisa Langell. Review focus settings (AF-C or AI Servo), setting the focus point, and finding the best aperture and shutter speed settings for photographing birds in motion. Practice envisioning the image before capturing it! This hands-on, in-the-field workshop is designed for those with DSLR and mirrorless cameras. Transportation provided. Limit 9.

*NEW*
Sponsored by Hunt’s
Using Landscape to Beautify your Birds-in-Flight Photography
6:00 a.m. to 9:30 a.m.    W    $80
Refuge Bus Stop
Join full-time professional nature photographer, Texas master naturalist and certified interpretive guide Ruth Hoyt as she leads participants in the field to capture images of landscapes and waterscapes with sandhill cranes. Telephoto lenses and tripods are welcome but not required for this session in the field. Learn how to create strong compositions by using the foreground, lighting and depth of field to your advantage, as well as anchor points, strong subject matter and more. Have your camera manual with you in digital or paper format. Remember to dress warmly and put extra memory cards and fully charged batteries in your pocket. Transportation provided. Limit 9.

*NEW*
Sponsored by Canon
Canon Open Basic
6:00 a.m. to 9:30 a.m.    W    Free
Refuge Crane Roost
Join Canon Explorer of Light Darrell Gulin to expand your knowledge of your equipment and take those special images. Hands-on help reviewing your photos taken while out in the field. Limit 12.

Sponsored by Mountain Birding Intensive
6:00 a.m. to 12:30 p.m.    T    $95
Socorro, Macey Center Parking Lot
Bosque del Apache is an amazing place to bird, but there is more to Central New Mexico than just wetlands. The Magdalena Mountains west of Socorro offer a huge diversity of birds that you can’t find on the refuge. Species such as Williamson’s sapsucker, acorn woodpecker, pygmy nuthatch, juniper titmouse, Cassin’s finch and northern pygmy-owl are all icons of the West and all may be seen on this tour. In the lower elevations, rich Chihuahua desert grasslands provide habitat for many species of sparrows and longspurs. Additionally, this tour often offers a great

Holiday Inn Express

**Holiday Inn Express**
1040 N California St,
Socorro, NM 87801
(575) 838-4600

**BRANT**
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opportunity to study Chihuahuan and common ravens. So when you’re ready to venture out of the wetlands and into the pine forests and grasslands, sign up for this tour! This trip is part of our “Birder’s Corner” and is sponsored and guided by BRANT Nature Tours. Bring your breakfast and plenty of drinking water. Transportation and light snacks provided. Light hiking involved. See map on page 75. Offered Wednesday and Friday. Limit 20.

Sponsored by
The Language of the Forest
7:00 a.m. to 12:30 p.m.
WE-lf $95 Refuge Visitor Center
Did you know that the birds can tell you when a cougar is moving through the landscape? It’s called the Language of the Forest. Interpreting this language is an ancient skill that helped people survive and flourish for thousands of years. For centuries now, modern cultures have been marked by an increasing disconnection from nature, from themselves, and from others. Birds hold a key to the re-connection. But there’s more to this than knowing when a cougar is around; understanding it will also teach you to quiet your mind, blend-in and attune to your senses, and become more sensitive to how you affect the natural world, including those around you. This trip consists of two parts, a one-hour classroom session followed by a guided field session around the refuge visitor center and Desert Arboretum. Your guide is Kristi Dranginis, an expert field ornithologist, naturalist, and herbalist. This trip is part of our “Birder’s Corner” and is sponsored and guided by BRANT Nature Tours and BirdMentor.com. This tour involves light walking. Limit 18.

Deadly Beauty Behavior
8:00 a.m. to 11:00 a.m.
WE-dbb $35 San Antonio, Owl Bar
Experience live raptors in the field! Explore the strategies hawks and falcons use to catch their prey and raise their young with falconer, raptor breeder, and wildlife rehabilitator Matthew Mitchell. Trained hawks and falcons will be released to fly, chase lures, and possibly even hunt wild prey (viewers be warned!). Meet at the west side of the Owl Bar in San Antonio at 8:00 a.m. and carpool a short distance to an area where the birds can be flown safely. Bring your questions and binoculars. This tour involves light walking. Cameras are allowed, but no dogs, please. Limit 30.

Refuge Birding Tour
8:00 a.m. to 11:00 a.m.
WE-rbt $20 Refuge Bus Stop
This tour is perfect for those wishing to discover the incredible diversity of birds on the refuge. Join Jeff Sanchez, wildlife biologist at Bosque del Apache to search for waterfowl, raptors, and songbirds! Learn about the complex management techniques used to create different types of habitat. The tour is great for novice to moderate level birders. The exact tour route will depend on the distribution of birds on that day. Transportation provided. Offered Wednesday and Saturday. Limit 40.

Birding Sevilleta! East Side
8:30 a.m. to 3:00 p.m.
WE-bse $60 Sevilleta NWR, Visitor Center
Discover another side of Sevilleta National Wildlife Refuge! Explore Chihuahua Desert grasslands and piñon-juniper woodlands in search of some winged residents with a refuge naturalist. Enjoy this rare opportunity to discover the magic of Sevilleta National Wildlife Refuge and its many inhabitants. Wear sturdy
shoes and dress for the weather. This tour includes some easy to moderate walking over uneven terrain. Bring your lunch and plenty of drinking water. See page 75. Limit 9.

*NEW*
Sponsored by OLYMPUS
**One on One Portfolio Review**
9:30 a.m. to 12:00 p.m.
WE-oopr S20 Refuge Visitor Center
Landscape, nature, bird and wildlife photographers are invited to sign up for a one-on-one portfolio review with professional photographer & Olympus Visionary Scott Bourne. You will present your work directly to Scott in a series of 10-minute, one-on-one reviews. This is an excellent way to find out what it takes to get published, win awards, and/or sell your work. Scott will review your photos and offer critiques on how you could make each one better. You can bring between 10-12 images, jpg format, on a USB memory stick. Bring your problem images if you want to know how to improve them. Bring your best images if you want to see if your work makes the grade – or a combination of both. Limit 12.

**Crane Basics Seminar**
10:00 a.m. to 11:00 a.m.
WE-cb S20 Refuge Expo Conference Tent
When watching a group of sandhill cranes, did you ever wonder, “What’s up with those birds?” Crane Basics is your opportunity to make sense of crane biology and behavior, knowledge that will significantly enhance your crane watching experience. Join Erv Nichols and Sandra Noll to gain insights into crane migration, family life, body language, and vocalizations through photographs, captivating video and a bit of humor too. Offered Wednesday and Friday. Limit 25.

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Sevilleta National Wildlife Refuge

When people think of a wildlife refuge in Socorro County, most people think of Bosque del Apache. However, there is another refuge in the northern part of the county, Sevilleta National Wildlife Refuge.

Within Sevilleta’s 360 square miles, four great communities of plants and animals come together: desert, prairie, shrub steppe and woodlands. Plus, the Rio Grande runs through it, providing water and the sheltering bosque to birds and other wildlife.

New Mexico’s largest and most biologically diverse national wildlife refuge has a special purpose among refuges in the contiguous states. It was established to preserve and enhance the integrity and the natural character of the ecosystems of the refuge. Visitors are welcomed to visit on their own and enjoy the refuge trails and Visitor Center or to take part in guided excursions across its timeless landscapes.

The Amigos de la Sevilleta is a non-profit 501(c)3 friends group that is dedicated to support Sevilleta in all of their endeavors. The Amigos and refuge staff have an outreach program in place to increase public awareness of Sevilleta National Wildlife Refuge research projects, conservation efforts and its vast wild beauty.
*NEW*
Desert Arboretum Tour and Plant Stories
10:00 a.m. to 11:00 a.m. WE-dat Free Refuge Desert Arboretum
No Registration Required
Come visit the Desert Arboretum, often called the Cactus Garden, a place designed to showcase xeric native plants as alternatives to water-consuming non-native varieties. Join master gardener Tom Hyden for a guided tour and learn more about the plants (cacti, succulents, native grasses, etc.) and their histories.
The Desert Arboretum is located behind the Expo Conference Tent, just east of the Friends House. For more information on the Desert Arboretum trail, turn to page 35. This tour involves light walking. Offered Wednesday, Thursday, Friday and Saturday.

Sponsored by
Point & Shoot Nature Photography
Introduction Seminar
10:00 a.m. to 11:30 a.m. WE-psn $20 Refuge Biology Building
Let the camera do all the work it can, so you can enjoy capturing memorable images of birds, wildlife, and nature. This is the point and shoot philosophy and technique that can be practiced with any of today’s superzoom point and shoot cameras. Join Stephen Ingraham as he introduces point and shoot nature photography: bird and wildlife, macro and landscape. This workshop will give you examples of what is possible, showcase the philosophy and the techniques to get you started, and offer advice on camera choice and basic field techniques. As thousands of photographers have discovered, today’s long zoom point and shoot digital cameras, in the hands of a thoughtful and creative photographer, are capable of amazingly satisfying images of everything from birds and wildlife, to macros of wildflowers and insects, to grand landscapes and sweeping panoramas under dramatic skies - all in a relatively small, compact, and inexpensive package. This is a great place to start your adventure in photography. Offered Wednesday and Friday. Limit 24.
*NEW*
Sponsored by
Ted Turner Reserves: Bison Country
10:00 a.m. to 11:30 a.m.  
Free  Refuge Visitor Center

The Turner Ranches southern New Mexico cover over 800 square miles and encompass many mountain ranges, overwhelming historical sites including petroglyphs, pictographs, Mimbres sites, military forts, battle sites. On the Armendaris Ranch, we have the fourth largest bat population in the U.S., desert bighorn sheep, javelina, mule deer, antelope, cougars, bobcats and oryx. We also have conservation efforts with the Bolson tortoise, the black tailed prairie dog and Desert Bighorn Sheep. The raptors are abundant and are particularly impressive when the bats emerge. This was presented on Nat Geo Wild’s “Hostile Planet – Deserts” in April. The historic Jornado del Muerto, which is part of the El Camino Real de Tierra Adentro National Historic Trail, runs right through the ranch.

The Ladder Ranch on the west side of I-25 has immeasurable Mimbres sites, homesteads and several battle sites from the Apache Wars. On the Ladder you are likely to see elk, deer, antelope, turkey and javelina. The conservation efforts on the Ladder Ranch include the Mexican gray wolf, Bolson tortoise, the black tailed prairie dog, the Chiricahua leopard frog, and tracking of the cougar population. The bird count on the Ladder has been estimated at over 252 species with a high concentration on the Animas watershed. We have large herds of bison on both ranches and the likelihood on seeing these magnificent animals is very high. The guide team of Ted Turner Reserves will give an informal presentation on the ranches and will talk about the bison and the ongoing research efforts. These ranches are now open to the public, and we are happy to discuss access to these wonderful places. Limit 25.

*NEW*
Sponsored by TAMRON
New Nature Photography
11:30 a.m. to 1:00 p.m.  
Free  Refuge Visitor Center

Elevate your style and expand your imagination!
Photographers think a great deal about composition, light, subject matter and more when they create an image. But do you, as a photographer, think about the final home for the image? Or how to make your images more marketable and desirable for today’s consumers? What about simply making your work more unique and “current” in ways you haven’t thought about? Join Tamron photography professional Lisa Langell as she takes you on a virtual journey from the field to the finishing room. Get inspired to think differently about what you shoot, how you shoot it, and why. Apply principles and techniques for capturing images that will result in compelling artwork. Look for the hidden opportunities that are right before you out in the field. Limit 20.

Backwater Tour
Bosque del Apache Water Management
12:30 p.m. to 3:00 p.m.  T  WE-bwt $20  Refuge Bus Stop
Experience the refuge from the perspective of water management. Join refuge water manager Gerad Montoya on a tour of the refuge and learn how water is moved, used, and conserved to create the diverse wetland habitats that attract wildlife and people to Bosque del Apache. Learn the tools and techniques the refuge uses to mimic the conditions needed to restore the wetland habitat of the historic Rio Grande. Discover how managing water is critical in providing habitat for cranes, geese, ducks, endangered species, and other wildlife. This tour takes you to places on the refuge that most people never get to see. Limit 18.

Sponsored by Hunt’s

Birds in Flight Workshop
12:30 p.m. to 5:30 p.m.  T  WE-cbf $110  Refuge Visitor Center
Canon Equipment Users Only
Join professional photographer Mark Buckler for this field and classroom workshop designed to help you achieve maximum results from your current Canon photography system. (Own Nikon gear? Join Don Toothaker’s workshop listed below.) Topics covered include: camera auto focus & lens settings, different metering modes to obtain optimal exposures, panning, birds in flight, creating strong compositions, importance of good light angles, and much, much more! After a brief classroom seminar and a catered light lunch, move to the field (transportation provided) for nearly four hours of creating wonderful images of cranes, geese, hawks, deer, and other wildlife. Join a world class photographer using top of the line photography equipment for a workshop we know you’ll enjoy! Transportation provided. Also offered on Thursday with Keith Bauer. Limit 9.

Sponsored by Hunt’s

Photography Intensive Workshop
12:30 p.m. to 5:30 p.m. Wednesday (part 1) and 5:30 a.m. to 11:30 a.m. Thursday (part 2)  W  WE-piw $210  Refuge Biology Building
Made up of two sessions over two days, this workshop has instruction in the field and classroom and will explore post processing and photo editing with professional photographer Russell Burden.
Following a brief overview of sandhill crane biology, behavior, and migration, we will dedicate our time to direct field observations (transportation provided), including how cranes create and maintain their pair bonds, raise young, and communicate by vocalizations and body language. Fly in at a refuge hotspot will conclude the tour - a great finale! Crane Team: **Paul Tebbel, Keanna Leonard, Erv Nichols, and Sandra Noll.** Transportation provided. Offered Wednesday and Friday. Limit 18.

*NEW*
Sponsored by **Hunt's**
**Afternoon Avian Adventure**
2:00 p.m. to 5:30 p.m. 
**WE-aaa $80 Refuge Bus Stop**
Join wildlife photographer and guide **Kathryn Dow** for an afternoon of bird photography. Explore exposure and histograms to master your manual settings. Learn how to read the light and select focus points on still and moving subjects. Uncertain about framing, splatter vision, and angles? We'll cover those too! Master the skills needed to capture emotion and set the tone of your birding photography. Session will conclude at dusk with a prowl for great horned owls emerging in that last light to start hunting. Transportation provided. Limit 9.

*NEW*
Sponsored by **TAMRON**
**Flat Lay Photography**
2:00 p.m. to 5:30 p.m. 
**WE-flp $80 Refuge Visitor Center**
The purpose behind this type of photography includes stock imagery, greeting cards, business cards, posters, advertising/marketing, wall art, and more. The sky is the limit with what you can do. Join **Lisa Langell**, a Tamron sponsored professional, to learn the concepts and principles of flat lay photography. Learn techniques for shooting high-quality flat lay images, lighting tips and indoor and outdoor options for flat lay. Review important principles for the proper composition and layout of your flat lay design and key post-processing techniques that will elevate the look
and feel of your work without changing the integrity of your image. Limit 9.

*NEW*
Sponsored by **SIGMA**
**Birds in Flight: Capture Stunning Images**
2:00 p.m. to 5:30 p.m.  
**WE-bfr** $80  Refuge Bus Stop
Want to learn how to take sharp photo images of birds in flight? Professional nature photographer and Sigma Pro **Roman Kurywczak** will show you how. Learn the proper settings to capture stunning bird-in-flight images of your very own. Every level of photographer is welcome to sign up for this workshop, but all should have a working knowledge of changing their camera settings, including f/stop, ISO, and shutter speed. A digital SLR camera with a minimum 300mm focal length lens is recommended but not required. Dress warmly and bring extra memory cards. Sigma USA will also be on hand to provide loaner lenses for these workshops. Offered Wednesday, Thursday, and Friday. Transportation provided. Limit 9.

*NEW*
Sponsored by **Canon**
**Finding Creative Moments in Photography**
2:00 p.m. to 5:30 p.m.  
**WE-fcm** $80  Refuge Bus Stop
Join Canon Explorer of Light **Darrell Gulin** and learn how to enhance normal wildlife images by knowing your camera settings, as well as bird behavior. Learn to watch the interactions between birds, and capture interactions such as leadership, nurturing and courting. Capture these moments using fast shutter speeds, pan blurs, motion, pans, and more. Offered Wednesday and Thursday. Transportation provided. Limit 9.

*NEW*
Sponsored by **OLYMPUS**
**Easy Tips to Better Bird Photography**
2:30 p.m. to 4:00 p.m.  
**WE-etbbp** $20  Refuge Visitor Center
Join Olympus photography professional **Scott Bourne** to learn how to find and identify birds, how understanding birds will improve your bird photography, and how to approach birds when you find them. Uncover how sun direction and wind direction impact bird photography as well as tricks for good compositions, the importance of clean backgrounds, and how your choice of gear can impact your success. There will be time at the end of the demonstration for your bird photography questions. Limit 24.

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### Want your Art Featured?

#### Enter our 2020 Featured Artist Contest!

The Festival of the Cranes 33rd year Cover Artist winner will be awarded a free premium 10’x10’ booth space in the Expo Tent during Festival as Friends featured guest.

Submissions for Cover Art for the 2020 Festival of the Cranes brochure and official merchandise should be high resolution, color images—artwork or photographs—that can be formatted to fit 8.5” x 11” with space for title text.

Artwork should represent sandhill cranes and Bosque del Apache National Wildlife Refuge.

For more information, see page 76 and email submit your art to Art@friendsofbosquedelapache.org by March 1, 2020.

### Interested in Photography Contests?

Learn more about the Festival Photography Contest at our website and join us in 2020!

[https://www.friendsofbosquedelapache.org/photo-contest.aspx](https://www.friendsofbosquedelapache.org/photo-contest.aspx)
Sponsored by 
Seven Fold Path to Better Birding
3:30 p.m. to 4:30 p.m. 
WE-sfp Free Refuge Biology Building
Stephen Ingraham, ZEISS Senior Brand Advocate for Birding and Nature, presents what every birder wishes they had known as a beginner: seven easy principles that will increase your enjoyment of birds and success as a birder. Learn when to use your ears, eyes or binoculars to keeping bird records and revel in the joy of birding by guiding your focus. Limit 24.

Sponsored by 
Owling Expedition Intensive
4:15 p.m. to 9:00 p.m. 
WE-oew $95 Refuge Expo Conference Tent
Elusive and beautiful, owls are highly sought-after birds on any birder’s life list. Their mysterious nocturnal lifestyle captures our imagination and fuels our desire to find them. For that same reason, they are often hard to find and even harder to see - unless you know how to look for them, that is. This workshop is not focused on owl ID (although we will definitely cover that too) but, rather, how to find owls. We hope to improve your owling skills to the point that you feel confident to plan and execute a productive owling adventure on your own! This workshop consists of a one hour class followed immediately by a guided tour of the refuge in search of owls. This trip is part of our “Birder’s Corner” and is sponsored and guided by BRANT Nature Tours. This tour will include light walking. Offered Tuesday, Wednesday, Thursday and Saturday. Transportation and dinner provided. Limit 40.

*NEW*
Dinner Theater: Young Frankenstein
5:30 p.m. to 10:00 p.m. 
WE-dt $45 Socorro, NMT, Macey Center
Galena Room door opens at 5:30 p.m. with a cash bar. Dinner - “Taste of the Mediterranean” served at 6:00 p.m. - includes Greek chicken, spanakopita, hummus, baklava and more. Socorro Community Theater is presenting Young Frankenstein. Show begins at 7:30 p.m. in Macey Center Performance Hall.
The comedy genius, Mel Brooks, adapted his legendarily funny film into a brilliant stage creation – Young Frankenstein! Grandson of the infamous Victor Frankenstein, Frederick Frankenstein (pronounced “Fronk-en-steen”) inherits his family’s estate in Transylvania. With the help of a hunchbacked sidekick, Igor (pronounced “Eye-gore”), and a leggy lab assistant, Inga (pronounced normally), Frederick finds himself in the mad scientist shoes of his ancestors. “It’s alive!” he exclaims as he brings to life a creature to rival his grandfather’s. Eventually, of course, the monster escapes and hilarity continuously abounds.
Young Frankenstein is presented through special arrangement with Music Theatre International (MTI). All authorized performance materials are also supplied by MTI. www.MTIshows.com Pre-paid registration is required by 5:00 p.m., Friday, November 15. Visit the website for ticket information and sales: www.socorro.com/sct. Limit 80.

Thursday, November 21, 2019
Walk Out to Fly Out
5:30 a.m. to 7:30 a.m. 
TH-wofo $10 Refuge Bus Stop
It’s early, it’s dark, and it’s cold, but this is one event you shouldn’t miss. When thousands of cranes and geese take flight, the sights and sounds are spectacular! Meet at the visitor center bus stop for
SIGMA

As Diverse as Mother Nature Herself

From snow-capped peaks to teeming tropical tide pools, SIGMA’s telephoto lineup is equipped to bring Mother Nature close.

S Sports
500mm F4 DG OS HSM

S Sports
150-600mm F5-6.3 DG OS HSM

C Contemporary
150-600mm F5-6.3 DG OS HSM

S Sports
60-600mm F4.5-6.3 DG OS HSM

S Sports
120-300mm F2.8 DG OS HSM

C Contemporary
100-400mm F5-6.3 DG OS HSM

S Sports
70-200mm F2.8 DG OS HSM

Visit the website to see included accessories.
a short bus ride and walk to the roost area to view this spectacular scene. Wear comfortable shoes and dress warmly. Often there are seats on the bus for walk-ons, though this is not guaranteed; exact change is appreciated. This tour will include light walking. Offered Wednesday, Thursday, Friday, and Saturday. Transportation provided. Limit 44.

Sponsored by Morning with Cranes

5:30 a.m. to 10:00 a.m.

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The experience of the evening crane fly in is very dramatic but don’t miss the other great show – dawn fly out. With guides Paul Tebbel and Keanna Leonard, watch and listen as the cranes awaken and the night slowly becomes day. There is no better time to pick out different vocalizations, see body language, and learn about the different life histories of the lesser and greater sandhill cranes. Learn how to recognize juveniles by sound and sight, identify the different subspecies and become familiar with many communications, like the unison call. Once all the cranes have departed, we’ll return to the refuge visitor center for 45 minutes to shed some layers and you’ll have time to grab breakfast from one of the vendors or eat what you brought. Then we’ll head back into the refuge to observe cranes in the field and learn more about their behavior while watching them feed, dance, and interact. This workshop is geared toward first-time viewers, but even experienced crane watchers will learn a lot. This tour will include light walking. Offered Wednesday, Thursday, Friday, and Saturday. Transportation provided. Limit 18.

Thursday 21
Managing Water Scarcity

Wow, what a turn of events from spring 2018! The Rio Grande went dry in late March last year. Having never happened before, this event put fear into many water managers and producers in the Middle Rio Grande Valley. This spring, we are dealing with above average snow pack in the northern watershed, and record high runoff and flows down the valley. Our delivery ditches are fully charged and flowing at maximum capacity! Water is the life blood of complex habitat systems and it is no different here on the refuge. Without it, we could not provide the landscape, habitat and crops Bosque del Apache is known for. But it is possible to have too much water all at once. Staff continue to restore habitat from once monotypic stands of salt cedar in the active floodplain, but the high runoff caused us to pull out of the quickly rising river, abandoning our river project. Once complete, we anticipate a lush corridor of mixed stands of native plants, shrubs and a cottonwood gallery complementing the many hours of dozer time that operators spent to restore native habitat.

Our moist soil units and wetlands will likely produce another great crop of natural wetland foods, keeping migratory waterfowl happy. Our ditches may be full at the moment, but we constantly strive to become efficient stewards of the land for the protection and conservation of the wonders Mother Nature has to offer.

Bernard Lujan, Deputy Refuge Manager

Sponsored by **BRANT**

Bosque del Apache Hot Spots & Elusive Birds
5:30 a.m. to 11:30 a.m.

TH-bhs $95 Refuge Bus Stop

Join professional photographer, birder, and field naturalist Kathryn Dow around the morning hot spots of Bosque del Apache, followed by a classroom session around 8 a.m. From sunrise to sunset there is always something to be found and photographed on this beautiful land. Learn the techniques for spotting them and the best way to approach birds, allowing for longer views of these elusive subjects. Explore how a bird’s behavior and habitat requirements can help select the best spot for getting that perfect shot. Kathryn will assist you on the correct exposure, focus point selection, composition, and shooting angles to create the best images! A hot breakfast is provided around 8 a.m., between field opportunities. Transportation provided. Offered Thursday and Saturday. Limit 16.

Sponsored by **SIGMA**

Birds in Flight: Capture Stunning Images
6:00 a.m. to 9:30 a.m.

TH-bfr $80 Refuge Bus Stop

Want to learn how to take sharp photo images of birds in flight? Professional nature photographer and Sigma Pro Roman Kurywczak will show you how. Learn the proper settings to capture stunning bird-in-flight images of your very own. Every level of photographer is welcome to sign up for this workshop, but all should have a working knowledge of changing their camera settings, including f/stop, ISO, and shutter speed. A digital SLR camera with a minimum 300mm focal length lens is recommended but not required. Dress warmly and bring extra memory cards. Sigma USA will also be on hand to provide loaner lenses for these workshops. Offered Wednesday, Thursday, and Friday. Transportation provided. Limit 9.

*SNEW*

Sponsored by **Canon**

Finding Creative Moments in Photography
6:00 a.m. to 9:30 a.m.

TH-fcm $80 Refuge Bus Stop

Join Canon Explorer of Light Darrell Gulin and learn
how to enhance normal wildlife images by knowing your camera settings, as well as bird behavior. Learn to watch the interactions between birds, and capture interactions such as leadership, nurturing and courting. Capture these moments using fast shutter speeds, pan blurs, motion, pans, and more. Offered Wednesday in the afternoon and Thursday. Transportation provided. Limit 9.

*SNEW*

Sponsored by Hunt’s

Beginning Photography
6:00 a.m. to 9:30 a.m.
TH-bpr $80 Refuge Bus Stop
Join full-time professional nature photographer, Texas master naturalist and certified interpretive guide Ruth Hoyt to capture images of the beautiful sandhill cranes on Bosque del Apache. If you are new to photography or haven’t photographed in awhile, this is the session for you! Tell a story with photos fast shutter speeds to freeze action and slow shutter speeds to achieve a soft, painterly appearance to images. A digital SLR camera with 300mm or more focal length lens and a tripod are recommended but not required. Have your camera manual with you in digital or paper format. Remember to dress warmly and put extra memory cards and fully charged batteries in your pocket. With nearly 30 years of experience teaching photography, Ruth is an expert at making people feel comfortable as she shares and shows techniques she uses for creating her images, especially the basics: focus, exposure, composition and telling a story with photos. Transportation provided. Limit 9.

Sponsored by Point & Shoot Nature Photography

Basic Field Techniques
6:00 a.m. to 10:00 a.m.
TH-psnp $50 Refuge Bus Stop
Join Stephen Ingraham for a hands-on experience in setting up and using your superzoom point and shoot camera to capture satisfying wildlife, bird, and nature...
images in the field. Let the camera do all the work so that you can enjoy seeing and capturing memorable images: everything from holding the camera correctly, to setting up the focus system, to exposure compensation and program shift. Just what you need to get the most out of your camera and your time in the field. This workshop will include the dawn fly out to capture early morning light. Transportation provided. Limit 9.

Sponsored by Advanced Birding
7:00 a.m. to 12:30 p.m. TH-abg $150 Refuge Bus Stop
Advanced Birding (yes, it’s for beginners, too!)
As with anything, practice makes perfect. But what if the bird identification techniques you’re practicing are actually hindering your progression to “expert birder” status? If you’ve ever been birding with an expert then you’ve probably watched them make split-second bird identifications (sometimes without even raising their binoculars) and wondered how the heck they did it. Sure they’ve probably had lots of practice, but we’ll let you in on a little secret: Becoming an expert birder and consistently making correct field identifications doesn’t come from a person’s ability to remember all possible field marks, learn every chip note, absorb every bird book, or even from birding for 50 years… it begins with learning to observe birds, and everything about the individual, in a more advanced way. And whether you’re in your first year of birding or you remember seeing the last ivory-billed woodpecker, there is no time like now for learning advanced techniques for recognizing birds. Join BRANT owner, Raymond VanBuskirk, and published bird field guide author, Michael Retter, as they dismantle traditional practices of bird identification and replace those practices with a more holistic approach to recognizing our beloved feathered friends. Transportation provided. Offered Thursday and Saturday. Limit 18.

Deadly Beauty Photography
8:00 a.m. to 11:30 a.m. TH-dbp $80 San Antonio, Owl Bar
Experience live raptors in the field! Hawks, falcons and eagles will be the star performers as they are released to fly, chase lures, and possibly hunt wild prey (viewers be warned!). Falconer and wildlife rehabilitator Matthew Mitchell will give consideration to the needs of photographers as he exercises his trained raptors. A professional wildlife photographer will be on site offering photography techniques and tips. Meet at the west side of the Owl Bar in San Antonio at 8:00 a.m. and carpool a short distance to an area where the birds can be flown safely. Bring your questions, tripods, cameras and binoculars. Please, no dogs! Limit 15.

La Posada de Maria Magdalena
Bed & Breakfast
Magdalena NM
Phone: (575) 854-2571
Cell: (910) 297-9904
info@laposadademariamagdalena.com
www.laposadademariamagdalena.com
*NEW*

eight-30 a.m. to 12:30 p.m.

Join Wezil Walraven, an experienced field ornithologist and professional bird guide, for an interactive course on identification of birds of prey overwintering on Bosque del Apache. The first hour will be a classroom conversation with visual aids learning the field marks of different raptors. This is followed by a search for birds of prey on the refuge tour loops for 3 hours. Transportation provided. Offered Thursday and Friday. Limit 22.

*NEW*

Desert Arboretum Tour and Plant Stories

10:00 a.m. to 11:00 a.m.

Come visit the Desert Arboretum, often called the Cactus Garden, a place designed to showcase xeric native plants as alternatives to water-consuming non-native varieties. Join master gardener Tom Hyden for a guided tour and learn more about the plants (cacti, succulents, native grasses, etc.) and their histories. The Desert Arboretum is located behind the Expo Conference Tent, just east of the Friends House. For more information on the Desert Arboretum trail, turn to page 35. This tour involves light walking. Offered Wednesday, Thursday, Friday and Saturday.

Sponsored by Hunt’s

Sensor Cleaning Demystified

10:00 a.m. to 11:00 a.m.

Learn to clean your sensor safely and efficiently from an expert with over 15 years of experience. Cleaning your sensor takes only minutes, just a fraction of the time you spend removing sensor dust in processing. Join Curt Fargo as he demystifies sensor cleaning with easy steps for safely and effectively cleaning any DSLR or mirrorless sensor. After a brief history of sensor cleaning, learn how to examine your
sensor, when to use both dry and wet sensor cleaning methods, and how to perform each method safely. Time permitting, Curt also provides free one-on-one training as he cleans the sensors of all attendees. Curt is an educator, factory-trained camera repairman with over 20 years’ experience, Certified Photographic Consultant, and has photographed professionally and semi-professionally for over 40 years. He is also the co-founder of www.CleaningDigitalCameras.com. You will also be able to find Curt in the Expo Tent at the Hunt’s booth. Offered Thursday, Friday and Saturday. Limit 20.

Sponsored by

Photoshop Post-Processing
10:00 a.m. to 12:00 p.m.

TH-ppp $60 Refuge Visitor Center

Would you like to take your images to the next level with expert processing? If so, this is the class for you. Join digital post-processing expert Keith Bauer to learn how to optimize your RAW processing workflow in Lightroom, or Adobe Camera Raw, and then take the next steps using the power of Photoshop. Keith will present a workflow using the Lightroom Develop module covering many of the more important RAW processing controls available. We’ll work through a few images discussing problems that photographers encounter and how RAW processing can help overcome them. While Lightroom is a powerful tool, to really fine tune the final product, Photoshop’s layer-based approach is needed. This presentation will cover some of the power available using Photoshop and when/why you’d choose to take an image the extra step from Lightroom to Photoshop. You’ll leave this class with a new understanding of techniques and tools to help you optimize your images. Offered Thursday and Friday. Limit 25.

Hike: Mines in the Magdalenas,
A Geology and Cultural History Hike
10:00 a.m. to 2:00 p.m.

TH-hmm $8 Water Canyon Campground

Join hiking guides J.R. Seeger and Lise Spargo and learn how Socorro County, in the 1880s, was the center of a silver and gold mining boom. Individual miners staked claims in the Socorro and Magdalena...
Mountains and extracted, on average, 10 ounces of silver for every ton of silver-bearing rock mined. The area produced between $7 million and $9 million in silver from 1880-1902. This 3+ hour, 2.5-mile hike along an old wagon trail in Water Canyon takes you past the remnants of a long-gone miner’s sluice, where miners used water and gravity to separate heavier ore-bearing rock from soils and lighter stones. The minerals, the mines and the miners are long gone, but the interesting geology and the beauty of the pine forest remain. The hike follows ridge lines, and while there is no significant elevation change on the trail, the entire hike is at 8,400 feet above sea level. Even a level trail can be challenging for individuals who are not acclimated to the area. Light hiking shoes are recommended, as well as warm clothing because of the altitude. Limit 15.

Sponsored by
Bosque del Apache Birding Intensive
11:00 a.m. to 4:00 p.m.  TH-bbi $10 Refuge Bus Stop
Bosque del Apache National Wildlife Refuge is one of the best birding destinations in the country! A trip for birders, this tour will provide you with expert guides for five hours of refuge birding. Spend the day experiencing all the birds on the refuge, from waterfowl & raptors to sparrows & blackbirds! This trip is part of our “Birder’s Corner” and is sponsored and guided by BRANT Nature Tours. A burrito lunch and snacks are provided in the vans. Transportation provided. Offered Thursday and Friday. Limit 24.

*NEW*
Sponsored by
Advanced Optical Technology
And Specialized Options in Today’s Sport Optics
11:30 a.m. to 12:30 p.m.  TH-aots Free Refuge Visitor Center
Technology is not exclusive to electronics and software. Join a Nikon professional to learn more about CAD, lens grinding and how lens coatings continue to advance optical performance. Become familiar with binocular advancements and how to choose the right binocular for less-than-common applications like insects, nocturnal, astronomy, etc. Limit 25.

Crane Basics Workshop
With Guided Field Observations
12:30 p.m. to 3:30 p.m.  TH-cbw $40 Refuge Expo Conference Tent
Join Sandra Noll and Erv Nichols in an expanded afternoon workshop that begins with a Crane Basics seminar followed by two hours of guided observation to practice and gain confidence in independently recognizing many aspects of crane biology and behavior. The tour provides opportunities to observe cranes and other wildlife in areas of the refuge not accessible to the general public. (This workshop does not include fly in.) Transportation provided. Offered Thursday and Saturday. Limit 44.

Sponsored by
Canon Equipment
Birds in Flight Workshop
12:30 p.m. to 5:30 p.m.  TH-cbfm $110 Refuge Visitor Center
Canon Equipment Users Only
Join professional photographer Keith Bauer for this field and classroom workshop designed to help you achieve maximum results from your current Canon photography system. (Own Nikon gear? Join Russell Burden’s workshop listed below.) Topics covered include: camera auto focus & lens settings, different metering modes to obtain optimal exposures, panning, birds in flight, creating strong compositions, importance of good light angles, and much, much more! After a brief classroom seminar and a catered light lunch, move to the field (transportation provided) for nearly four hours of creating wonderful images of cranes, geese, hawks, deer, and other wildlife. Join a world class photographer using top of the line photography equipment for a workshop we know you’ll enjoy! Also offered on Wednesday with Mark Buckler. Transportation provided. Limit 9.
Support Native Plants and Pollinators

The Desert Arboretum surrounding the Friends House at Bosque del Apache has long been a popular spot to learn about the Northern Chihuahuan Desert’s native plants and to see the many types of birds and pollinators that it supports. Further, it’s a place to learn about responsible water usage and xeriscaping. Our Desert Arboretum contains over a hundred native plant species. Each species supports native pollinators—bees, hummingbirds, bats, moths, and others. Thanks to a generous donation by the Petschek family, Friends has created the Native Plant and Pollinator Program, which will expand the number of native plants that attract and sustain a large variety of pollinators, not only in the Desert Arboretum, but also on other parts of the refuge.

Even desert-hardy plants need some water to survive. In recent years, most winters have brought only trace amounts of moisture, so we depend on summer monsoons to provide enough water to last the year. Thanks to generous donations, Friends have been able to install a 1500-gallon tank near the Desert Arboretum, and three slim-line water catchment tanks on the back of the Picnic Pavilion, which also collect over 1500 gallons. By harvesting water during rains, these tanks supply water to the plants so that they can survive in times when water is scarce.

With more available water, Friends has been able to expand the Desert Arboretum’s collection of native plants. Friends is in the process of marking more plants to help visitors appreciate what they see. Friends is also continuing to create documentation on the major plants, including their history and how people have used them. Exclusively available in the Nature Store is a book, Plant Stories of the Chihuahuan Desert, by master gardener and Friends volunteer Tom Hyden.

A key component of our Native Plant and Pollinator Program is educating and engaging children of all ages in the wonders of nature, the cycle of life, responsible water usage, and the importance of pollinators to our planet. The program will help us prepare for climate change by increasing the variety of native plants and by encouraging more people to adapt their neighborhood landscaping to evolving climate realities.

Please help us support the desert dwellers not only on the refuge, but throughout Socorro County.
Sponsored by Nikon Equipment

Birds in Flight Workshop
12:30 p.m. to 5:30 p.m.
Refuge Visitor Center
Nikon Equipment Users Only
Join professional photographer Russell Burden for this field and classroom workshop designed to help you achieve maximum results from your current Nikon photography system. (Own Canon gear? Join Keith Bauer’s workshop listed above.) Topics covered include: camera auto focus & lens settings, different metering modes to obtain optimal exposures, panning, birds in flight, creating strong compositions, importance of good light angles, and much, much more! After a brief classroom seminar and a catered light lunch, move to the field (transportation provided) for nearly four hours of creating wonderful images of cranes, geese, hawks, deer, and other wildlife. Join a world class photographer using top of the line photography equipment for a workshop we know you’ll enjoy! Also offered on Wednesday with Don Toothaker. Transportation provided. Limit 24.

Edible and Medicinal Plants of the Chihuahua Desert
1:00 p.m to 2:30 p.m.
Refuge Desert Arboretum
Free
Edible and Medicinal Plants of the Chihuahua Desert looks harsh and inhospitable but to the native people of the southwest, it can be a supermarket. Nearly every plant has a use as food, fiber, medicine or building material. Join Master Gardener Tom Hyden for a ninety-minute tour of the Desert Arboretum to learn about the plants and their uses. After the tour, indulge in a wild food tasting at the Friends House. Offered Thursday and Saturday. Limit 15.

Burrowing Owls and Predators
1:00 p.m. to 2:30 p.m.
Refuge Biology Building
Live birds up close! Burrowing owls are a unique ground-dwelling species of western grasslands and deserts. To varying degrees throughout their range in the United States, Canada, and Mexico, they are listed as a species of concern due to their declining populations. Learn how biologists are studying burrowing owl population and the threats to their survival. Join Kirsten McDonnell, wildlife biologist with U.S. Fish and Wildlife Service, for an informative introduction to burrowing owl ecology and behavior, with photographs, videos, and of course, avian ambassadors. Limit 9.

IRIS PASSCAL Tour
2:00 p.m. to 4:00 p.m.
Socorro, NMT IRIS PASSCAL
New Mexico Tech’s IRIS PASSCAL supports the exploration of the Earth’s crust, mantle, and core to enhance fundamental understanding of earthquakes, volcanoes, crustal deformation, mantle convection, global geodynamics, and the history of the continents. Learn about the mysterious Phantom Tsunami of 1700, the Socorro Magma Body that lies underneath our region, and the history of earthquakes in Socorro. Registration is required. See page 74 and 75. Limit 18.
Artistic Photography
2:00 p.m. to 5:30 p.m.  
TH-amp  $80  Refuge Visitor Center
Capture nature photographs using light, innovative camera settings and emotion. This fun, upbeat and inspiring session is designed to help the intermediate nature photographer photograph nature in a whole new light, literally! Join Lisa Langell, a Tamron-sponsored professional, to learn about using lenses, light, settings and more in ways that will enable you to capture images that are artistic, creative, emotionally evocative, and inspiring. This workshop will focus on how to take beautiful photographs by making the most of composition techniques and natural light, even without a long lens. Transportation provided. Limit 9.

*NEW*
Sponsored by OLYMPUS
Creative Field Techniques in Bird Photography
2:00 p.m. to 5:30 p.m.  
TH-ftr  $80  Refuge Bus Stop
In this field workshop, Olympus Visionary Scott Bourne will share his thoughts and techniques on photography topics ranging from shooting backlit subjects to slow shutter speed, pan blurs to shooting for composite, and even how to frame “birdscapes” - the technique of composing a landscape shot with a foreground or sky filled with birds. Learn advance composition, including how to properly frame groups of two or more birds, what wing positions sell, and how to maximize depth of field. Transportation provided. Limit 9.

*NEW*
Sponsored by Canon
Anticipation in Wildlife Photography
2:00 p.m. to 5:30 p.m.  
TH-awp  $80  Refuge Bus Stop
Join Canon Explorer of Light Darrell Gulin and learn how to prepare for your photography subjects even before going out in the field. Master the skills needed to predict the next moves of your wildlife subject. Learn how to anticipate the special moments before

Very Large Array
You’ve seen it on TV and in the movies, now see it for REAL!

The Very Large Array (VLA) is the most famous and powerful telescope of its kind. It has made more discoveries than any other telescope on Earth.

The immense dishes of the VLA are spread across more than a hundred square miles of desert. They gather invisible light—radio waves—naturally emitted in space. We learn about star birth, galaxy growth, clouds of molecules that may be building blocks of life, and the incredible power of black holes.

Precious information from space travels for billions of years to reach the VLA. From Bosque del Apache you can be there in about an hour!

Bring this ad and receive one free collectible astronomy trading card.*

*Limit one free card per person per visit.

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Friends Annual Dinner
All are Welcome!

Join our keynote speaker, Gina Dello Russo, a retired Bosque del Apache ecologist and local river advocate, and learn how your voice is vital to the conversation about partnerships, advocacy, and the future of conservation in our diverse community.

Menu: Choose among chicken, beef rib or vegetarian dinners, with salad, and a choice of two desserts.

Pecan Chicken: Pan seared, organic chicken breast topped with a creamy pecan sauce and served over green chile mashed potatoes with seasonal vegetables.

Bourbon Braised Short Rib: Slow cooked beef rib served over buttermilk mashed potatoes and seasonal vegetables. Topped with a bourbon glaze.

Vegetarian Chile Relleno Duo: Battered & cheese-stuffed local green chile served over sautéed spinach tossed with black beans, tomato relish, corn and roasted red bell peppers.

Join us Thursday, November 21st from 5:30 p.m. to 7:30 p.m. at Bodega Burger Co. & Lounge in Socorro. See page 40 for event details.

they come along and how to enhance sandhill crane portraits. Transportation provided. Limit 9.

Golden Eagle Seminar
3:00 p.m. to 4:30 p.m. S Refuge Biology Building
TH-ge $12
The golden eagle is a widespread raptor of the Northern Hemisphere, with a distribution extending into Europe, Asia, northern Africa, and North America. Primarily a western species in North America, they occupy a broad geographic area and a wide variety of open and semi-open habitats. Join Kirsten McDonnell, wildlife biologist with U.S. Fish and Wildlife Service, for a fascinating seminar on golden eagle biology, a look at their captivating behavior and the threats to their survival. Limit 24.

*NEW*
Sponsored by Ted Turner Reserves: Turner Endangered Species Fund
3:00 p.m. to 4:30 p.m. S Refuge Visitor Center
TH-ttesfr Free
Our Mission: to conserve and restore imperiled species, with an emphasis on promoting wild, working landscapes on private land. Wild, working landscapes encompass lands used for activities such as forestry, ranching and hunting which are also managed to promote native biodiversity. Our work on the bison ranches in New Mexico owned by Mr. Turner serve as a model for how meaningful conservation of biodiversity can be achieved on large tracts of private land. Join our biologists as they discuss their efforts in place to conserve and restore several species on all the Turner Ranches in New Mexico. Discussions will feature the Bolson Tortoise, The Chiricahua Leopard Frog, Desert Bighorn Sheep, Black-footed Ferret, Prairie Dogs and the Mexican Gray Wolf. There are also other great stories to tell and questions to be answered.
VLA Tour
3:30 p.m. to 4:30 p.m.

TH-vla $5 VLA, Visitor Center

The Very Large Array (VLA) is a world-famous radio astronomy telescope consisting of 27 giant dish antennas spread across the Plains of San Agustin 50 miles west of Socorro. On this special tour, you will learn about the history, operation, and mission of this National Science Foundation project while touring the visitor center and walking to the base of one of the 25-meter (82-feet) dishes. The VLA Gift Shop closes at 4:00, so folks wanting to shop should arrive early. Admission fees will be collected at the VLA Gift Shop upon your arrival: $5.00 per person, with ages 17 and under are always free. See page 75. No registration required; just show up and pay at the door.

Walk In to Fly In
4:30 p.m. to 5:45 p.m.

TH-wifi $10 Refuge Bus Stop

As the shadows grow long and the sun begins to set, thousands of geese and cranes return to the nighttime safety of the wetlands on the refuge. Meet at the visitor center bus stop for a short bus ride and walk to the roost area to view this spectacular scene. Wear comfortable shoes and dress warmly. Often there...
are seats on the bus for walk-ons, though this is not guaranteed; exact change is appreciated. Offered Thursday and Saturday. Limit 44.

*NEW*
Feature Event
Friends Annual Dinner with Keynote
You Are Vital to Preserving Bosque del Apache and the Rio Grande
5:30 p.m. to 7:30 p.m.
E $37 Socorro, Bodega Restaurant
You explore Bosque del Apache and the surrounding area because of your love for wildlife and wild landscapes. You are a part of a community, a diverse and interesting community that includes the wildlife that live in the Socorro Valley or visit often. It also includes our passionate community of conservation groups and concerned citizens that care about the refuge, the Rio Grande, and continental flyways. Their calls and our voices span the centuries and can reach local, regional, national and international leaders. But what do we want them to hear? This year the Friends dinner will focus on the important messages and messengers for wildlife, for us, and the wild places we all depend on and value. Gina Dello Russo, retired Bosque del Apache ecologist and local river advocate, will lead a conversation about partnerships, advocacy, and the future of conservation in our community. Throughout the dinner our diverse community members will share their perspectives on the Rio Grande, our local area, the birds that join us each year, and the importance of refuges to all life on our planet. Dinner is presented at the Bodega Burger co. Co & Lounge with a cash bar opening at 5:30 p.m. Dress is casual. You’ll also be able to view the Photography Contest slideshow of entries and winners. See the menu offering on page 38. See maps on pages 73 and 74. Limit 95.

Sponsored by SIGMA
VLA Nighttime Photography
Photographing the Nighttime Landscape
5:30 p.m. to 8:30 p.m.
W $130 VLA, Visitor Center
Photographing the Nighttime Landscape
Join Roman Kurywczak a photography Sigma Pro, for an educational how-to program on the possibilities of photographing landscapes with the star-filled sky as a backdrop. The Very Large Array Radio Telescope (VLA), one of the world’s premier astronomical radio observatories, consists of 27 radio antennas in a Y-shaped configuration on the Plains of San Agustin, west of Magdalena. Each antenna is 25 meters (82 feet) in diameter. At this location, the National Radio Astronomy Observatory (NRAO) and VLA, in partnership with Friends of Bosque del Apache and Sigma Camera, offer this nighttime photography workshop of spectacular magnitude. Learn about camera equipment, tips, techniques, and settings for star points. Explore “light painting” of a foreground subject, as well as overcoming obstacles presented by less-than-ideal conditions.
The workshop begins with an equipment check and camera set-up at 5:30 p.m. in the VLA cafeteria. Bring a flashlight/headlamp with a red filter. You are required to leave your electronic communication equipment (cell phones, tablets, and computers) in your vehicle and turned off, as they interfere with...
the VLA’s telescope data collection, which occurs continuously. Dress warmly and in layers; bring water and a sack dinner. You will be walking in the desert at night up to 0.3 miles to the antennas, so consider your equipment weight and wear good walking shoes. This event will have an optional photo contest. Details about photo contest will be emailed post-Festival in December. Offered Tuesday, Thursday and Saturday, with Sunday as a backup for poor weather. A partial refund of $85 will be available if the weather is prohibitive on scheduled nights and you cannot participate in the Sunday event. Limit 30.

Sponsored by Morning with Cranes
5:30 a.m. to 10:00 a.m. W FR-acw $70 Refuge Bus Stop
The experience of the evening crane fly in is very dramatic but don’t miss the other great show – dawn fly out. With guides Paul Tebbel and Keanna Leonard, watch and listen as the cranes awaken and the night slowly becomes day. There is no better time to pick out different vocalizations, see body language, and learn about the different life histories of the lesser and greater sandhill cranes. Learn how to recognize juveniles by sound and sight, identify the different subspecies and become familiar with many communications, like the unison call. Once all the cranes have departed, we’ll return to the refuge visitor center for 45 minutes to shed some layers and you’ll have time to grab breakfast from one of the vendors or eat what you brought. Then we’ll head back into the refuge to observe cranes in the field and learn more about their behavior while watching them feed, dance, and interact. This workshop is geared toward first-time viewers, but even experienced crane watchers will learn a lot. This tour will include light walking. Offered Wednesday, Thursday, Friday, and Saturday. Transportation provided. Limit 18.

Friday, November 22, 2019

Walk Out to Fly Out
5:30 a.m. to 7:30 a.m. T FR-wofo $10 Refuge Bus Stop
It’s early, it’s dark, and it’s cold, but this is one event you shouldn’t miss. When thousands of cranes and geese take flight, the sights and sounds are spectacular! Meet at the visitor center bus stop for a short bus ride and walk to the roost area to view this spectacular scene. Wear comfortable shoes and dress warmly. Often there are seats on the bus for walk-ons, though this is not guaranteed; exact change is appreciated. This tour will include light walking. Offered Wednesday, Thursday, Friday, and Saturday. Transportation provided. Limit 44.
Friends of Bosque del Apache Nature Store

Sponsored by **OLYMPUS**

**Fundamentals of Bird Photography**
6:00 a.m. to 9:30 a.m.

FR-fbp $80 Refuge Bus Stop

Join Olympus Visionary Scott Bourne to learn the importance of sun angle, wind direction, choosing a pleasing background, composition, angle, and framing for winning bird photos. Practice finding birds, positioning yourself relative to the bird against a simple background, and anticipating the movements of your subject. Basic composition tips will be shared, as well as how to spot pleasing head angles and how to capture silhouettes at sunrise or sunset. Transportation provided. Limit 9.

*NEW*

Sponsored by **Hunt’s**

**Mastering Birds-in-Flight Photography**
6:00 a.m. to 9:30 a.m.

FR-bfk $80 Refuge Bus Stop

Join Keith Bauer, a New Mexico photography pro who calls Bosque del Apache home. Learn how to set up and use your camera system for the sharpest, most professional results possible. Begin the mastery of photographic techniques to maximize the sharpness and exposure of your flight images at Bosque del Apache. Learn how to assess conditions in the field to be in the right place at the right time for the best action and opportunities possible. Transportation provided. Limit 9.
*NEW*
Sponsored by **Hunt’s**
**Beating the Blur**
**Mastering Sharp Bird Images**
6:00 a.m. to 9:30 a.m.
FR-bbms $80 Refuge Bus Stop
Do you struggle with creating sharp images of birds, whether they are sitting still or flying? Do you find your bird photographs lack excitement? If so, join full-time professional nature photographer, Texas master naturalist and certified interpretive guide **Ruth Hoyt**. All experience levels are welcome to join this session. With nearly 30 years of experience in teaching photography, Ruth has answers to your questions, whether about the camera you use or your methods for capturing images. For the best results, come with an open mind, enthusiasm and love for nature, photography and fun. Have your camera manual with you in digital or paper format. Remember to dress warmly and put extra memory cards and fully charged batteries in your pocket. Offered on Friday and Saturday. Transportation provided. Limit 9.

Sponsored by **Canon**
*NEW*
**Canon Open Workshop**
6:00 a.m. to 9:30 a.m.
FR-coba Free Refuge Crane Roost
Join wildlife nature photographer, educator, author, and Canon Explorer of Light **Adam Jones** for an exciting early morning field workshop experience. Adam is well known for his easy going informative style, nuts and bolts approach, and his ability to communicate well with all skill levels. The primary focus is to change the way you see, and to hone the technical skills necessary to capture what you see in your minds eye. Limit 12.

Sponsored by **BRANT**
**Mountain Birthing Intensive**
6:00 a.m. to 12:30 p.m.
FR-mbi $95 Socorro, Macey Center Parking Lot
Bosque del Apache is an amazing place to bird, but there is more to Central New Mexico than just wetlands. The Magdalena Mountains west of Socorro offer a huge diversity of birds that you can’t find on the refuge. Species such as Williamson’s sapsucker, acorn woodpecker, pygmy nuthatch, juniper titmouse, Cassin’s finch and northern pygmy-owl are all icons of the West and all may be seen on this tour. In the lower elevations, rich Chihuahua desert grasslands provide habitat for many species of sparrows and longspurs. Additionally, this tour often offers a great opportunity to study Chihuahuan and common ravens. So when you’re ready to venture out of the wetlands and into the pine forests and grasslands, sign up for this tour! This trip is part of our “Birder’s Corner” and is sponsored and guided by **BRANT** Nature Tours. Bring your breakfast and plenty of drinking water. Transportation and light snacks provided. Light hiking involved. See map on page 75. Offered Wednesday and Friday. Limit 20.
Sponsored by Friends of Bosque del Apache National Wildlife Refuge

Field Sketching and Bird Painting
7:00 a.m. to 12:15 p.m.  Refuge Visitor Center
FR-dbw $70

Join expert birder and world-renowned wildlife artist, Catherine Hamilton, for a field sketching and painting workshop. Featuring a two-hour indoor classroom session and ample time to work outside, you will have the opportunity to hone your field sketching and color skills, or to explore something completely new. This workshop is open to all levels, from curious beginners to advanced artists. Unique instruction for each individual and their particular focus or level will be provided. The workshop will incorporate working from life and learning the pros and cons of successfully using photographic reference. Bird anatomy and movement will be discussed. After breaking down the overwhelming experience of drawing and painting from the world in front of us into a few initial exercises, implement this new view as we explore the feeders and Desert Arboretum at Bosque del Apache. Participants should bring their own materials. Materials can be as simple as a pencil and a sketchbook, or as sophisticated as a travel watercolor set. This trip is part of our “Birder’s Corner” and is sponsored and guided by BRANT Nature Tours and Wildside Nature Tours. Light walking involved. Limit 9.

Deadly Beauty: Raptors and Man
8:00 a.m. to 11:00 a.m.  San Antonio, Owl Bar
FR-dbrm $50

Experience live raptors in the field! Join falconer and wildlife rehabilitator Matthew Mitchell with his free-flying raptors as he highlights the interconnectedness of birds of prey in our lives. The discussion will focus on falconry, captive breeding, and raptor rehabilitation. Watch trained hawks and falcons play, fly, and yes, hunt - viewers be warned! This group will meet at the west side of the Owl Bar in San Antonio at 8:00 a.m. and carpool a short distance to an area where the birds can be flown safely. Bring your questions, tripods, cameras and binoculars. Please, no dogs! Limit 24.
San Antonio’s Elementary School presents: 12th Annual Arts and Crafts Exhibit

San Antonio Elementary School is proud to partner with many local artists at the annual arts and crafts exhibit. Doubling as a fundraiser for the school, a variety of vendors will display their wares on Friday, Saturday and Sunday of the Festival of the Cranes. Featured arts and crafts include stained glass, holiday and seasonal wreath, jewelry, apparel and much more!

San Antonio Elementary School is nestled at the corner of 4th and Miera Street. Doors will be open 7:30 a.m. – 7:00 p.m. Friday and Saturday, and 7:30 a.m. – 2:00 p.m. Sunday. See page 67 for more information about food options during this event.

Raptor ID Tour
8:00 a.m. to 11:00 a.m. T FR-rit $50 Refuge Bus Stop
Join Gail Garber and her team from Hawks Aloft to learn what to look for when searching for raptors in the Middle Rio Grande Valley. Explore Bosque del Apache National Wildlife Refuge in search of red-tailed hawks (including Harlan’s), Cooper’s and sharp-shinned hawks, eagles, merlins, and harriers. Discuss why so many raptors call Bosque del Apache their winter home. Transportation provided. Limit 22.

Old Mission Church Tour
8:15 a.m. to 11:30 a.m. T FR-omct $30 Socorro, San Miguel Church
Join Deacon Nick Keller, from San Miguel Church in Socorro, to visit six of the ten mission churches in Socorro County. These historic places are a testament to the faith of the early settlers in the area. Many were built by the community, and the land was donated by residents. At each stop, learn about the history of the church and visit each church that is open. We will travel by city bus through the county on roads that offer a unique view of the agricultural quality of the area. See maps on pages 73 and 74. The bus tour leaves at 8:30 a.m. from the San Miguel Church in Socorro. Transportation provided. Limit 19.

Crane Basics Seminar
10:00 a.m. to 11:00 a.m. S FR-cb $20 Refuge Expo Conference Tent
When watching a group of sandhill cranes, did you ever wonder, “What’s up with those birds?” Crane Basics is your opportunity to make sense of crane biology and behavior, knowledge that will significantly enhance your crane watching experience. Join Erv Nichols and Sandra Noll to gain insights into crane migration, family life, body language, and vocalizations through photographs, captivating video and a bit of humor too. Offered Wednesday and Friday. Limit 25.

*NEW*
Desert Arboretum Tour and Plant Stories
10:00 a.m. to 11:00 a.m. T FR-dat Free Refuge Desert Arboretum
No Registration Required
Come visit the Desert Arboretum, often called the Cactus Garden, a place designed to showcase xeric native plants as alternatives to water-consuming non-native varieties. Join master gardener Tom Hyden for a guided tour and learn more about the plants (cacti, succulents, native grasses, etc.) and their histories.
The Desert Arboretum is located behind the Expo Conference Tent, just east of the Friends House. For more information on the Desert Arboretum trail, turn to page 37. This tour involves light walking. Offered Wednesday, Thursday, Friday and Saturday.

Sponsored by **TAMRON**

**Art of Composition**

*Nature, Photography and Negative Space*

10:00 a.m. to 11:30 a.m.  

*FR-aoc*  Free  Refuge Visitor Center

Elevate your photography to new levels as you expand your technique with professional photographer Lisa Langell. This class has something to offer to just about anyone with a camera! Whether you bring a long lens or not, this class will provide inspiration to infuse art into your bird photography and expand your senses beyond just portraits. Focusing on key elements of composition, with an emphasis on using positive and negative space, learn how to create images that are emotionally infused and leave lasting impressions with your audience. Find the potential to open up new markets for your work. Limit 20.

Sponsored by **Hunt’s**

**Photoshop Post-Processing**

10:00 a.m. to 12:00 p.m.  

*FR-ppp*  $60  Refuge Visitor Center

Would you like to take your images to the next level with expert processing? If so, this is the class for you. Join digital post-processing expert Keith Bauer to learn how to optimize your RAW processing workflow in Lightroom, or Adobe Camera Raw, and then take the next steps using the power of Photoshop. Keith will present a workflow using the Lightroom Develop module covering many of the more important RAW processing controls available. We’ll work through a few images discussing problems that photographers encounter and how RAW processing can help overcome them. While Lightroom is a powerful tool, to really fine tune the final product, Photoshop’s layer-based approach is needed. This presentation will cover some of the power available using Photoshop and when/why you’d choose to take an image the extra step from Lightroom to Photoshop. You’ll leave this class with a new understanding of techniques and tools to help you optimize your images. Offered Thursday and Friday. Limit 25.

Sponsored by **Zeiss**

**Point & Shoot Nature Photography Introduction Seminar**

10:00 a.m. to 11:30 a.m.  

*FR-psn*  $20  Refuge Biology Building

Let the camera do all the work it can, so you can enjoy capturing memorable images of birds, wildlife, and nature. This is the point and shoot philosophy and technique that can be practiced with any of today’s superzoom point and shoot cameras. Join Stephen Ingraham as he introduces point and shoot nature photography: bird and wildlife, macro and landscape. This workshop will give you examples of what is possible, showcase the philosophy and the techniques to get you started, and offer advice on camera choice and basic field techniques. As thousands of photographers have discovered, today’s long zoom point and shoot digital cameras, in the hands of a thoughtful and creative photographer, are capable of amazingly satisfying images of everything from birds and wildlife, to macros of wildflowers and insects, to grand landscapes and sweeping panoramas under dramatic skies - all in a relatively small, compact, and inexpensive package. This is a great place to start your adventure in photography. Offered Wednesday and Friday. Limit 24.
**Hike: Canyon National Recreation Trail**  
10:00 a.m. to 12:30 p.m.  
FR-hcp    $8    Refuge Trailhead  
Join volunteers J.R. Seeger and Lise Spargo at the Canyon National Recreation Trail for a 2.5-mile loop through a mix of environments starting with the desert scrub of the Chihuahua desert, through a deep ravine called Solitude Canyon, and up to the top of a mesa overlooking the refuge. The hike offers opportunities to enjoy signs of mammals hiding in the rocks, birds nesting in the sandstone cliffs and wonderful geologic features carved by flash floods over the ages. The trek will include approximately two and a half hours of moderate hiking. There are areas of deep sand and one steep pitch which requires some care as we rise out of the canyon into the mesa. Good hiking shoes, wide-brimmed hats and a day pack with water are strongly recommended. Binoculars will be useful in spotting wildlife. Meet at trailhead, see page 72. Limit 15.

*NEW*  
Sponsored by Hunt’s  
Carrizozo: Seeing in Black & White  
8:00 a.m. to 12:30 p.m.  
FR-cbw    $95    Carrizozo, Tularosa Basin Gallery  
Learning to see and work in black and white is essential to the growth of all photographers. The absence of color forces emphasis to be put on the subject, subject development, exposure, and emotional content. Join Don Toothaker to learn how to set your camera to black and white mode (and still capture color images!) and how to interpret the characteristics of tone, texture, and detail essential to a successful monochromatic image. Located about 45 minutes east of San Antonio is the small, colorful town of Carrizozo. Once a prominent hub for the railroad industry, the scenic small town has many buildings that recall days gone by. Main Street and the surrounding side streets feature scenes perfectly suited for great learning and creative opportunities in black and white. At the heart of Main Street is the Tularosa Basin Gallery of Photography, which will serve as the centerpiece of our morning exploring the beautiful world of black and white. Light walking involved. See page 75. Limit 15.

**Sponsored by BRANT nature tours**  
Bosque del Apache Birding Intensive  
11:00 a.m. to 4:00 p.m.  
FR-bbi    $110    Refuge Bus Stop  
Bosque del Apache National Wildlife Refuge is one of the best birding destinations in the country! A trip for birders, this tour will provide you with expert guides for five hours of refuge birding. Spend the day experiencing all the birds on the refuge, from waterfowl & raptors to sparrows & blackbirds! This trip is part of our “Birder’s Corner” and is sponsored and guided by BRANT Nature Tours. A burrito lunch and snacks are provided in the vans. Transportation provided. Offered Thursday and Friday. Limit 24.
Refuge Tour
11:30 a.m. to 1:30 p.m.  FR-rt  $10  Refuge Bus Stop
This is a unique opportunity to explore seldom-visited areas of the refuge with your knowledgeable refuge staff tour guide. Your host will explain how the land and water are managed to benefit wildlife. Enjoy spectacular views of cranes, geese, ducks, raptors, and perhaps even turkeys. Please note that, due to time constraints, participants remain on the bus for this 2 hour tour. Tours are offered Friday and Saturday. Limit 44.

Sponsored by
Friends of Bosque del Apache National Wildlife Refuge

Photography Intensive Workshop
12:30 p.m. to 5:30 p.m. Friday (part 1) and 5:30 p.m. to 11:30 a.m. Saturday (part 2)  FR-piw  $210  Refuge Visitor Center
Made up of two sessions over two days, this workshop has instruction in the field and classroom and will explore post processing and photo editing with professional photographer Russell Burden. The classroom portion begins in the early afternoon at 12:30 p.m. and lasts until around 3:00 p.m. Learn the ins and outs of what makes the difference between a great image of an avian subject and a snapshot rendering. Discuss how to set up your camera to acquire the best images of birds in flight. Armed with this information, ride out on the refuge for a sunset session and apply the classroom concepts to the birds of Bosque del Apache. At the first location, view the fly in of the sandhill cranes and snow geese as they roost in ponds to keep themselves safe at night. The following morning, convene at the refuge bus stop at 5:30 a.m. for about three hours in the field, photographing the morning blast-off of thousands of snow geese in addition to solitary and small group take-offs of numerous sandhill cranes. Back in the classroom, discuss strategies for optimizing the photos captured during the sunset and sunrise field sessions. Part of that time will be spent critiquing your photos. Photoshop and Nikon software will be used to provide one-on-one classroom attention with each participant. Breakfast will be provided before the morning classroom session around 9 a.m. - 9:30 a.m.

Offered Wednesday/Thursday and Friday/Saturday. Transportation provided. Limit 9.

Sponsored by
Hunt's

Sensor Cleaning Demystified
3:00 p.m. to 4:00 p.m.  FR-scd  Free  Refuge Visitor Center
Learn to clean your sensor safely and efficiently from an expert with over 15 years of experience. Cleaning your sensor takes only minutes, just a fraction of the time you spend removing sensor dust in processing. Join Curt Fargo as he demystifies sensor cleaning with easy steps for safely and effectively cleaning any DSLR or mirrorless sensor. After a brief history of sensor cleaning, learn how to examine your sensor, when to use both dry and wet sensor cleaning methods, and how to perform each method safely. Time permitting, Curt also provides free one-on-one training as he cleans the sensors of all attendees. Curt is an educator, factory-trained camera repairman with over 20 years’ experience, Certified Photographic Consultant, and has photographed professionally and semi-professionally for over 40 years. He is also the co-founder of www.CleaningDigitalCameras.com. You

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Fenced yard
will also be able to find Curt in the Expo Tent at the Hunt’s booth. Offered Thursday, Friday and Saturday. Limit 20.

**Raptor ID**
1:00 p.m. to 2:30 p.m.  
Sponsorship - $12  
Refuge Biology Building
View live raptors up close! Have you always wondered about the mysterious world of raptor identification and just what that large hawk flying overhead might be? Join **Gail Garber** and her team from Hawks Aloft for an enlightening look into the world of raptors and how to distinguish them from one another. Plumage characteristics, season, behavior and habitat all provide clues to their identity. Thanks to the wildlife photographers who donate their work to Hawks Aloft, this program promises to be a visual art show. Limit 24.

**Hike: Canyon National Recreation Trail**
1:00 p.m. to 3:00 p.m.  
Sponsorship - $8  
Refuge Trailhead
Join local naturalist **Vannetta Perry** on a 2.5 mile roundtrip hike through Solitude Canyon, found along the Canyon National Recreation Trail. Full of geologically interesting formations, Solitude Canyon dates back several million years before the Rio Grande existed. Evidence of eruptions, floods, and desert dunes are visible to those who search. Meet at the Canyon National Recreation Trailhead, for this moderately difficult hike. See page 72. Limit 15.

**Afternoon with the Cranes Fly In**
1:30 p.m. to 5:30 p.m.  
Sponsorship - $60  
Refuge Expo Conference Tent
If you want to fully experience sandhill cranes, this workshop is for you! Our “Crane Team” pools their expertise to provide a personalized experience for all crane viewers – novice and experienced alike! Following a brief overview of sandhill crane biology, behavior, and migration, we will dedicate our time to direct field observations (transportation provided), including how cranes create and maintain their pair bonds, raise young, and communicate by vocalizations and body language. Fly in at a refuge hotspot will conclude the tour - a great finale! **Crane Team**: **Paul Tebbel**, **Keanna Leonard**, **Erv Nichols** and **Sandra Noll**. Transportation provided. Offered Wednesday and Friday. Limit 18.

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**Special Keynote Social with David La Puma**

**David La Puma**’s passion for bird migration and the emergent technology used to study it cannot be overemphasized. In 2019, he began a new career with Cellular Tracking Technologies, a high-tech company pushing the boundaries of what is possible in wildlife tracking. As the Director of Global Market Development, David is responsible for helping bird observatories and other entities around the globe design and implement cutting-edge wildlife tracking infrastructure, and deploy the next generation of tracking technology. For the five years prior, David was the director of New Jersey Audubon’s Cape May Bird Observatory (http://birdcapemay.org) where his responsibilities included monitoring migration at one of the world’s most important migration concentration points, with long-term research of raptor, waterbird, songbirds and butterfly migration ingrained in the DNA of the observatory.

Join us Friday, November 22nd, from 5:00 p.m. to 6:00 p.m. for southwestern tapas appetizer bar at the **Bodega Burger co. Co & Lounge in Socorro**. Keynote Social presentation is 6:00 p.m. to 7:00 p.m. See Event details on page 52 for more information.
Sponsored by **Hunt’s**

**Sweet Tweets: Finding Songbirds for Photography**

2:00 p.m. to 5:30 p.m.  
FR-sfts  $80  Refuge Bus Stop

Join professional photographer, birder and field naturalist Kathryn Dow in an afternoon of avian exploration for the small wonders of Bosque del Apache. This field workshop will focus on finding songbirds by sight and sound. These little wings and sweet tweets are often overlooked with all there is to see on the refuge. Learn about camera settings to achieve images with correct exposure, composition and focus point selection. After birding and photographing around the refuge, this session will conclude at the Desert Arboretum in the appealing afternoon light. We will focus on the little visitors to the bird feeders and quail who dine below. Transportation provided. Limit 9.

Sponsored by **Hunt’s**

**Bird Photography Basics**

2:00 p.m. to 5:30 p.m.  
FR-bibf  $80  Refuge Visitor Center

Birds are incredibly fun to photograph, but they also present an incredible challenge. You need a strong foundation in the basics of photography so that you can concentrate your effort towards following these fast-moving and small animals. Mark Buckler will share tips on equipment selection, camera settings, composition and in-the-field strategies. This class includes a brief introduction inside followed by a session on the refuge where you can get hands-on help with your bird photography. Transportation provided. Limit 9.

Sponsored by **SIGMA**

**Birds in Flight: Capture Stunning Images**

2:00 p.m. to 5:30 p.m.  
FR-bfr  $80  Refuge Bus Stop

Want to learn how to take sharp photo images of birds in flight? Professional nature photographer and Sigma Pro Roman Kuryczak will show you how. Learn the proper settings to capture stunning bird-in-flight images of your very own. Every level of photographer is welcome to sign up for this workshop, but all should have a working knowledge of changing their camera settings, including f/stop, ISO, and shutter speed. A digital SLR camera with a minimum 300mm focal length lens is recommended but not required. Dress warmly and bring extra memory cards. Sigma USA will also be on hand to provide loaner lenses for these workshops. Offered Wednesday, Thursday, and Friday. Transportation provided. Limit 9.

Sponsored by **Canon**

**Birds in Flight, Wildlife and More**

2:00 p.m. to 5:30 p.m.  
FR-bfwm  $80  Refuge Bus Stop

Join wildlife nature photographer, educator, author, and Canon Explorer of Light Adam Jones for an exciting afternoon field workshop experience. The primary focus is to change the way you see, and to hone the technical skills necessary to capture what you see in your mind’s eye. Adam is well known for his easygoing informative style, nuts and bolts approach,
and his ability to communicate well with all skill levels. Learn how to make artistic images of birds, wildlife, and landscapes. Field discussions include capturing birds in flight, silhouettes, motion treatments for moving subjects, high ISO considerations, noise reduction in post processing, panning, AF settings for moving subjects, and how to get the most out of the teleconverter on your long lenses landscape imaging, depth of field, hyperfocal focusing, focus stacking, HDR that looks realistic, live view and how to quickly change from landscape settings to wildlife/action settings. Offered Friday and Saturday. Transportation provided. Limit 9.

J.E. Smith Museum Tour
Vintage Frontier Photography Museum
3:00 p.m. to 4:00 p.m.

FR-smt $12 Socorro, Smith House
The Smith House in Socorro is the former home of Joseph Edward Smith, territorial photographer. He and his wife Elizabeth Ann (Myscie) Driver were given the home as a wedding present by the bride’s parents in 1886. From cowboys to businessmen, Smith photographed the lives of working people to show the West as it was. Along with the photos, the museum holds an archive of Smith’s equipment, written material, and artifacts from the period. The home itself has been restored to its 1880s vintage. Seven generations of Smiths have now lived in the home on Central Street. Suzanne Smith, the current resident, is the great-granddaughter of J.E. and Myscie Smith. She will guide you through the past with a personal accounting of the home and the Smith family. See maps on pages 73 and 74. Limit 8.

Digiscoping Today Seminar
3:00 p.m. to 4:00 p.m.

FR-dt Free Refuge Biology Building
Digiscoping -- taking super-telephoto photos through the eyepiece of a spotting scope -- has been around for many years. What began with simple homemade adaptors and inexpensive compact point and shoot cameras has evolved into a legitimate photographic technique using smartphone cameras at one end of the spectrum, and mirrorless interchangeable lens cameras (MILC) at the other. Join ZEISS Sports Optics Senior Brand Advocate Stephen Ingraham as he explores digiscoping today. After the demonstration, there will be an opportunity to try digiscoping using ZEISS equipment. Bring your Smartphone or MILC if you have one. Limit 20.

*NEW*
Sponsored by Brant Nature Tours
Keynote Social with David La Puma
5:00 p.m. to 7:00 p.m.

FR-ks $30 Socorro, Bodega Restaurant
The Future is NOW: How the InternetOfWildlife (IOW) is uncovering the mysteries of bird behavior around the globe! What was once reserved for SciFi novels is now reality, and what once seemed like our wildest dreams is now at our fingertips. The
miniaturization of tracking technology allows us to not only determine precisely where a bird is; we can now determine whether that bird is flapping, gliding, hunting, or even being hunted! In this highly engaging appearance, David La Puma will take you behind the scenes of the next-generation bird tracking technology. He’ll share with you some of the amazing discoveries that have been made in the last few years, describe the state of technology today, and give you a glimpse into the future as the research field barrels forward at breakneck speed. From golden eagles and sandhill cranes to yellow-rumped warblers and even monarch butterflies, the information we are able to gather today is changing the way we study wildlife, and informing the conservation of the world’s most charismatic creatures. This event is located at Bodega Burger co. Co & Lounge and southwestern tapas will be served. Limit 125.
Not sure where to start?
Try some of these outstanding workshops!

White Sands National Monument Photography
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An Evening at Abo Photography
Intensive
Saturday Evening

Festival of the Cranes is about education workshops, celebrating the annual migratory flock arrival, and saluting the Bosque del Apache.

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“Best of the Year;” named by Rolling Stone Magazine as “Band to Watch from Santa Fe;” and were finalists in the John Lennon Songwriting contest. Tickets through festivalofthecranes.com, www.nmtpas.org, or by calling 575-835-5688. Limit 50.

Saturday, November 23, 2019

Walk Out to Fly Out
5:30 a.m. to 7:30 a.m.
SA-wowo $10 Refuge Bus Stop
It’s early, it’s dark, and it’s cold, but this is one event you shouldn’t miss. When thousands of cranes and geese take flight, the sights and sounds are spectacular! Meet at the visitor center bus stop for a short bus ride and walk to the roost area to view this spectacular scene. Wear comfortable shoes and dress warmly. Often there are seats on the bus for walk-ons, though this is not guaranteed; exact change is appreciated. This tour will include light walking.

Offered Wednesday, Thursday, Friday, and Saturday. Transportation provided. Limit 44.

Sponsored by Morning with Cranes
5:30 a.m. to 10:00 a.m.
SA-acw $70 Refuge Bus Stop
The experience of the evening crane fly in is very dramatic but don’t miss the other great show – dawn fly out. With guides Paul Tebbel and Keanna Leonard, watch and listen as the cranes awaken and the night slowly becomes day. There is no better time to pick out different vocalizations, see body language, and learn about the different life histories of the lesser and greater sandhill cranes. Learn how to recognize juveniles by sound and sight, identify the different subspecies and become familiar with many communications, like the unison call. Once all the cranes have departed, we’ll return to the refuge visitor center for 45 minutes to shed some layers and you’ll have time to grab breakfast from one of the vendors or eat what you brought. Then we’ll head back into the refuge to observe cranes in the field and learn more

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A Life Journey with Planned Giving

The great conservationist and nature writer Aldo Leopold said, “I do not imply that this philosophy of land was always clear to me. It is rather the end result of a life journey.” Many first-time visitors to Bosque del Apache National Wildlife Refuge, on their own journey of discovery, are stopped in their tracks: they have never seen anything like it, the birds, the views -- everything -- and they never realized it was all here. Once they discover it, they want to come back. For many, the refuge becomes a place and time full of meaning, a place to share with their parents, their kids, and their friends.

The refuge represents the foresight, stewardship, and hard work of several generations. It is our hope that it will persist as a legacy for future generations. If Bosque del Apache is part of your journey, you can help to build that legacy with a planned gift - a lasting commitment to help sustain this valuable natural resource.

For more information, visit our website www.friendsofbosquedelapache.org, visit the Friends Booth at Festival, or call 575-838-2120.

About their behavior while watching them feed, dance, and interact. This workshop is geared toward first-time viewers, but even experienced crane watchers will learn a lot. This tour will include light walking. Offered Wednesday, Thursday, Friday, and Saturday. Transportation provided. Limit 18.

Sponsored by Hunt’s
Bosque del Apache Hot Spots & Elusive Birds
5:30 a.m. to 11:30 a.m. [W]
SA-bhs $95 Refuge Bus Stop
Join professional photographer, birder, and field naturalist Kathryn Dow around the morning hot spots of Bosque del Apache, followed by a classroom session around 8 a.m. From sunrise to sunset there is always something to be found and photographed on this beautiful land. Learn the techniques for spotting them and the best way to approach birds, allowing for longer views of these elusive subjects. Explore how a bird’s behavior and habitat requirements can help select the best spot for getting that perfect shot. Kathryn will assist on the correct exposure, focus point selection, composition, and shooting angles to create the best images! A hot breakfast is provided around 8 a.m., between field opportunities. Transportation provided. Offered Thursday and Saturday. Limit 16.

Sponsored by Canon
Birds in Flight, Landscapes, Wildlife and More
6:00 a.m. to 9:30 a.m. [W]
SA-bifcci $80 Refuge Bus Stop
Join wildlife nature photographer, educator, author, and Canon Explorer of Light Adam Jones for an exciting early morning field workshop experience.
Adam is well known for his easy going informative style, nuts and bolts approach, and his ability to communicate well with all skill levels. The primary focus is to change the way you see, and to hone the technical skills necessary to capture what you see in your mind’s eye. The emphasis is on making artistic images of birds, wildlife, and landscapes. Field discussions include capturing photos of birds in flight, silhouettes, motion treatments for moving subjects, high ISO considerations, noise reduction in post processing, panning, AF settings for moving subjects, and how to get the most out of the teleconverter on your long lenses. Transportation provided. Limit 9.

*NEW*

Sponsored by Hunt’s
Beating the Blur
Mastering Sharp Bird Images
6:00 a.m. to 9:30 a.m.
SA-bbms S80 Refuge Bus Stop
Do you struggle with creating sharp images of birds, whether they are sitting still or flying? Do you find your bird photographs lack excitement? If so, join full-time professional nature photographer, Texas master naturalist and certified interpretive guide Ruth Hoyt. All experience levels are welcome to join this session. With nearly 30 years of experience in teaching photography, Ruth has answers to your questions, whether about the camera you use or your methods for capturing images. For the best results, come with an open mind, enthusiasm and love for nature, photography and fun. Have your camera manual with you in digital or paper format. Remember to dress warmly and put extra memory cards and fully charged batteries in your pocket. Offered on Friday and Saturday. Transportation provided. Limit 9.

Sponsored by Hunt’s
Advanced Birding
7:00 a.m. to 12:30 p.m.
SA-abg S150 Refuge Bus Stop
Advanced Birding (yes, it’s for beginners, too!)
As with anything, practice makes perfect. But what if the bird identification techniques you’re practicing are
actually hindering your progression to “expert birder” status? If you’ve ever been birding with an expert then you’ve probably watched them make split-second bird identifications (sometimes without even raising their binoculars) and wondered how the heck they did it. Sure they’ve probably had lots of practice, but we’ll let you in on a little secret: Becoming an expert birder and consistently making correct field identifications doesn’t come from a person’s ability to remember all possible field marks, learn every chip note, absorb every bird book, or even from birding for 50 years… it begins with learning to observe birds, and everything about the individual, in a more advanced way. And whether you’re in your first year of birding or you remember seeing the last ivory-billed woodpecker, there is no time like now for learning advanced techniques for recognizing birds. Join BRANT owner, Raymond VanBuskirk, and published bird field guide author, Michael Retter, as they dismantle traditional practices of bird identification and replace those practices with a more holistic approach to recognizing our beloved feathered friends. Transportation provided. Offered Thursday and Saturday. Limit 18.

Duck Banding Project (For Kids!)  
9:00 a.m. to 9:30 a.m.  
SA-dbp1 Free Refuge Flight Deck
Each year, Bosque del Apache participates in the Central Flyway waterfowl banding effort to learn more about the migratory patterns of ducks. Banding ducks involves placing a small metal band with a unique identification number around their leg. Youth are invited to join Jeff Sanchez, wildlife biologist at Bosque del Apache, to learn about this activity. Hold a band in your hand (and a duck, if they cooperate)! Three 30 minute sessions will be offered, starting at 9:00 a.m. Registration required. Limit 15.

Duck Banding Project (For Kids!)  
9:00 a.m. to 9:30 a.m.  
SA-dbp2 Free Refuge Flight Deck
Each year, Bosque del Apache participates in the Central Flyway waterfowl banding effort to learn more about the migratory patterns of ducks. Banding ducks involves placing a small metal band with a unique identification number around their leg. Youth are invited to join Jeff Sanchez, wildlife biologist at Bosque del Apache, to learn about this activity. Hold a band in your hand (and a duck, if they cooperate)! Three 30 minute sessions will be offered, starting at 9:00 a.m. Registration required. Limit 15.

Sponsored by  
Sensor Cleaning Demystified  
10:00 a.m. to 11:00 a.m.  
SA-scd Free Refuge Biology Building
Learn to clean your sensor safely and efficiently from an expert with over 15 years of experience. Cleaning your sensor takes only minutes, just a fraction of the time you spend removing sensor dust in processing. Join Curt Fargo as he demystifies sensor cleaning with easy steps for safely and effectively cleaning any DSLR or mirrorless sensor. After a brief history of sensor cleaning, learn how to examine your sensor, when to use both dry and wet sensor cleaning methods, and how to perform each method safely. Time permitting, Curt also provides free one-on-one training as he cleans the sensors of all attendees. Curt is an educator, factory-trained camera repairman with
over 20 years’ experience, Certified Photographic Consultant, and has photographed professionally and semi-professionally for over 40 years. He is also the co-founder of www.CleaningDigitalCameras.com. You will also be able to find Curt in the Expo Tent at the Hunt’s booth. Offered Thursday, Friday and Saturday. Limit 20.

*NEW*

Desert Arboretum Tour and Plant Stories
10:00 a.m. to 11:00 a.m.  T  F
SA-dat Free Refuge Desert Arboretum
No Registration Required
Come visit the Desert Arboretum, often called the Cactus Garden, a place designed to showcase xeric native plants as alternatives to water-consuming non-native varieties. Join master gardener Tom Hyden for a guided tour and learn more about the plants (cacti, succulents, native grasses, etc.) and their histories. The Desert Arboretum is located behind the Expo Conference Tent, just east of the Friends House. For more information on the Desert Arboretum trail, turn to page 35. This tour involves light walking. Offered Wednesday, Thursday, Friday and Saturday.

Hike: Rio Viejo
10:00 a.m. to 12:00 p.m.  H  F
SA-hrv $8 Refuge Trailhead
The Rio Viejo (Old River) Trail is a flat 2-mile roundtrip walk along an old course of the Rio Grande. Though the Rio Grande now journeys east of this trail, evidence of its history remains. Join Vannetta Perry for this easy hike through the woods, where you may see mule deer, coyotes and ring-necked pheasants among the native cottonwoods and screwbean mesquite. Meet at the trailhead, see page 72. Limit 15.

Sponsored by Nikon

How to Select the Right Binocular for You, Your Usage, and Your Budget
10:00 a.m. to 11:30 a.m.  S  F
SA-hsrb Free Refuge Visitor Center
With the right binocular, you become an intimate visual participant in your world. Join a Nikon Optic expert as they teach you how to select YOUR binocular from the hundreds of available options. Learn how price can influence performance, directly and indirectly. Limit 25.

Sponsored by BRANT

Young Birder’s Walk (For Kids!)
10:00 a.m. to 12:00 p.m.  T  F
SA-ybw Free Refuge Bus Stop
Young birders and their families are invited to join BRANT guides for a FREE late morning walk around the refuge visitor center. Whether your kiddos are already die-hard birders or are just getting into it, we’d love to take them out to enjoy the birds and nurture our next generation of birders! Limit 20.
Hike: Sevilleta Mesa View
10:00 a.m. to 1:00 p.m.  H
SA-hsmv $8  Sevilleta NWR, Visitor Center
Join a refuge naturalist to learn about the fascinating
landscape of Sevilleta National Wildlife Refuge on
this 3.5 mile roundtrip journey to the top of the mesa
overlooking the refuge. Scenic views of the Ladrones
and surrounding mountains abound along the edge of
the mesa before dropping back into the valley. Along
the way, you’ll see a wide diversity of awe-inspiring
landforms. This is a moderate to strenuous hike over
uneven surfaces. Bring your lunch and plenty of
drinking water. See page . Limit 15.

Duck Banding Project (For Kids!)
10:00 a.m. to 10:30 a.m.  W
SA-dbp1 Free  Refuge Flight Deck
Each year, Bosque del Apache participates in the
Central Flyway waterfowl banding effort to learn
more about the migratory patterns of ducks. Banding
ducks involves placing a small metal band with a
unique identification number around their leg. Youth
are invited to join Jeff Sanchez, wildlife biologist at
Bosque del Apache, to learn about this activity. Hold
a band in your hand (and a duck, if they cooperate)!
Three 30 minute sessions will be offered, starting at
9:00 a.m. Registration required. Limit 15.

Cranes of the World
11:00 a.m. to 12:30 p.m.  S
SA-cw $12  Refuge Expo Conference Tent
Join Sandra Noll for a generously-illustrated program
which opens with an overview of the history, art and
mythology of cranes, followed by introductions to the
world’s 15 crane species. The two species specific
to North America, sandhill and whooping cranes,
will be given prominence. Woven throughout is the
International Crane Foundation’s mission to conserve
worldwide ecosystems, watersheds, and flyways upon
which cranes depend. Limit 30.

Refuge Tour
11:30 a.m. to 1:30 p.m.  T
SA-rt $10  Refuge Bus Stop
This is a unique opportunity to explore seldom-visited
areas of the refuge with your knowledgeable refuge
staff tour guide. Your host will explain how the land
and water are managed to benefit wildlife. Enjoy
spectacular views of cranes, geese, ducks, raptors, and
perhaps even turkeys. Please note that, due to time
constraints, participants remain on the bus for this 2
hour tour. Tours are offered Friday and Saturday. Limit
44.

Sponsored by

Time Lapse Photography
12:00 p.m to 1:30 p.m  S
SA-tlp $45  Refuge Visitor Center
In this class, Keith Bauer will teach you how to create
beautiful time lapse sequences, then take the individual
images captured over a period of time and create an
amazing time lapse movie from them. Learn how to
do this using Lightroom as the source for the images
and a third party plugin to create seamless transitions.
Explore how to solve exposure variations, remove
flicker from the sequence of images, and create truly
professional level time lapse movies. This technique
is great for capturing nearly anything that moves.
Keith will demonstrate this with cloud sequences as
examples in the class. No experience necessary to join
us in this fun class. Limit 25.

*NEW*
Edible and Medicinal Plants of the Chihuahua
Desert
1:00 p.m to 2:30 p.m  W
SA-empcd Free  Refuge Desert Arboretum
The Chihuahua Desert looks harsh and inhospitable
but to the native people of the southwest, it can be a
supermarket. Nearly every plant has a use as food,
fiber, medicine or building material. Join Master
Gardener Tom Hyden for a ninety-minute tour of the
Desert Arboretum to learn about the plants and their
uses. After the tour, indulge in a wild food tasting at
the Friends House. Offered Thursday and Saturday.
Limit 15.
The **International Crane Foundation**

*salutes*

Bosque del Apache National Wildlife Refuge staff and Friends of Bosque del Apache for their dedication to the cranes!

*Illustration by Julia Whatley*

*Saving cranes and the places where cranes dance!*

www.savingcranes.org
608-356-9462
Call to get involved!

The International Crane Foundation works worldwide to conserve cranes and the ecosystems, watersheds, and flyways on which they depend. We provide knowledge, leadership, and inspiration to engage people in resolving threats to cranes and their diverse landscapes.
Hike: Indian Well Wilderness  
12:30 p.m. to 3:00 p.m.  
SA-hiww $8  
Refuge Bus Stop  
Join Lise Spargo and J.R. Seeger for a journey into the Indian Well Wilderness Unit, found along the Canyon National Recreation Trail. There is no formal trail for 1.5 miles, but participants will be guided through a series of deep cut arroyos, returning to the Canyon National Recreation Trail near marker 11. There are several short, steep scrambles during the hike. The bus will return us to the refuge visitor center afterwards. A day pack with water and food, as well as hiking boots with good ankle support, are strongly recommended. Total distance: approximately 2.5 miles. Elevation change is from 4500’ at the start to 4750’ at the highest point in the hike. Transportation provided. This is a difficult hike and well worth the effort. Limit 15.

All About Owls  
1:00 p.m. to 2:30 p.m.  
SA-aaoo $12  
Refuge Biology Building  
Live owls up close! Whooo is that calling in the night? What might you expect to see in different seasons in New Mexico? Join Gail Garber and her team from Hawks Aloft to venture into the world of the owls of North America, nineteen species in all. Learn how different owls have adapted to their unique habitats, from the snowy owl of the far north, weighing in at nearly 4 pounds, to the diminutive elf owl of the Southwest, which weighs less than two ounces. Laugh with us as we relate some of our owl adventures, both near and far, from the riparian woodland along the Rio Grande, to the Sax Zim Bog near Duluth, Minnesota. This talk will feature the live educational owls of Hawks Aloft, as well as the amazing imagery of Doug Brown, David Powell, Keith Bauer, and our other favorite photographers. You will not want to miss this show! Limit 24.

Hike: John P. Taylor, Jr. Memorial Trail  
1:00 p.m. to 2:30 p.m.  
SA-hjt $8  
Refuge Trailhead  
Join Vannetta Perry for a one mile roundtrip easy walk along the John P. Taylor, Jr. Memorial. This accessible trail through Bosque del Apache is a restored salt cedar forest. Now, it is managed to simulate the meandering flow of the habitat historically found along the Rio Grande, the bosque. The dedication plaque at the end of the trail features an image from 1846 of cranes and the surrounding landscape which inspired John P. Taylor, Jr.’s restoration vision. Enjoy a quiet stroll over smooth terrain with an opportunity to see turkeys, cranes, geese, deer, and elk. Bring water, good boots, and warm clothes. Meet at the trailhead, see page 72. Limit 20.

Historic San Miguel Church Tour  
1:00 p.m. to 2:30 p.m.  
T  
SA-hsm Free  
Socorro, San Miguel Church  
Join Deacon Nick Keller, from San Miguel Church in Socorro, for a private tour of this newly-restored church. Learn about the rededication of the church in 2014, after nearly four years of being closed for restoration and repair. Wonder at the story of the structural and aesthetic improvements. This historic church is celebrating over 400 years of faith in this area, which dates all the way back to the founding of the community in the early 17th Century. The tour is free with offerings appreciated. See maps on pages 73 and 74. No need to register and no limit of attendees -- just meet us at the front door.
Sponsored by Hunt’s
Create a Backyard Bird Photography Studio
1:00 p.m. to 3:00 p.m.
Refuge Visitor Center
SA-cbpps $45

You don’t have to live on a ranch, in the woods, near a swamp, or in the desert to create a successful backyard bird photography studio. Allow Ruth Hoyt, full-time professional nature photographer, Texas master naturalist and certified interpretive guide, to show you how. Learn how to plan and create a bird photography studio – even in a small area! After a short indoor introduction to best birding practices, move outside to see a bird photography studio in action! Participants learn about what birds require for survival and how you can ethically and safely use this information to help the birds and provide yourself with photographs – a win-win situation! Limit 12.

Endangered Species Tour
1:00 p.m. to 3:30 p.m.
Refuge Bus Stop
Join Jeff Sanchez, a wildlife biologist at Bosque del Apache, for a look at the work being done to restore habitat for endangered and threatened species on the refuge. With four federally-listed, endangered species occurring on the refuge, management of their habitat needs can be complex. Learn about the challenges these four species face and how they are supported at Bosque del Apache. Visit areas of the refuge that are closed to the public and learn about different habitats that are being managed to protect the endangered species and support the migrating waterfowl. Transportation provided. Limit 19.
Crane Basics Workshop with Guided Field Observations
1:00 p.m. to 4:00 p.m.
SA-cbw $40 Refuge Expo Conference Tent
Join Sandra Noll and Erv Nichols in an expanded afternoon workshop that begins with a Crane Basics seminar followed by two hours of guided observation to practice and gain confidence in independently recognizing many aspects of crane biology and behavior. The tour provides opportunities to observe cranes and other wildlife in areas of the refuge not accessible to the general public. (This workshop does not include fly in.) Transportation provided. Offered Thursday and Saturday. Limit 44.

Photography as a Tool for Conservation
2:00 p.m. to 4:00 p.m.
SA-pvtc Free Refuge Visitor Center
Join Filipe DeAndrade and learn to use your photographic and video skills as tools for conservation – just as he has done. Fil’s passion has long been to help people to fall in love with nature and see it as their refuge, much like he has since his childhood. He won a National Geographic film competition with his film, Adapt, while he was a senior at University of Florida in 2014 and has since done filming for National Geographic, Nat Geo WILD, and others. Fil has travelled the world to capture the stories of animals, people, and nature. He and his film crew (Brian Moghari and McKenzie Barney) came to Bosque del Apache three years ago to film three episodes in the ten-episode Nat Geo WILD series about wild places in the United States – “Untamed with Filipe DeAndrade.” Since that time, Fil has shot footage around the world and has relocated to Costa Rica. In Costa Rica, he is creating environmental education for the entire school system to turn young people on to the importance of nature and conservation. Fil knows that people usually protect what they truly understand and fall in love with. Filipe is back here now for two weeks to do more filming and to share his stories with us again, through the beautiful places, people, and animals he captures on film. Limit 25.

Sponsored by TAMRON
Shooting the Darkside: Silhouette Birds in Flight and Motion
2:00 p.m. to 5:30 p.m.
SA-std $80 Refuge Bus Stop
A well-photographed image of wildlife in silhouette can often elicit as much or more emotion from your audience than images of most well-lit subjects. Join Tamron professional Lisa Langell to learn how to maximize your shooting day, add diversity to your portfolio, and create powerful emotion with your photography through silhouette, back-lit and rim-lit photography. This fun, creatively-enriching session will cover what subjects work best in these lighting conditions, settings for silhouette photography, and how to utilize this special light. Discover the beauty as
you learn technical mastery to shoot “on the darkside.” Transportation provided. Limit 9.

Sponsored by Canon
Birds in Flight, Wildlife and More
2:00 p.m. to 5:30 p.m. W
SA-bfwm $80 Refuge Bus Stop
Join wildlife nature photographer, educator, author, and Canon Explorer of Light Adam Jones for an exciting afternoon field workshop experience. The primary focus is to change the way you see, and to hone the technical skills necessary to capture what you see in your minds eye. Adam is well known for his easy going informative style, nuts and bolts approach, and his ability to communicate well with all skill levels. Learn how to make artistic images of birds, wildlife, and landscapes. Field discussions include capturing birds in flight, silhouettes, motion treatments for moving subjects, high ISO considerations, noise reduction in post processing, AF settings for moving subjects, and how to get the most out of the teleconverter on your long lenses landscape imaging, depth of field, hyperfocal focusing, focus stacking, HDR that looks realistic, live view and how to quickly change from landscape settings to wildlife/action settings. Offered Friday and Saturday. Transportation provided. Limit 9.

Sponsored by Zeiss
Point and Shoot Nature Photography
Advanced Field Techniques & Modes
2:00 p.m. to 5:30 p.m. W
SA-aps $65 Refuge Bus Stop
Join Stephen Ingraham to explore birds in flight, macro, HDR for landscapes, and other advanced subjects for point and shoot nature photography. Your camera is capable of much more than you are probably aware, and even difficult subjects and scenes can be captured with relative ease. It is strongly suggested that you take the Basic Field Techniques workshop (offered Thursday) before taking this one. Transportation provided. Limit 9.

Sponsored by Hunt’s
An Evening at Abó
Photography Intensive
4:00 p.m. to 8:30 p.m. W
SA-ari $130 Salinas Pueblo Missions National Monument
Located in central New Mexico about 90 minutes from Socorro, the Abó Site dates back to the 14th century when Abó Pueblo thrived as a major trading community. The Spanish arrived in the 15th century and founded a mission, including a large church and several other buildings. The local red clay was used to make adobe bricks. Much of the mission remains, including several buildings and walls. Given the color, texture, and detail, Abó makes for stunning photographs illustrating New Mexico’s rich cultural history. Join professional photographers Don Toothaker, Mark Buckler, and Keith Bauer to experience the wonders of this historic site. Plan to photograph the exterior walls in both twilight and at night. We will also have telescopes for observing the heavens since Abó is an International Dark Sky Park. Come prepared with your camera, any lenses you wish to carry, a tripod, extra batteries, plenty of memory cards, and flashlight with red light option. After check-in orientation, we will move into the field for twilight photography and continue into the night. Allow plenty of time, as the drive from Socorro will take nearly 1.5 hours to the Abó parking lot, nine miles before Mountainair, NM on Highway 60. Food and beverages are not available at the site. Limit 24.

Sponsored by Owling Expedition Intensive
4:15 p.m. to 9:00 p.m. W
SA-oew $95 Refuge Expo Conference Tent
Elusive and beautiful, owls are highly sought-after birds on any birder’s life list. Their mysterious nocturnal lifestyle captures our imagination and fuels our desire to find them. For that same reason, they are often hard to find and even harder to see - unless you know how to look for them, that is. This workshop is not focused on owl ID (although we will definitely cover that too) but, rather, how to find owls. We hope to improve your owling skills to the point that you
feel confident to plan and execute a productive owling adventure on your own! This workshop consists of a one hour class followed immediately by a guided tour of the refuge in search of owls. This trip is part of our “Birder’s Corner” and is sponsored and guided by BRANT Nature Tours. This tour will include light walking. Offered Tuesday, Wednesday, Thursday and Saturday. Transportation and dinner provided. Limit 40.

**Walk In to Fly In**
4:30 p.m. to 5:45 p.m.  
Refuge Bus Stop
As the shadows grow long and the sun begins to set, thousands of geese and cranes return to the nighttime safety of the wetlands on the refuge. Meet at the visitor center bus stop for a short bus ride and walk to the roost area to view this spectacular scene. Wear comfortable shoes and dress warmly. Often there are seats on the bus for walk-ons, though this is not guaranteed; exact change is appreciated. Offered Thursday and Saturday. Limit 44.

Sponsored by **SIGMA**

**VLA Nighttime Photography**
Photographing the Nighttime Landscape
5:30 p.m. to 8:30 p.m.  
VLA, Visitor Center
Join Roman Kurywczak a photography Sigma Pro, for an educational how-to program on the possibilities of photographing landscapes with the star-filled sky as a backdrop. The Very Large Array Radio Telescope (VLA), one of the world’s premier astronomical radio observatories, consists of 27 radio antennas in a Y-shaped configuration on the Plains of San Agustin, west of Magdalena. Each antenna is 25 meters (82 feet) in diameter. At this location, the National Radio Astronomy Observatory (NRAO) and VLA, in partnership with Friends of Bosque del Apache and Sigma Camera, offer this nighttime photography workshop of spectacular magnitude. Learn about camera equipment, tips, techniques, and settings for star points. Explore “light painting” of a foreground subject, as well as overcoming obstacles presented by less-than-ideal conditions.

The workshop begins with an equipment check and camera set-up at 5:30 p.m. in the VLA cafeteria. Bring a flashlight/headlamp with a red filter. You are required to leave your electronic communication equipment (cell phones, tablets, and computers) in your vehicle and turned off, as they interfere with the VLA’s telescope data collection, which occurs continuously. Dress warmly and in layers; bring water and a sack dinner. You will be walking in the desert at night up to 0.3 miles to the antennas, so consider your equipment weight and wear good walking shoes. This event will have an optional photo contest. Details about photo contest will be emailed post-Festival in December. Offered Tuesday, Thursday and Saturday, with Sunday as a backup for poor weather. A partial refund of $85 will be available if the weather is prohibitive on scheduled nights and you cannot participate in the Sunday event. Limit 30.

Sponsored by **Albuquerque Birding Hot Spots**
Albuquerque Birding Hot Spots
7:30 a.m. to 4:30 p.m.  
Albuquerque, Valle de Oro
Join Valle de Oro National Wildlife Refuge manager Jennifer Owen-White and BRANT owner, Raymond VanBuskirk, for a very special day of birding from Albuquerque’s valley of gold to the snow swept summits of the Sandia Mountains. We will start the day at Valle de Oro, located on the east bank of the Rio Grande, just south of Albuquerque, and make our way to the Sandia Crest, home to all three North American rosy-finch species and the location of Rio Grande Bird Research Inc.’s (RGBR) thirteen-year study of the winter ecology of rosy-finches. We will explore the 570 acres of habitat at Valle de Oro, which serves as an urban oasis for both wildlife and people. Learn about the past, present, and future of this incredible, urban refuge. After a morning of birding in the Rio Grande Valley, search for rosy-finches at Sandia Crest - the winter home of some of North
America’s hardest-to-find bird species. Lunch will be provided with the chance to talk with Rio Grande Bird Research Inc. researchers about the important work they have been doing for the past thirteen years. Not only will we watch all three rosy-finch species at the feeders, but also we will have the opportunity to take part in the important bird research happening on the edge of Albuquerque. We might even get to even release a few finches back to the wild!
*The rosy-finch research is volunteer-run and depends on the generous donations of people like you to keep it going. There will be a donation basket on-site, for those interested in contributing to current and future research.

Tour starts at 7:30 a.m. at Valle de Oro NWR. Transportation from Valle de Oro will be provided and lunch is included. Bring plenty of snacks, water, warm clothes (layers), boots, etc. Limit 24.

Sponsored by

Hunt’s

White Sands National Monument Intensive
A two-day special event
3:00 p.m. to 8:30 p.m. Sunday
6:00 a.m. to 10:30 a.m. Monday
SU-wsi $290

White Sands National Monument
Located in the southeast corner of New Mexico, near the town of Alamogordo, White Sands National Monument is a unique natural treasure and spectacular destination for photographers of all skill levels. White Sands National Monument is 275 square miles of white gypsum that time and wind have shaped into a wide array of dunes. These dunes provide wonderful studies in light, shadow, shape, and detail. Join professional photographers, Don Toothaker and Mark Buckler to explore the wonders of the dunes. The sweeping views from the dunes are breathtaking in every direction. The dunes are also wonderful locations for exploring macro photography. Learn color techniques and the power of monochrome. Each day will be full of opportunity as we explore the dunes and vegetation amid the stunning light of White Sands National Monument. Come prepared with your camera, any lenses you wish to carry, a tripod, extra batteries, plenty of memory cards, and flashlight with red light option. We start by meeting in the White Sands National Monument parking lot. After check-in and orientation, we will move into the field for afternoon photography and extend into the night, where we will experience the special night skies of New Mexico. Allow plenty of time, as the drive from Socorro will take nearly three hours. A special hotel rate of $85 has been arranged for a single or double occupancy with Quality Inn in Alamogordo, NM, if you make your reservations by November 10th. Suites and reservations after November 10th are not included in this special rate. Call 575-434-4200 and tell them you are reserving a room as part of Festival of the Cranes. Room registration and payment will be your responsibility. Limit 24.

Photo by Eileen Johnson