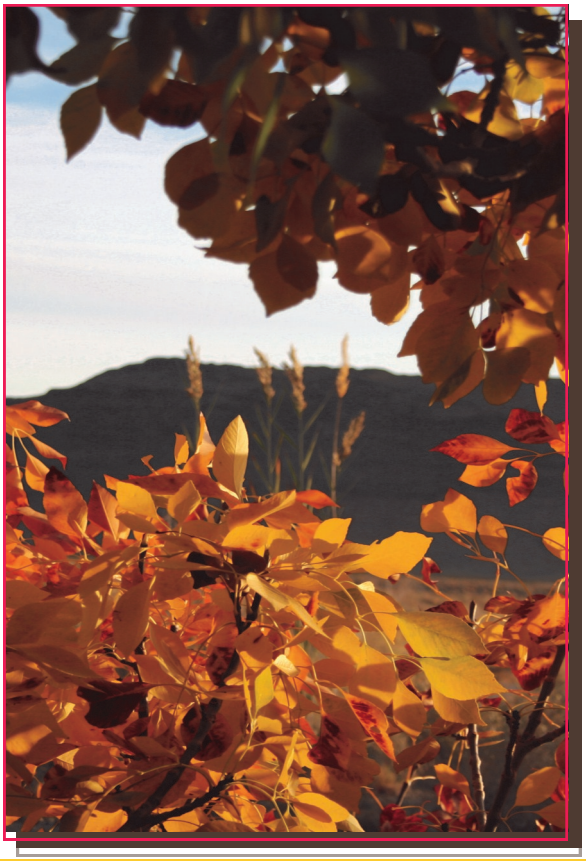
FALL | 2013

WHERE THE DESERT SPRINGS TO LIFE!

Ash Meadows

Currents

Ash Meadows is amazing in many aspects. However, it is truly incredible in the fall when people traveling through Mojave Desert expect to see brown and grey colors, but instead they see golden yellow and bright orange ash trees! Fall is definitely the best time to visit Ash Meadows National Wildlife Refuge and to experience the parade of bright colors.



Where do autumn colors come from?

A color palette needs pigments, and there are three types that are involved in autumn color.

- Chlorophyll, which gives leaves their basic green color. It is necessary for photosynthesis, the chemical reaction that enables plants to use sunlight to manufacture sugars for their food. Trees in the temperate zones store these sugars for their winter dormant period.
- Carotenoids, which produce yellow, orange, and brown colors in such things as corn, carrots, and daffodils, as well as rutabagas, buttercups, and bananas.
- Anthocyanins, which give color to such familiar things as cranberries, red apples, concord grapes, blueberries, cherries, strawberries, and plums. They are water soluble and appear in the watery liquid of leaf cells.

Why do leaves change their color?

Temperature and moisture are the main influences.

A succession of warm, sunny days and cool, crisp but not freezing nights seems to bring about the most spectacular color displays. During these days, lots of sugars are produced in the leaf but the cool nights and the gradual closing of veins going into the leaf prevent these sugars from moving out. These conditions-lots of sugar and lots of light-spur production of the brilliant anthocyanin pigments, which tint reds, purples, and crimson. Because carotenoids are always present in leaves, the yellow and gold colors remain fairly constant from year to year.

The amount of moisture in the soil also affects autumn colors. Like the weather, soil moisture varies greatly from year to year. The countless combinations of these two highly variable factors assure that no two autumns can be exactly alike. A late spring, or a severe summer drought, can delay the onset of fall color by a few weeks.

A warm period during fall will also lower the intensity of autumn colors. A warm wet spring, favorable summer weather, and warm sunny fall days with cool nights should produce the most brilliant autumn colors.

It is the combination of all these things that make the beautiful fall foliage colors we enjoy each year.

Source for this **article** is USDA Forest Service website : http://www.na.fs.fed.us/fhp/pubs/leaves/leaves.shtm

FALL MIGRATION - WHY DO BIRDS MIGRATE?

It's all about survival. Large groups of birds remaining in breeding areas would rapidly deplete food sources resulting in fewer surviving offspring. When birds migrate it allows food sources in a particular area to replenish. When food sources are not adequately replenished; birds have been known to migrate well outside their typical range.
Migration takes a lot of energy. Birds store up extra body fat before their journey instead of relying solely on food they find along the way. The stored fat can be up to fifty percent of a bird's body weight.

Although birds have evolved with different types of plumage which helps them to survive in various climates these conditions can be overly harsh for eggs and young chicks. When the weather in the Artic breeding grounds begins to drop or temperatures rise in the tropics birds will travel to areas with temperate habitats better suited to laying eggs.
Large groups of birds in a small area are susceptible to parasites and disease. Birds that disperse to various areas are less likely to catch and or spread disease which can devastate breeding colonies. Habitats with abundant food sources all year-round will also attract large number of predators which can prove deadly to defenseless chicks.

Sources for this article: Birding.about.com and ornithopter.org

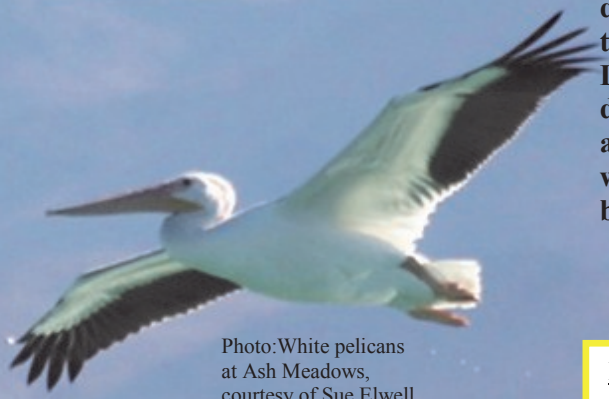


Photo:White pelicans at Ash Meadows, courtesy of Sue Elwell

Fun Fact: The arctic tern migrates over 20,000 miles every year. It flies from the arctic to the Antarctic and back. There is no other species that travels farther.

Birds have an internal GPS system to assist them with migration. They can sense the Earth's magnetic field and use visual clues such as stars or land features. Although birds may have an instinctive urge to migrate they learn the route the first time from the journey with their parents. "This created a problem when biologists wanted to establish a new population of the whooping crane, an endangered species. Biologists were able to raise the whooping cranes in captivity, but the cranes would not migrate! Biologists taught the cranes to follow a small, manned airplane called an ultralight. This plane led the birds on their thousand-mile journey from Wisconsin to Florida, and after that first time, the birds knew how to make the trip on their own", according to ornithopter.org.
Not all birds migrate. Some birds have access to a food source that is available all year round and competition for the same food source is limited. An example is the woodpecker that digs into barks of trees where many insects spend the winter.

CHRISTMAS BIRD COUNT 2013

The longest running Citizen Science survey in the world, Christmas Bird Count provides critical data on population trends. Tens of thousands of participants know that it is also a lot of fun. Data from the over 2,300 circles are entered after the count and become available to query under the Data & Research link.

The Annual Audubon Christmas Bird Count at Ash Meadows will take place Dec 15, 2013.
For more information or to join the Christmas Bird Count group, contact Abram DaSilva at abram_dasilva@fws.gov.

WELCOME THE SCHALLS!

Janet and Tony Schall have started their first season as volunteer RV residents working with us at Ash Meadows this October.

This wonderful couple had a great experience volunteering at Saguaro National Park in Arizona and Salt Creek Campground in Washington.

Their help at Ash Meadows NWR is greatly appreciated. Janet assists at the visitor center greeting visitors and working on several organizational projects in the office.

Tony works in heavy-equipment maintenance, keeps the refuge and the visitor center clean and is always here to help with the increased number of fall visitors.

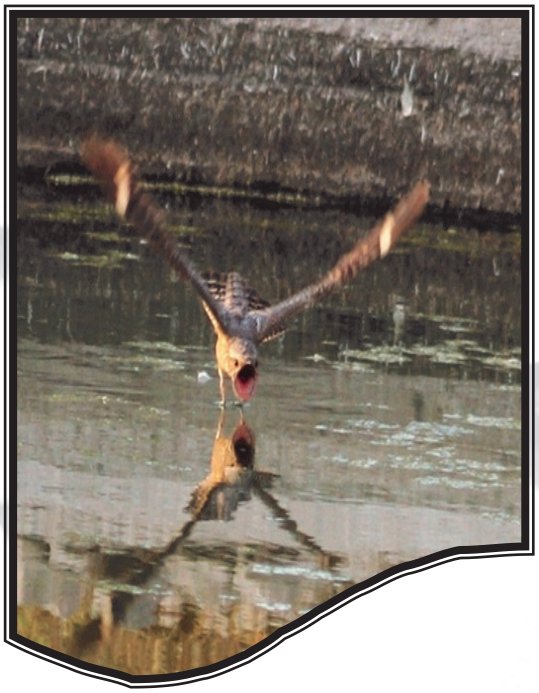
"I just love it here", says Tony. They enjoy exploring this area since it is very different from their home state, Washington. Janet jokes, "We are just nosey! We are curious about how things are being done, and volunteering at the refuge is the best way to get this knowledge."

The future of Ash Meadows National Wildlife Refuge is in your hands! YOU can benefit wildlife habitat and help people working here. Individuals and groups of all ages are welcome. Scheduling is flexible. Call to become a volunteer today! 775-372-5435

Birding in Ash Meadows

The fall season is a great time to visit the refuge when the heat of summer is finally gone. As the ash trees prepare for the winter, their leaves become the beautiful orange and yellows of fall which is a welcome sight here in the desert. It is fall migration time for the birds, and the refuge plays host to many weary travelers and we say goodbye to some of our summer residents.

Thanks to Kathy Kuyper, our birding volunteer from northern California, we were able to document approximately 100 different species within a 10 day period the later part of October. Last spring Kathy was able to identify a new species for the refuge, bay-breasted warbler, and although she was not as lucky this time she was able to document some unusual sightings such as the lesser nighthawk. These birds are found in the refuge during the spring and summer, flying south for the winter in September.
The nighthawk is not related to hawks at all. They are in the 'nightjar' family and they are the most aerial of the nightjars, longer-winged and more buoyant in flight. They are nocturnal with a distinctive wide gaping mouth and lay eggs on open ground.



For more information on the species Kathy Kuyper listed during her bird survey you can go to www.ebird.org or refer to the local Audubon group in Pahrump (for more information call 775-727-0634)

On the Horizon

New Visitor Center - We are getting closer to breaking ground for the new visitor center and the staff has been busy identifying and relocating the rare endemic Ash Meadows Sunray. There is more to the process than you might think because of the unique soil conditions at Ash Meadows.
Biologists and soil scientists have discovered that within even the smallest areas soil conditions can vary. These slight differences allow one plant to thrive while making survival difficult for another nearby.

Selecting just the right area for replanting can be tricky so in order to increase success rates the staff is selecting sites where existing plants are thriving. The new plants are placed within just a few feet of existing healthy plants. The location of the visitor center and the roads used for construction traffic was carefully planned in an effort to avoid as many rare plants as possible.

Capture the Moment

Have you ever wanted to learn more about photography? Now is your chance to participate in the
Nature through the Lens program
at Ash Meadows NWR on
November 23, from 10-11:30 AM.
You will learn about photography basics, types of nature photography and have time to practice what you learn. All you need is the passion to learn more and a personal camera; phone, point and shoot and DSLR are all welcomed. We will meet at Point of Rocks Boardwalk and registration is necessary.

For more information or to register, contact
Jennifer Winston at jwinston@ndow.org.

Contact us:
610 E. Spring Meadows Road
Amargosa Valley, Nevada 89020
Phone 775-372-5435
E-mail: alsu_shaydullina@fws.gov

The refuge is open from sunrise to sunset every day.
Visitor center hours of operation:
Monday-Friday 8:00a.m. - 4:30p.m.
Open holidays / weekends when staff or volunteers available.

Follow us: www.fws.gov/refuge/ash_meadows/

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