

Barry Jones, Visitors Services Specialist at
Quivira National Wildlife Refuge, will speak at
Manhattan Public Library Auditorium
3:30 p.m. Sunday, July 17th



Northern Flint Hills Audubon Society,
P.O. Box 1932, Manhattan, KS 66505-1932



prairie falcon

Northern Flint Hills Audubon Society Newsletter

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Upcoming Events

Jul 9- Sat. Morning Birding
8 a.m. Sojourner Truth Park

Jul 11 - Board Meeting 6 p.m.
Home of Tom & MJ Morgan

**Jul 17- Sunday 3:30 Barry Jones "Quivira"
Manhattan Public Library Auditorium**

**Jul 23 -24 Quivira Field Trip
See page 4 for more information**



Skylight plus

Pete Cohen

The countdown is already well along. As of July 1st there will be 417 days to Monday, August 21, 2017, when a total eclipse of the Sun will be visible along

a path from Oregon to South Carolina. Depending on one's perception of the Flint Hills, it will either clip the northern edge or barely miss it. The eclipse.org website puts the center line passing through Beatrice and Falls City, Nebraska and just NE of Hiawatha, Kansas, with the western edge just barely including Marysville. Time enough for more details, which are available with fantastic precision.

Especially with the Sun-rich season of summer coming on, it seems well to review just what's going to be eclipsed.

The Sun (I learn) by modern knowledge is a ball of ionized gas called plasma, nearly 900,000 miles in diameter, whose distance from the Earth, (because the Earth's orbit is elliptical) averages about 93 million miles. What lights our days is basically the photosphere, that can be regarded either as the Sun's surface or as the lowest level of its atmosphere, where the temperature is about 10,000° F. (5537.77 C.)

A Great Courses lecture by Alex Filippenko of Berkeley helpfully explains that the gases are thin enough there for photons to escape into space. Below that the light being created by nuclear reactions at the Sun's center is impeded by gases so dense it can take a struggling photon 100,000 years to reach the surface and escape the inferno.

Immediately surrounding this photosphere is the thin but hotter chromosphere whose hydrogen content gives it a pale reddish color that is outshone by the yellowish photosphere. Surrounding the chromosphere is the even hotter corona which sends forth the solar wind of ionized particles that threatens astronauts and our earthbound electrical systems, compensating by interacting with the atoms and ions of Earth's upper atmosphere to create our auroras. Its glow, like the chromosphere's, is visible to us only when the shine of the photosphere is completely blocked.

The Moon, traveling its elliptical orbit around the spinning Earth willy-nilly, provides such a total eclipse on average about every 18 months, but the chance of its effect being seen from any one location is about once in almost 400 years (though in 2024 part of the middle U.S. will beat the average). For millennia, people have chased after those locations, obtaining vital information, producing fascinating speculations, and experiencing aesthetic excitement. It's now become possible to artificially block the photosphere's disk so that the corona can be studied independently, but only the show provided by the Moon engenders the countdowns and keeps them going.

Meanwhile those impatient to see something blotted out can be awake in the wee hours of July 2nd to watch the Moon sidle up to Taurus' Aldebaran and the Pleiades, then return on the 29th to pass in front of them. This, however, will be technically termed an "occultation," not an "eclipse."

At other times in July the Moon will be to the lower left of Leo's Regulus on the 7th, and in the evenings of the 8th and 9th will be below, then above, Jupiter that is setting, ending its long run of all night performances. And in the evenings of the 13th-16th the Moon, Mars, Saturn, and Scorpius' Antares will be having a roundelay with Mars being the brighter red one and Saturn holding to yellowish.

The triangle of Mars, Saturn, and Antares continues into August with the Moon re-joining on the 11th, before setting around midnight to make way for the Perseid meteor shower, expected to be best during the morning hours. The music will pause for Saturn on the 13th as it holds to one position all the night because of how various orbital motions coincide. Later, on the 23rd-25th it'll be red eye to red eye as Mars, fading but still brighter, passes close above Antares.

While this is going on, Venus, beginning a stint as the Evening Star, forms a triangle with Jupiter and Mercury very low in the western twilight the 19th to 24th, after which Mercury bows out, giving Venus and Jupiter a chance to cuddle closely the 27th. Earlier, in the dawn of that day, the Moon will briefly show with another companion: Betelgeuse, the bright star of Orion's highest shoulder, reminding that summer isn't for always.

The Moon will be new in July the 4th at 6a01, full the 19th at 5p577; in August new the 2nd at 3p45, full the 18th at 4a27.

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Perfume

Dru Clarke



In walking through the yard I catch the sweet scent of blooming milkweed. Although the plants are on the south side of the implement shed where I can't see them, their essence is carried on the breeze far from their origin, offering a promise of a full frontal assault after I round the corner. Head high, the flowers are lavender pink pompoms, nodding heavily in their drowse. They were planted to help the monarch butterfly, but a host of other insects are sipping the nectar: lightning bugs; bees; flies both large and small; skippers; fritillaries. The buzzing and fluttering create a murmuring din.

Other fleeting fragrances often send me searching the brush. Sometimes I find the source: bittersweet and green brier vines have delicate, easily overlooked blossoms that appear in May. Following the hovering flight of insects helps locate these inconspicuous flowers. A friend calls green brier "Wait a minute...", a reference to its habit of grabbing and pricking you with its spines before you can extricate yourself, so I try to remember this when sniffing it out.

In early June, while awaiting the opening of the annual barbecue contest in Marysville, I spent some time in the garden of the Koester House, where my nose was arrested by a lightly saccharine wave of molecules. Above me loomed an enormous linden tree, fully decked out with pale yellow parasols of blooms. A fellow – who originally was from Switzerland- came down off the porch and joined me, and began telling me about the tree, which dated from the 1840's, when the house was built. His mother made tea from the flowers and leaves, and he used them to flavor vodka! I had bought a linden tree years ago, motivated by those mature trees on our university campus, in the hopes of some day enjoying honey made from it. A basswood (our native linden) tree at Alcove Spring should bloom in mid-June, a good time to visit. The tree is just below the water fall, next to the path.

When I was a kid, I beachcombed on Long Beach Island, a barrier beach off the coast of New Jersey. One day, I found a large softball – sized lump of grey, greasy stuff that melted under the touch of my fingers.

It had no noticeable odor, and I played with it for a while. As an adult, I discovered that it must have been ambergris,

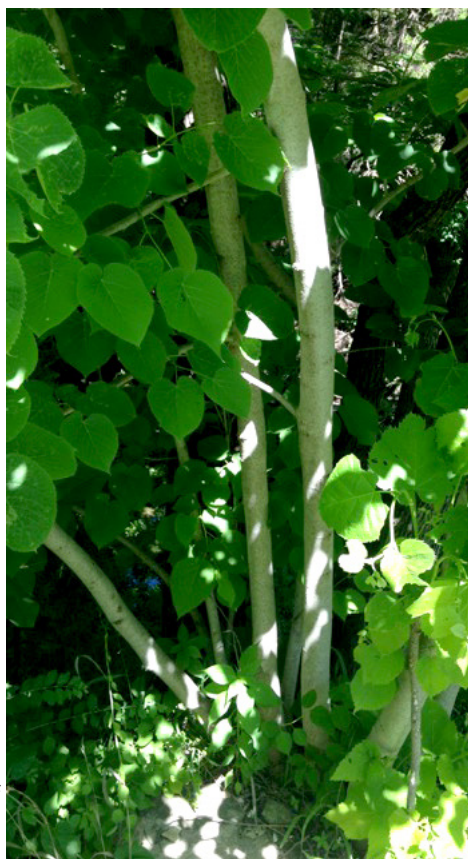
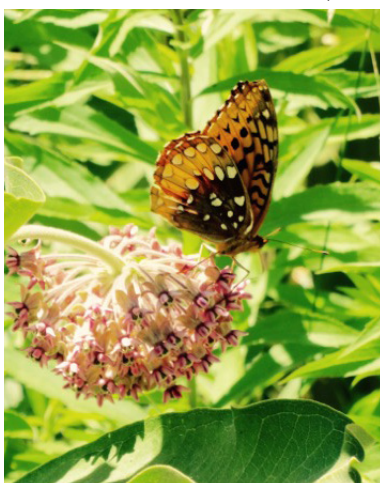
the substance in a sperm whale's gut that more than likely coats squid's beaks, protecting the digestive system of the whale. Ambergris was prized as a base for fine perfumes, along with civet, musk and castor: I probably had held in my hands a valuable treasure a perfumer would have coveted. Animal and plant oils were the first liquids used to capture fragrances until the invention of steam distillation and the more modern solvent, ethanol. Musk's "dryout" (staying power) is legendary. Josephine of France was so fond of musk that its scent could be detected in her boudoir sixty years after her death.

The use of perfumes is ancient: a 4,000 year old perfumery covering 4,000 m² was discovered on Cyprus. Muslims used extracts to blend with cement from

which their mosques were built. One perfumer investigating customary uses of fragrances observed a Berber woman in her wedding garb standing astride a crucible in which burned aoud (agar wood) to infuse her body as well as her dress with its smoke. (The word 'perfume' is from "per fumus," or "pro fumum," "through smoke.")

Sometimes I'll crush a plant underfoot and be transported to some olfactory nirvana. Why have they not made a perfume from this? I wonder. I'll pluck a few leaves from a prickly ash, mash them up and stick them in my pocket, retrieving them periodically to sniff their clean, citrusy essence. As there is no prickly ash perfume, I'll settle for Mitsouko, heralded as one of the finest fragrances designed in the 20th century. They say while no one has died from wearing it, it has been responsible for the births of many children. I am well beyond that possibility, but not so far gone that I can't smile at the idea. Meanwhile, I'll go out and enjoy the milkweed.

© Dru Clarke June 2016



FIELD TRIP

U.S. Fish & Wildlife Service Quivira National Wildlife Refuge



JOIN us on a birdwatching trip to Quivira National Wildlife Refuge.

We will leave **Sat. afternoon at 3:30 p.m. July 23** and view/listen to the evening sight/sounds of Quivira. We will then **stay overnight** and view/listen to Quivira in the early Sunday morning when the birds are most active.

We plan to **return to Manhattan approx. 3:30 p.m. on Sunday.**

Please leave a message on Patricia's phone **785-776-9593** if you plan to go on the field trip so that we can arrange carpooling and most convenient place to meet. We will discuss your preferred overnight arrangements and perhaps we can get a group rate. **Please call by July 18th** or tell Patricia at the July 17th program with Barry Jones at Manhattan Public Library Auditorium.

The Uniqueness of Quivira

Located in south central Kansas, Quivira NWR lies in the transition zone of eastern and western prairies. In 1955, the Migratory Bird Commission approved the purchase of land to create the Refuge, and by 1998 the last of the Refuge's 22,135 acres had been purchased. The name "Quivira" is of Spanish origin, given to the region by the Spanish explorer, Coronado, who visited the area in 1541. Instead of gold, treasures and the fabled "Seven Cities of Cibola," Coronado instead found fertile grasslands, abundant wildlife, and small agricultural villages.

For untold years, the Big and Little Salt Marshes have attracted thousands of migratory waterfowl, providing them with food, cover and a place to rest. Indians and early settlers hunted the waterfowl in these marshes and shortly after the turn of the century, commercial hunting provided wagonloads of waterfowl to Kansas City restaurants and other eastern points.

Salt Marsh

Quivira's wetlands are unique due to the high concentration of salt in many areas. Subterranean salt deposits are near enough to the surface in the Quivira area to affect the groundwater that percolates to the surface. Salinity (or salt) levels in the water varies depending on rainfall, runoff from rainfall, and the depth of the water.

Sand Prairie

In the pre-settlement era of Kansas, prairie covered most of the state. During this time, much of the area south of the "great bend" of the Arkansas River consisted of plains with scattered active sand dunes. Once inactive, these dunes were covered with prairie grasses and forbs. This Sand Prairie is a unique and uncommon ecosystem in North America

Check out these links for more information about Quivira

https://www.fws.gov/refuge/Quivira/wildlife_and_habitat/index.html

https://www.fws.gov/refuge/quivira/wildlife_and_habitat/dragonflies_and_damselflies.html

https://www.fws.gov/refuge/quivira/wildlife_and_habitat/butterflies.html

Sojourner Truth Butterfly Garden Alsop Bird Sanctuary

The Butterfly Garden is thriving and since you all missed our picnic in June, please try to stop by and see the garden.



Above: Butterfly Garden, Tom Morgan and Patricia Yeager

Below: Alsop, Moving Rocks July 23, work started at 6 a.m. to beat the heat. The rocks are to border the gravel.

King of the Hill- Kevin Fay

Others not in picture - Patricia Yeager, MJ and Tom Morgan





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Subscription Information: If you do not want to receive the national magazine, but still want to be involved in NFHAS local activities, you may subscribe to the Prairie Falcon newsletter for \$15/yr. Make checks payable to the Northern Flint Hills Audubon Society, and mail to: Treasurer, NFHAS, P.O. Box 1932, Manhattan, KS, 66505-1932
RARE BIRD HOTLINE: For information on Kansas Birds, subscribe to the Kansas Bird Listserve. Send this message <subscribe KSBIRD-L> to <list serve@ksu.edu> and join in the discussions.

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