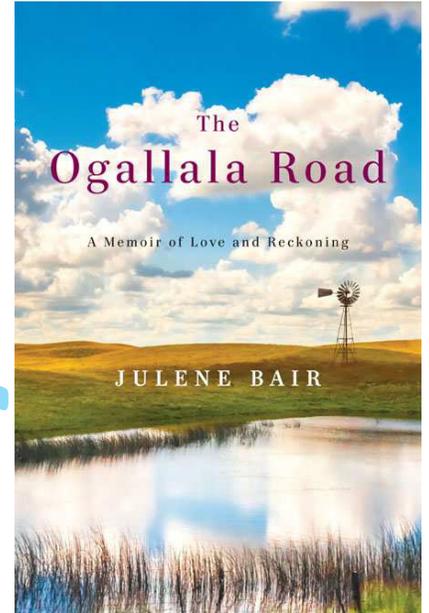




A discussion about water,  
with author, Julene Bair

Sept. 24, 2014 , 7-9 p.m.  
Sunset Zoo Rotunda  
Public Welcome  
Book signing after program



# Water

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



## prairie falcon

Northern Flint Hills Audubon Society Newsletter

Vol. 43, No. 1 ~ September 2014

### Inside

pg. 2 - Skylight Plus  
Pete Cohen

pg. 3 - Eyeshine  
Dru Clarke

pg. 4 - Eastern Kingbird

pg. 5 - Features of a Good Birdhouse

### Upcoming Events

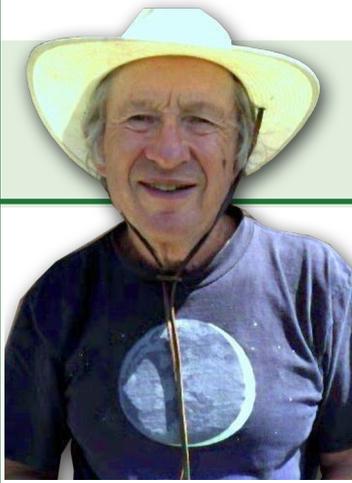
Sept 8 - Board Meeting 6 p.m.  
Home of Tom & MJ Morgan

Sept 13 - Saturday Morning Birding  
8 a.m. Sojourner Truth Park

Sept 24 - Julene Bair 7 p.m.  
Sunset Zoo Rotunda

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

Oct 11 - Saturday Morning Birding  
8 a.m. Sojourner Truth Park



## Skylight plus

Pete Cohen

Looked at one way, The Sky Manager operates on the platoon system, sending up different teams for each

season. This viewpoint is based upon the perception that the stars are passing by.

One could also consider that there is a Sky Curator who maintains four dioramas, and guides us slowly past them through each year. This viewpoint is based upon the fact that it's the Earth that's doing the relevant moving and the perception that the stars are simply on display in their various positions.

For whatever reason, the former view seems much the more common one, and within it this month the summer familiars are sliding westward down and out of our evenings and the autumn regulars are returning.

Pegasus, the Flying Horse is in the van, so to speak, that is, in the lead spot (vanguard), not the vehicle-trailer (English offers so many possibilities). As usual, he is most prominent by almost not being there. That is, the four stars marking the outward corners of his square body surround a large area of notably apparent dark emptiness in the eastern evening sky.

He is upside-down again, tilted to the right (south) with his forelegs (two lines of stars) extending from the upper right of the square, and with his neck and head represented by a long curve of stars reaching out from the lower right. (The small constellation, Delphium, the Dolphin, swims just ahead). This horse once had hind legs, kicking back in two separating arcs from the upper left corner, but the Authorities have created from them the maiden Andromeda, which puts her head in a rather awkward position, while what is now her long gown

curves slightly toward the Milky Way, just inside of which the hero, Perseus, glows brightly, resembling a number of possibilities, including a large Greek letter pi. All three personalities are also closely connected in the realm of mythology.

There's not a lot of starlight below the Square and Andromeda. The brief, yet Zodiacal, constellation Aries, the Ram (with the star Hamal making it findable) is below her hem, and Aquarius faintly bears his water burden just south of Pegasus's head. The two dim Fish of Pisces form a long, widely separating lateral V, with sharp end to the left, just under the Square. And Cetus the Whale is formed by connecting a small rectangle of stars beneath Aries to a longish pouch of stars below Pisces.

Then just above the southern horizon, almost in direct line below the two forward stars of Pegasus, a lone bit of brightness can be seen. This is the star Fomalhaut (fish's mouth), the leading light of Pisces Austrinus, the Southern Fish.

Meanwhile recognizably orange/reddish Mars, while trailing closely behind Saturn to early settings through the month, will at the same time be drawing ever closer to its nearly look-alike star, Antares in Scorpio. Their closest encounters come the 27<sup>th</sup>-29<sup>th</sup> as a fattening crescent Moon nearly touches Saturn on the 27<sup>th</sup> and continues passing by. The Moon will make its own pass with Antares on the 1<sup>st</sup>, and on the 14<sup>th</sup>-15<sup>th</sup> slip between Aldebaran, the eye of Taurus, and the Pleiades on the Bull's shoulder. As Jupiter returns in the first light of the 19<sup>th</sup>, the Moon will go between it and Procyon in the Little Dog, then come within speaking distance to Leo's Regulus the 21<sup>st</sup>.

The fall equinox will occur at 9p29 CDT the 22nd. The Harvest Moon, early this year, will be full at 8p38 the 8<sup>th</sup>; new 1a14 the 24<sup>th</sup>.

*©2014 Peter Zachary Cohen*



Kansas Native Plant Society - check out their website for events that might interest you, such as Wildflower walks <http://www.kansasnativeplantsociety.org/events.php>

# Eyeshine

Dru Clarke



“Who can believe there is no soul behind those luminous eyes.”

Theophile Gautier

Jules, one of our cats, had not come in when I went to bed, but I knew soon enough by the loud caterwauling where he was cornered by something. Tripping downstairs, I grabbed our spotlight and slipped and slid through wet grass to the edge of the meadow. There, two pairs of eyes luminesced back at me, one pair superior to the other, then a blink, a quick rushing away, then one pair, low and unmoving. Jules cowered there and let me pick him up and carry him to the house. His and the other animal’s eyeshine were greenish silver, marking both as cats that have green or yellow eyes. (Cats with orange, brown or blue eyes have red eyeshine.)

Eyeshine is a function of a remarkable layer called the tapetum lucidum, “bright tapestry,” that lies behind the retina of many vertebrates’ eyes. (Crocodiles have a retinal tapetum: that is, it is part of the retina itself.) It is made up of crystals of guanine, one of the four nucleosides making up DNA, and it functions by reflecting light back along the same path of incoming light, greatly enhancing the animal’s vision in low light or darkness. Nocturnal creatures have exquisite “bright tapestries”: the brighter the eyeshine, it seems, the more rods – those cells receiving light and refining shapes – and fewer cones, cells responsible for distinguishing color, in the animal’s eyes.

Eyeshine comes in a rainbow of colors: white, blue, green, yellow, pink and red. No one seems to know why the colors differ from species to species. Carrying a spotlight at night one can reveal any number of unseen creatures, and with some practice, can reveal the identity of the eyeshine. Notice, too, the behavior associated with the eyeshine: is there bobbing, weaving or a pattern of blinking? Is the eyeshine low to the ground or higher up? Yellow could be a deer or a raccoon, depending on how tall it is. Wolf spiders – certainly not vertebrates- have a green/white eyeshine and can be startling when so many of them glow back at you. We have a fat opossum living under our ‘summer kitchen’ whose eyeshine is a dull orange, and the bullfrogs in our pond have a green opalescence. Mountain lions and coyotes have greenish/gold eyeshine. But if you see amber, don’t approach: it is more than likely a skunk!

The first I learned of this structure was when I was researching sharks for a marine science unit I was developing. No wonder they are such efficient predators. Humans don’t have tapeta, so the ‘red eye’ one sees with a camera flash, is from the blood in the eye’s vessels. Oh, and by the way, Bigfoot and the Moth Man both reputedly have red eyeshine. Maybe they are just unusually large humans who are camera shy!

© 2014 Dru Clarke



*Everyone likes birds. What wild creature is more accessible to our eyes and ears, as close to us and everyone in the world, as universal as a bird?*

*David Attenborough*



## Eastern Kingbird *Tyrannus tyrannus*



If you are viewing this on-line and in color- you will see the red median crown stripe, usually concealed by the dark crown feathers of this *Tyrannus tyrannus*.

Thanks to Dave Rintoul's skill, we get to see it.

Everyone thinks of penguins being the bird in a tuxedo, but I also think of the Eastern Kingbird- dressed in formal attire, sitting so upright on the line. They are visual hunters and swope out from their perch to snatch flying insects.

The scientific name *Tyrannus* means "tyrant, despot, or king," referring to the aggression kingbirds exhibit with each other and with other species. When defending their nests they will attack much larger predators like hawks, crows, and squirrels. They have been known to knock unsuspecting Blue Jays out of trees

BUT in the winter they go down to the Amazon in South American, where they travel in flocks and eat fruit! I would love to see a flock of these elegant birds.

Here in the Flint Hills we have the perfect habitat for them, open grasslands, pastures, wetlands and open spaces near the edge of woods. The most widespread of our kingbird species, it breeds throughout North America, with the exception of northern Canada and the southwestern United States.

*photos by Dave Rintoul*



### IT'S WELL CONSTRUCTED

**UNTREATED WOOD**  
Use untreated, unpainted wood, preferably cedar, pine, cypress, or for larger boxes (owls) nonpressure-treated CTRX exterior grade plywood.

**GALVANIZED SCREWS**  
Use galvanized screws for the best seal. Nails can loosen over time, allowing rain into the nest box. Screws are also easier to remove for repairs or maintenance. Do not use staples.

### IT KEEPS BIRDS DRY

**SLOPED ROOF**  
A sloped roof that overhangs the front by 2-4" and the sides by 2" will help keep out driving rain, while also thwarting predators. Add 1/4" deep cuts under the roof on all three edges to serve as gutters that channel rain away from the box.

**RECESSED FLOOR**  
A recessed floor keeps the nest from getting wet and helps the box last longer. Recess the floor at least 1/4" up from the bottom.

**DRAINAGE HOLES**  
Add at least 4 drainage holes (1/8" to 1/2" diameter) to the floor to allow any water that enters the box to drain away. Alternatively, you can cut away the corners of the floor board to create drainage holes.

### IT HELPS REGULATE TEMPERATURE

**THICK WALLS**  
Walls should be at least 3/4" thick to insulate the nest properly. (Boards sold as 1" are actually 3/4" thick.)

**VENTILATION HOLES**  
For adequate ventilation, there should be two 3/8" diameter holes on each of the side walls, near the top (4 total).

### IT KEEPS OUT PREDATORS

**NO PERCHES**  
A perch is unnecessary for the birds and can actually help predators gain access to the box.

**COMMON NEST BOX PREDATORS**

**NOEL GUARD**  
A wire mesh tube attached to the front of the nest box that fits snugly in combination with another, or attach it to boxes installed on trees.

**COLLAR**  
A metal collar of about 3" in diameter surrounding the pole underneath the nest box.

**STOVEPIPE**  
The most complex, and perhaps the most effective. These baffles are generally 8" in diameter and 14-20" long.

**CHIMPUNKS**  
Chipmunks are both a nest predator and a competitor for nest boxes. To keep chipmunks out, mount boxes away from trees on a metal pole equipped with a baffle.

**CATS**  
Cats are excellent jumpers and can leap to the top of a nest box from a nearby tree or from the ground. Mount your box high enough and far enough from trees so cats cannot spring to the top of the box in a single leap. Keep your pet cats indoors for their own safety and for the safety of birds.

**SNAKES**  
Many snakes are excellent climbers and can easily surmount an unguarded pole. Snakes most likely to climb into birdhouses are generally non-venomous (such as racers and rat snakes) and helpful at controlling rodents. Avoid installing nest boxes next to brush piles.

**RACCOONS**  
Raccoons are intelligent and can remember nest box locations from year to year. They can be abundant in populated areas. Mount nest boxes on a metal pole equipped with a baffle, avoid mounting them on trees or fence posts.

## FEATURES OF A GOOD BIRDHOUSE

BUILD A SAFE AND SUCCESSFUL HOME

The **Cornell Lab** of Ornithology  
Exploring and Conserving Nature

### IT HAS THE RIGHT ENTRANCE SIZE FOR THE RIGHT BIRD

By providing a properly-sized entrance hole, you can attract desirable species to your birdhouses while excluding predators and unwanted occupants. Below are the requirements for some common species that nest in boxes.

**DON'T WANT TO GIVE A HOME TO EUROPEAN STARLINGS?**  
1 1/2" is the smallest hole size they can fit into, so select a smaller hole size.

**DON'T WANT TO GIVE A HOME TO HOUSE SPIDERS?**  
1 1/4" is the smallest hole size they can fit into, so select a smaller hole size.

Species listed include: Screech-Owl, American Osprey, Golden Plover, Ash-crested Flycatcher, Eastern & Western Bluebird, Bewick's Wren, Canada Wren, Tree Swallow, Great Crested Flycatcher, Prothonotary Warbler, White-breasted Nuthatch, Yellow-rumped Cuckoo, Mountain Bluebird, Red-breasted Nuthatch, Junco Titmouse, House Wren, Chickadee.

### IT HELPS FLEDGLINGS LEAVE THE NEST

**ROUGH INTERIOR WALLS**  
The interior wall below the entrance hole should be rough to help nestlings climb out of the box. For small boxes (wrens and chickadees), plain wood is usually rough enough, but you can roughen smooth boards with coarse sandpaper.

**INTERIOR GROOVES**  
A series of shallow horizontal cuts, like a small ladder, works well in medium-sized boxes meant for swallows and bluebirds. Swallows, in particular, need a little help climbing out of boxes.

**FOR DUCK BOXES**  
For duck boxes, staple a strip of 1/4" mesh hardware cloth from floor to hole to help ducklings escape deep boxes.

### IT MAKES PLACEMENT & MAINTENANCE EASY

**EXTENDED BACK**  
A few extra inches at the top and bottom of your birdhouse can make it easier to mount on a metal pole. Alternatively, you can pre-drill mounting holes in the back panel before assembly and use a short-handled screwdriver to install the box.

**HINGED DOOR WITH A STURDY CLOSING MECHANISM**  
A hinged side gives you access for cleaning and monitoring your nest box, both of which are important for a successful nesting season. A latch or nail keeps the box securely closed until you are ready to open it.

**DON'T FORGET TO MONITOR YOUR NEST BOX AND ENTER THE DATA INTO NESTWATCH!**

<http://birds.cornell.edu/Page.aspx?pid=1478>

<http://nestwatch.org/learn/all-about-birdhouses/features-of-a-good-birdhouse/>

## OF NOTE:

The Flint Hills Renewable Energy and Efficiency Coop (FHREC) has made significant progress in the past year in home renewable energy production. According to Madonna Stallmann, none of this would have been possible without the tireless help from Bill & Tamara Dorsett. They are being honored with a plaque at the UFM Solar Addition and an honorary fund at UFM to help further community education in areas of sustainability, energy and climate issues.



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Membership Information: Introductory memberships - \$20/yr., then basic, renewal membership is \$35/yr. When you join the National Audubon Society, you automatically become a member of the Northern Flint Hills Audubon Society. You will receive the bimonthly Audubon magazine in addition to the Prairie Falcon newsletter. New membership applications should be sent to **National Audubon Society, PO Box 422250, Palm Coast, FL 32142-2250**. Make checks payable to the National Audubon Society and include the **code C4ZJ040Z**. Questions about membership? Call 1-800-274-4201 or email the National Audubon Society [join@audubon.org](mailto:join@audubon.org). Website is [www.audubon.org](http://www.audubon.org).

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](mailto:list_serve@ksu.edu)> and join in the discussions.

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