

*On Saturday, Jan. 3, the U.S. Army Corps of Engineers at Tuttle Creek Lake will sponsor a free Eagle Day program for an impressive 27th year.*



The day will start at 9 a.m. at the Manhattan Fire station at Kimball and Denison with an overview of eagle nesting in Kansas. This will be followed by a live raptor program featuring live hawks and owls and a mounted bald eagle. For more information, contact Steve Prockish at (785) 539-8511, x3167.

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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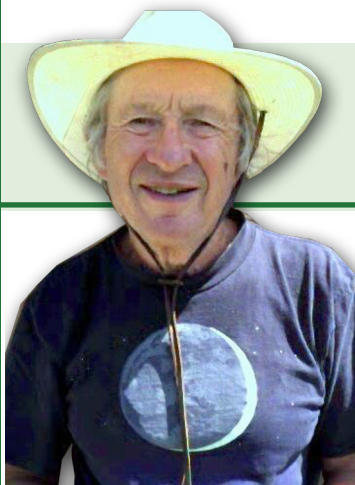
### Upcoming Events

**Jan 3 - Tuttle Creek Eagle Day**

**Jan 5 - Board Meeting 6 p.m.**  
Home of Carla Bishop

**Jan 10 - Saturday Morning Birding**  
8 a.m. Sojourner Truth Park

Our website: [nfhas.org](http://nfhas.org)



## Skylight plus

Pete Cohen

The book club discussion was about “Two Years before the Mast,” Charles Henry Dana’s first-hand account of the life of a sailor in the 1830s. So a comment about navigation wasn’t surprising, or surprising that it reminded me, though vaguely, of reading that a whole British naval squadron had come to grief on the Scilly Isles in 1707 because, it was determined, of faulty navigation. Surprise came when I got a chance to clarify my memory I discovered the disaster had occurred on a November 2<sup>nd</sup>, the same date of the discussion.

It was the second time in a week that I’d had that kind of coincidence, and there’d been a number previously. So when I coincidentally saw reference to a book by British mathematician, David J. Hand titled “The Probability Principle; Why Coincidences, Miracles, and Rare Events Happen Every Day,” I felt compelled to follow up.

His main thesis, as I take it, is that there are so many entities in the universe, from the most minute to the most gargantuan, and each one is always in motion and/or getting in another’s way. Therefore there are bound to be a multitude of occurrences of vital or passing significance to specific ones, be that one a human or an electron, etc. And the reader is pointed to consider the mind-boggling number of possible coincidences that don’t occur.

This will not be news to hedge fund managers, meteorologists, and others who have to deal with probabilities and speak of “sigma events,” those that deviate in various degrees from what might be expected from strictly mathematical formulation, because the universe’s entities are not locked into a fixed grid of performance but are subject to all manner of coincidental perturbations.

And the universe itself is the result of zillions of interactions that statistically at any point might have gone differently

He mentions meteorologist Edward Lorenz who upon noticing how small changes in simulations of weather patterns led the way to much greater ones, coined the phrase, butterfly effect.

And in applying the topic to gravity, he quotes physicist Michael Berry’s demonstration that the mass of two players around a pool table could alter the deflection of two balls on the table after nine collisions. It seems to me there are lots more than nine collisions in an opening break when the mass of the shooter is usually pulling directly back from the force of his thrust. I wonder if the rules and wagers regarding pool and billiards tournaments take into account the bulk and position of the participants.

Coincidentally, we’re living at a time when an easily noticeable star can show us northern hemispherians, where true north is (well, almost true north, but the variance now is detectable only with a lot of technical effort). People in Caesar’s time had to make do with Thuban, not quite as visible in Draco the Dragon, who twists his way between the two Dippers. As the Earth wobbles, true north will keep shifting in a loop of 26,000 years that goes in the direction of, but doesn’t reach, Vega. One might be able to contemplate that path by noting the 2,000 year difference between Polaris and Thuban.

Past coincidences have also provided that through this month in the eastern pre-dawn Saturn can be seen moving gradually from Libra into Scorpio, visible near the waning Moon the 16<sup>th</sup>. In the eastern evenings Jupiter will be rising in Leo, while in the west Mercury will be uncharacteristically present, setting near brighter Venus, starting notably close about an extended hand’s width high in the early darkness during the second week. Mars will be appearing unenthusiastically above them in Aquarius, and the Moon will be in their vicinity the 21<sup>st</sup> and 22<sup>nd</sup>. Full the 4<sup>th</sup> at 7p53, new the 20<sup>th</sup> at 4a14.

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# Gathering Stones

Dru Clarke



Sometimes, from nowhere it seems, a stone will appear in one of our pastures. They've gained the moniker of "floaters" if they sailed like a ship in on the tide of shifting soil. Each is a wreck's prow, mocking, as Robinson Jeffers said, with "the insolent quietness of stone." We move them, if they are light enough, to a fencerow, or to a border around our wooden walkway to keep weeds down. More than likely they have worked their way close to the surface through frost-heaving, then have bucked up through groundcover exposed by weather and wind or the travels of animals. While they might keep the horses' hooves trimmed, they wreak havoc on the mower, and serve a better purpose in a new locale.

A friend yells at neighbors who move rocks, and she has a point: often, beneath them, is someone's home. Beneath mostly large rocks – angular and rough mineralized blocks that are difficult to move – are countless niches for a host of organisms. If a ringneck snake or a colony of intrepid ants or a spiral-shelled snail is discovered when one of these liths is moved, it is laid back down, gently, on its denizens. Often burrows of varying dimensions are uncovered: each may lead to different animals whose tunnels may extend inches, even feet, beneath the rock. The rock provides a protective roof and helps to maintain a constant temperature and humidity for its residents. Organic debris that gathers beneath it is woven together and broken down by fibers of fungi that lend a lace-like look to the surface. A rock I wrested loose on one hillside that the cattle amble by sheltered a host of wood termites and sow bugs – a terrestrial crustacean species – so I left it in place. Sow bugs are such interesting animals – both parents raise their young – with closest relatives bound to a marine environment that I view them with some awe. And wood termites, in the wild, help break down the litter that trees create.

But stones are somehow different. The word "stone" connotes a smoothness and smallness that "rock" doesn't. You can pick up a stone easily and hold it in your hand(s). Rock connotes the raw material in situ from which stones evolve. The word "stonerock" (stanrocces in Early

Old English) precedes both stone and rock in etymology, in usage from 600 A.D. (stone's first usage was in 825 A.D.).

Stones in the Flint Hills are usually worn fragments of limestone strata, but they can be bits of mineralized deposits created in past environments, like tide pools from ancient oceans (found in the Tuttle Creek spillway after the '93 flood), or deserts, like the opalescent chunks of caliche we kick up in our pastures. Mysteriously formed flint nodules, or chert, after which our region is named are especially prized finds. Others contain fossils that indicate what the world here was like when the stone from which the rock was formed existed: calcareous shells of plankton known as fusulinids which look like grains of wheat, corals, and even stomatolites – stone-forming algae. Some are remnants of freshwater reigns, the ripple marks of slow-moving streams and the cracked surfaces of mudflats. One a friend found in a dry stream bed looked like petrified detritus, a mineralized jumble of twigs and leaves. The odd mimetoliths – stones that resemble shapes of things known to us – implore that we pick them up and take them home. Our favorite is like a miniature sycamore tree, branches and all.

We have baskets of stones at home, most of which we've lost the origin of: beaches from New England and the Pacific Northwest, especially Dungeness Spit before it was forbidden to remove them; one from the Tatra Mts. in Romania; some from the shores of the Great Lakes; others from outwash plains in North America, some from the glacial erratics dropped in the streambed of Blood Creek that feeds into the Kansas River.

A friend recently gave us two smooth stones from Iceland, one steely grey with glittering crystals embedded, and the other, dull black. Each would make perfect worry stones, should we ever feel the need.

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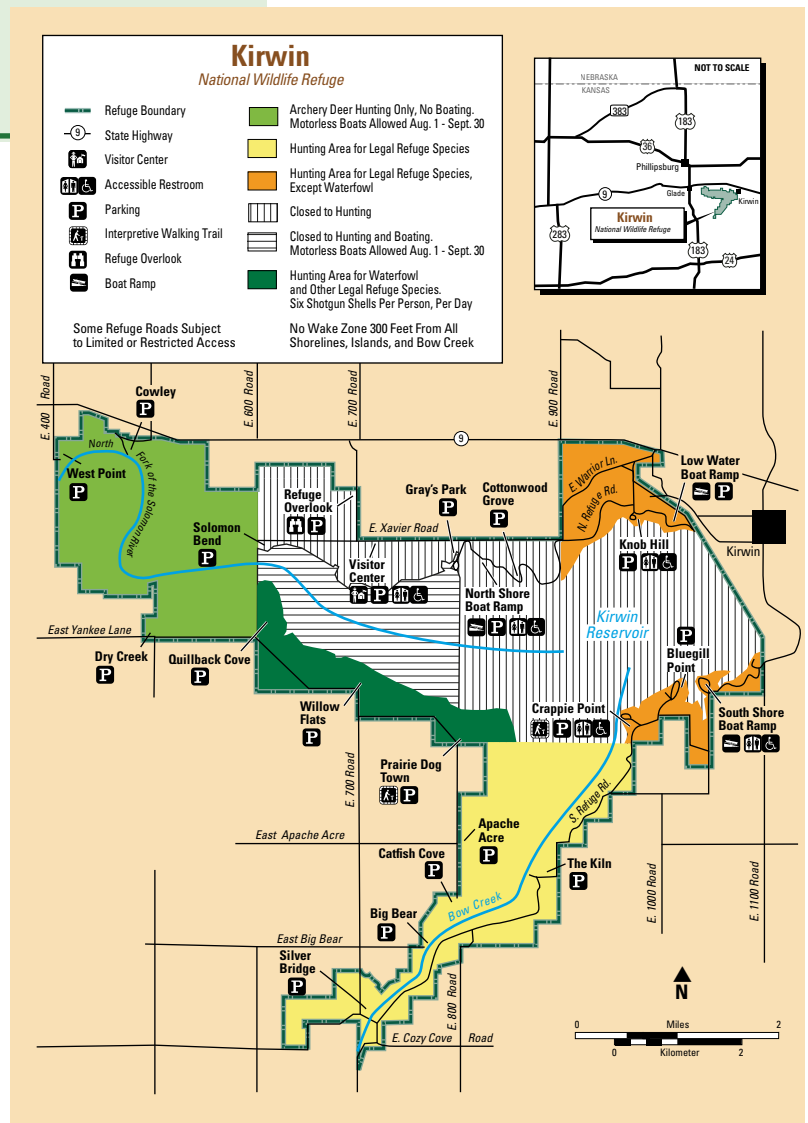
# SAVE THE DATE

Mark your calendars now!

Saturday, March 14, 2015 we are planning a day trip to Kirwin National Wildlife Refuge.

More information will be in February Prairie Falcon, but you can go to the website:

<http://www.fws.gov/refuge/kirwin>



Thank you Chuck Otte for a great evening - interesting and entertaining!

November program by Chuck Otte



# Bird Tree of Life

An international team of researchers has sequenced the genomes of 45 avian species and created the most reliable tree of life for birds to date. Their new avian family tree helps to clarify how modern birds — the most species-rich class of four-limbed vertebrates on the planet — emerged rapidly from a mass extinction event that wiped out the dinosaurs about 66 million years ago.

It also reveals how some of the earliest branches on the bird tree of life diverged, answering many long-standing questions about the common ancestor of birds, crocodilians, and dinosaurs. The findings shed new light on the evolution of avian sex chromosomes, vocal learning in both birds and humans, and the process that led to birds losing their teeth.

The massive comparative genomics project took more than four years to complete and involved hundreds of scientists from about 80 institutions in 20 different countries. The collaboration culminated in multiple studies, eight of which are published in the 12 December issue of *Science*. Others are published in journals such as *Genome Biology* and *GigaScience*.

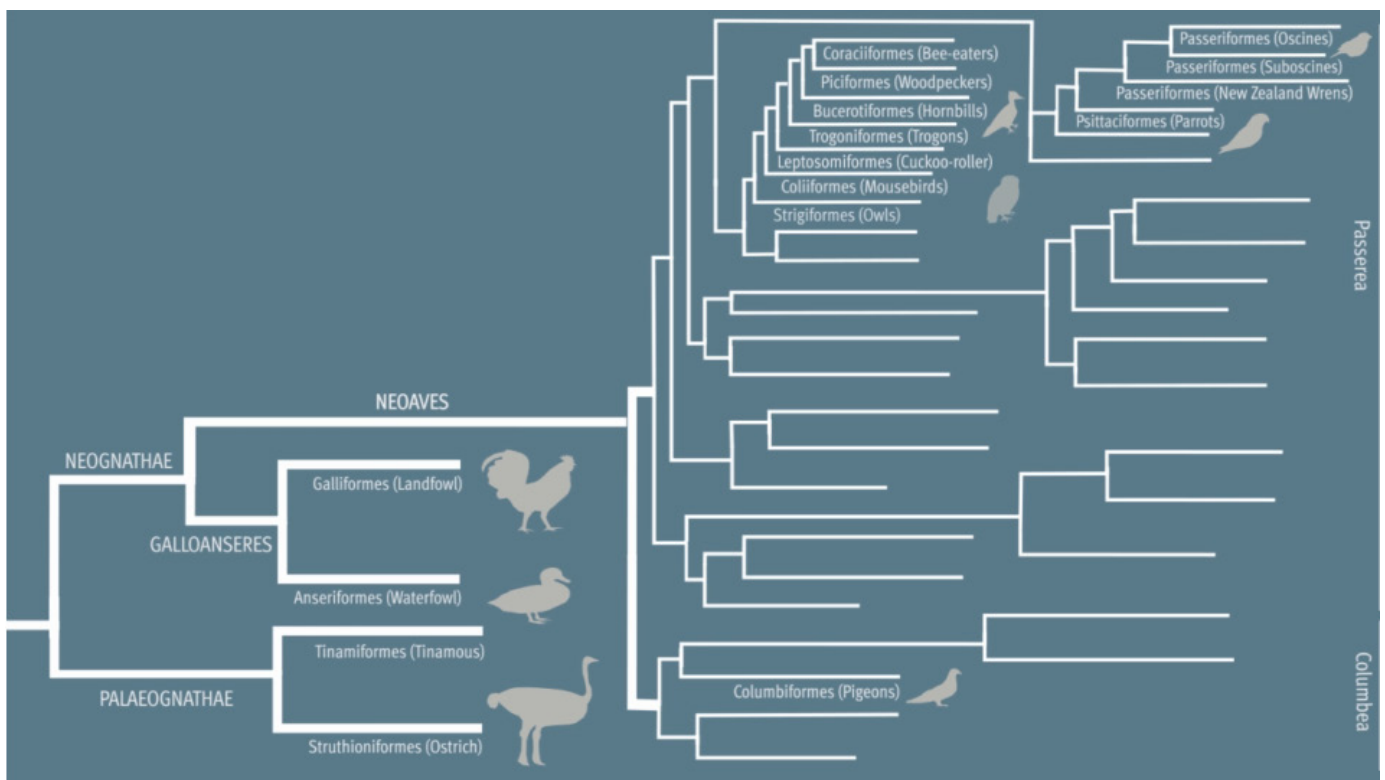
For more information go to:

Advancing Science, Serving Society

<http://www.aaas.org/news/new-genome-sequences-reveal-bird-tree-life>

or *Science Magazine*:

<http://www.sciencemag.org/content/346/6215/1308>





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Also available on-line at [www.ksu.edu/audubon/falcon.html](http://www.ksu.edu/audubon/falcon.html)

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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