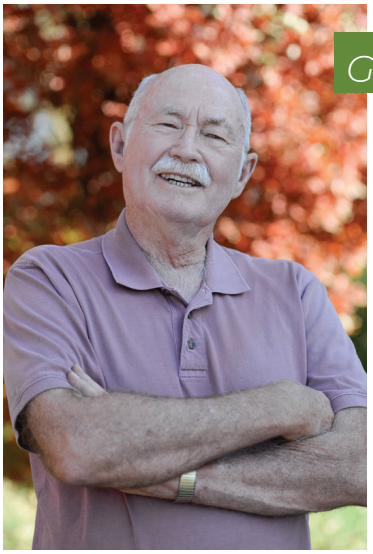
Audubon of Kansas

Prairie Wings

Advancing Conservation in the Great Plains 2020-21



Photos by Ron Klataske.

Gary Haden

A Letter From the Chair

Gary contemplating his woods in Morris County

In my four years on the board of AOK I have come to know most other board members and to understand what is important to them. What I find so interesting is the uniqueness of each board member in terms of interests and skills, and the commensurate strength our organization derives from that diversity.

I find all aspects of science and nature to be interesting—from what happens in my own body, to the organisms at my feet and in the air, to our climate and cosmology. But there is one thing more than any other that keeps me involved with AOK, and that is trees.

I don't know how I came to love trees. It happened at an early age. Perhaps it is atavistic, going back to Adam and Eve's apple tree or when my early ancestors climbed down from the trees on the African savannah—take your pick. One of my earliest memories was when I was four years old and my family planted a shelterbelt on our farm in Ellsworth County. A couple years later I cried when my father pulled out some fruit trees he had planted between the road and utility poles—spots he could not reach with farm equipment. I never did understand that.

Now my wife and I have trees worth saving—180-year-old bur oaks and other mature trees along Clarks Creek in Morris County. No matter how depressing I find national environmental affairs, how vexed I might feel as I deal with fellow humans, how relentless the need to raise funds to meet AOK's expenses, I know I can always get an emotional lift when I can find time to walk our nature trail under those massive bur oaks. Now we need to find a way to save them so others can enjoy them in the present and the future. Perhaps some of them will reach their natural life expectancy of 300 to 400 years. For my wife Carolyn and me, that's where AOK's Sanctuaries Initiative comes into play.

AOK harbors different priorities for other people…all of them important. We have educators who want to get children into natural settings, families who want to recreate amidst native prairies and along uncontaminated streams. We have prairie dog lovers, avid birders, photographers, naturalists, writers, and attorneys willing to sue the state and federal government if that's what it takes to assure that Quivira National Wildlife Refuge gets the water it is entitled to under existing Kansas law.

We on the board and the 4,300 individuals who donate to AOK or otherwise support the organization don't always agree on what to do next, and we might not have the resources to do everything we'd like, but when all of our diverse parts pull in one direction, we get things done. As chairman of the AOK Board of Trustees I'm proud of that. With the support of AOK members and donors, we look forward to continued success.

–Gary Haden

Prairie Wings *is a publication of Audubon of Kansas, Inc. — the only widely distributed magazine devoted specifically to statewide conservation and wildlife advocacy initiatives. It is made possible by your generous support and contributions. We encourage you to share this publication with friends, family, and other organizations. Please feel free to leave copies in reception areas, hospitals and other business locations to help spread awareness about critical wildlife issues.*

Support AOK and Prairie Wings *today! Please consider becoming a sustaining member by signing up for monthly giving at audubonofkansas.org. This is convenient and secure for you, and helps us to stabilize our operations all year long. By giving a gift membership and/or contributing to the vital work of Audubon of Kansas, you can help promote the appreciation and proper stewardship of our natural world.*

Ensure the future of AOK and Prairie Wings*! Legacy Gifts ensure the future success of AOK and the continuation of important initiatives such as* Prairie Wings. *AOK gratefully accepts gifts in the form of stocks, bonds, charitable gift annuities, trusts, and bequests, as well as assets to be sold such as gifts of land, real estate, and vehicles. Gifts of land to be preserved as wildlife sanctuaries require an adequate endowment to fund future operations and taxes; property must meet requirements stated in AOK's property acceptance policy. See the AOK brochure,* Your Land, Your Legacy, *copies of which can be obtained from the AOK office on request.*

To learn more about AOK or ways to support our mission, please contact (785) 537-4385 or aok@audubonofkansas.org. Audubon of Kansas, Inc. is an independent 501(c)(3) organization that is neither administered nor funded by the National Audubon Society. Contributions are fully tax-deductible to the extent allowable by the IRS. Contributions can be sent to the state office: 210 Southwind Place, Manhattan, KS 66503.

Cover image Male Bobolink by Dave Rintoul
Back cover Burrowing Owl scowl by Dave Rintoul

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The Mission of Audubon of Kansas includes promoting the enjoyment, understanding, protection, and restoration of natural ecosystems. We seek to establish a culture of conservation and an environmental ethic.

Prairie Wings is a publication of Audubon of Kansas, Inc. Additional newsletters and AOK E-News are published periodically. See our website at www.audubonofkansas.org and www.niobrarasanctuary.org.

AOK is an independent grassroots organization that is not administered or funded by the National Audubon Society. All funding is dedicated to our work in the Central Plains and Prairie states.

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Michael L. Donnelly

A Note from the Editor

Photo by Ron Klataske.

2020 has been in many respects a calamitous year. The human death toll from Covid-19 has been appalling, and continues to mount; the economic consequences have been massive, and are still impossible to finally assess. Floods, a seemingly unending procession of hurricanes, and unprecedentedly huge out-of-control forest fires ravaging our forests come as harbingers of the even more dire results scientists have predicted from anthropogenic climate change. Our clean water and clean air continue to be beset with reckless government deregulation, while long standing protections like the Migratory Bird Treaty and the Endangered Species Act come under attack and are chiseled away, as are protected lands and National Monuments. As the economy tanks, 501(c)(3) organizations like Audubon of Kansas can particularly feel the pinch of hard times.

But in the midst of so much bad news, AOK, at least, has some cause to celebrate. Last year was the twentieth year of our existence as one of the most active conservation organizations in the Northern Great Plains, being the voice of Nature on many fronts, challenging environmental threats, and publically championing education, awareness, and appreciation of the natural world. On the brink of the New Year, 2021, AOK faces a momentous transition: our founder and long-time Executive Director, long and for many the face of AOK, Ron Klataske, will retire after so many battles and successes. He will be succeeded as Executive Director by an able, energetic, and enthusiastic biologist, teacher, organizer and administrator, Jackie Augustine, who comes to us from the state of Ohio, but with deep roots and connections in Kansas. In this issue of *Prairie Wings*, we will look back over Ron's service and achievements over the past twenty years, and also look forward, introducing Jackie, and learning about some of her plans for AOK's future.

In this issue we are also delighted to introduce McKay Stangler, our new (as of this year) Director of Philanthropy. He brings vital experience in organization development, a fertile mind and great energy to this crucial role.

We will also look in this issue at some continuing, unique initiatives by AOK. The third annual "Celebration of Cranes" was innovatively virtual this year, but consequently designed to reach, educate, and inspire an even wider audience. AOK continues to advocate for the Quivira National Wildlife Refuge, a crucial migration stopover for Sandhill Cranes and other waterfowl, as well as the endangered, magnificent Whooping Crane.

No less than the cranes, if less imposing a presence, Prairie Dogs have been an iconic species in short-grass prairie, a keystone species on which numerous threatened predators, including Ferruginous Hawks, Golden Eagles, and the rare, endangered Black-footed Ferret, are dependent. Ron Klataske updates AOK's long-standing efforts to protect Prairie Dogs and reintroduce Black-footed Ferrets, educating and gaining the cooperation of conservation-minded landowners to save Prairie Dogs as a keystone species and reintroduce Black-footed Ferrets in short-grass prairies.

The climate crisis triggers rapid development of green energy alternatives. In windy Kansas, wind turbines have proliferated across the landscape. But both public enthusiasm and development have been largely uncritical. AOK is one of the few conservation organizations in the Midwest to point to the threats to wildlife of rash, unconsidered siting of wind farms. In this issue of *Prairie Wings*, the editor publishes a thorough-going examination of environmental hazards from carelessly sited wind turbines, and airs considerations for choosing and monitoring sites to do the least damage to birds, bats, and natural ecosystems. In addition, the editor and John Schukman collaborate on a brief report on the importance of baseline surveys of flora and fauna, both in wind farm siting decisions, and in establishing diachronic studies of wildlife on conservation properties, like the AOK sanctuaries.

Finally, AOK is not solely about fighting in the trenches for environmental causes. We highlight appreciation and enjoyment of nature here in Kansas. In this issue, the AOK Sanctuaries are represented in Elizabeth Dodd and Dave Rintoul's beautifully written and illustrated photo-journal of a visit to the Hutton Ranch. Ron Klataske provides an update on improvements at another AOK sanctuary, the Connie Achterberg Wildlife-friendly Demonstration Farm. Beth Schultz's article on Lisa Grossman's *plein air* Kansas landscapes captures the inspiration and uplift we can derive from the reflection of our rivers and prairies in the work of an accomplished artist's eye and hand.

We hope that you will find in this issue of *Prairie Wings* pleasure, food for thought, and stimulation to go out, enjoy Kansas wildlife and wild scenes, and work for the appreciation, preservation, and restoration of our natural ecosystems.

--The Editor

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The Niobrara River flows past the Hutton Ranch. Photo by Dave Rintoul.

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During the past two years, AOK received a major gift and additional funding from the estate of Mary Joyce Davis of Dodge City, a Charter Trustee of Audubon of Kansas

Your Support Is Vital To AOK's Effectiveness

Ron Klataske, Executive Director, Audubon of Kansas

Upland Sandpiper – photo by Ron Klataske

Your annual membership and other gifts to Audubon of Kansas are vital to our ongoing conservation, education, sanctuary stewardship, and advocacy work. AOK cannot function without the support of members' annual or sustaining monthly contributions and gifts to fund special projects. We thank you for your continuing dedication and generosity. Donating online allows monthly giving. We use PayPal to ensure our donors a safe and secure transaction. Other ways to contribute include bequests, memorials/tributes, and gift memberships. Please consider contributing at this time. Contributions from required distributions of IRAs can be made without accruing any tax obligation from the distribution.

LEGACY GIFTS: PLANNED GIVING OPTIONS

By establishing a planned gift to Audubon of Kansas, you can ensure that AOK continues to be equally or even more effective into the future. We are committed in perpetuity to stewardship of our sanctuary system. We have outlined several ways to establish a planned gift below:

Create a Charitable Gift Annuity. By establishing a charitable gift annuity to benefit Audubon of Kansas, you will continue to receive fixed payments for the rest of your life and have a charitable deduction. Charitable gift annuities offer payment rates that are more attractive than many other investments, with the rate amount determined by your age. In addition, you have the satisfaction of knowing that the remainder of your gift will benefit Audubon of Kansas conservation and education initiatives well into the future.

Make a Gift of Stock or Bonds. Contributions of appreciated stock or bonds held for more than one year are most advantageous. Your gifts will provide a larger financial contribution to Audubon of Kansas, and you will avoid capital gains liability.

Include a Bequest in Your Will or Trust. You can designate specific property, a fixed dollar amount, or a percentage of your residual estate, for the benefit of Audubon of Kansas.

Persons wishing to make a bequest to Audubon of Kansas, Inc. may tailor it to their individual interests or use wording similar to the following.

> *I bequeath ___% of my residuary estate (or $___) to Audubon of Kansas, Inc., a not-for-profit 501(C)3 conservation organization incorporated in the State of Kansas with its address at P.O. Box 256, Manhattan Kansas, 66505. AOK's Federal Identification Number is 48-0849282.*

Make a Gift of Land, or other Real Estate. Gifts of real estate or other property are excellent ways to establish a major donation. Gifts of real estate property that can be sold with the proceeds to be used to support general or specific Audubon of Kansas programs are often referred to as "Trade Lands." Some parcels may be protected with conservation easements prior to sale. Proceeds can be designated, for example, for specific conservation, education or even stewardship of an established AOK sanctuary.

Gifts of Land to be Maintained as a Wildlife Sanctuary (such as the Connie Achterberg Wildlife Friendly Demonstration Farm or the Hutton Niobrara Ranch Wildlife Sanctuary) or permanently preserved generally require establishment of an adequate endowment to fund future operations, pay annual property taxes, and provide for ongoing stewardship of the property. Gifts of land for this purpose must be consistent with the Audubon of Kansas mission, or generate funds that support stewardship and other conservation or educational activities. Protection of lands is best achieved with advanced planning. Landowners can elect to make a gift of land while retaining a life estate. Thus, they obtain tax benefits and continue to retain normal use and management of the property. Conservation enhancement activities can become a partnership venture.

Cars for Conservation! Farm and Ranch Equipment can also be used at AOK Sanctuaries. Although AOK has not promoted this avenue of philanthropy, vehicles and similar property can be donated and then sold to generate funds for AOK operations. In addition, AOK is interested in receiving an energy-efficient vehicle to retain for business travel.

Audubon of Kansas, Inc. is administered by a Board of Trustees with interests in conservation and education in Kansas, Nebraska and generally the central Great Plains and prairie states. AOK is an independent, grassroots organization that is not administered or funded by the National Audubon Society. All funds received are devoted to conservation advocacy, nature appreciation initiatives, education and stewardship (including management of wildlife sanctuaries) in this region.

Please contact any of our Trustees or AOK professional staff at 785-537-4385 or email AOK@AudubonofKansas.org for additional information.

Photo by Ron Klataske

Jackie Augustine to be AOK's Executive Director

in January 2021

The Editor Interviews Jackie about her background and plans

Jackie Augustine holding a lesser prairie-chicken in western Kansas (Gove County). In order for Jackie and her students to identify individuals and record their behavior, each bird is given a unique combination of colored leg bands and tail colors.

Audubon of Kansas is pleased to announce that Dr. Jackie Augustine has accepted the Executive Director position. She will start in January 2021. We asked her the following questions to introduce herself.

You're coming to us from Western Ohio. Tell us about your previous connections with Kansas and the Great Plains, and what drew you back here.

The road between my hometown, Two Rivers, Wisconsin, and Kansas was a winding path, but the journey was guided by a passion for wildlife in general, and birds specifically.

I grew up about 5 blocks from Lake Michigan. My family went camping 'up north' often, and I was an active Girl Scout. When I would go to my grandma's house, I would read *The Readers Digest Guide to North American Wildlife*. My parents like to tell the story of when I was 8 years old, my grandma saw an unusual bird at her bird feeder. Mom called me over, "Look at this cool bird, Jackie!" I ran over and stated, "That's a Yellow-headed Blackbird." Then, I took that *Readers Digest Guide* off the shelf, and opened it to the correct page and showed them. When I was 8, I didn't seek birds or anything out, but appreciated what came to me. I also had a pet Monarch for a while. Grandma ran it over with the mower, and I kept it in an ice cream pail, fed it flowers, and 'exercised' it. But I didn't really get hooked on birds and birding until college.

Being from a small town, I looked for a college in a small town that offered a zoology degree. I somehow found Miami University in Oxford, Ohio. Once there, I became an active member of the Student Naturalist Club, volunteering every weekend at a local nature center. Members of the club told me to take ornithology my sophomore year with Doc Osborne before he retired, so I did. I remember one morning in spring, and every place we stopped, we heard a Song Sparrow. With its challenging song to learn and bold barring across its belly, I thought it was impressive (for a sparrow). Imagine my surprise when I returned to my dorm later that day, and spotted a Song Sparrow singing directly outside my dorm window. As I watched students walk past that bird, not noticing its presence, I knew that I was hooked. I wondered how many other species were out there if I only learned how to look.

I spent the next 6-8 years adding birds to my life list. I received my Masters at the University of Wisconsin-Milwaukee studying how food abundance and individual condition affects breeding in Tree Swallows. The field station was a great place to bird because it had old growth forest, a bog, prairie, and lake habitats within a short distance. I could count 100 species in a day. I then moved to Kansas to obtain my PhD in Biology from Kansas State. Under Brett Sandercock's supervision, I studied the breeding behavior of the Greater Prairie-Chicken. On weekends, I would go birding around Tuttle Lake near Manhattan, or spend a day at Cheyenne Bottoms or Quivira studying shorebirds. During this time, I fell in love with grasslands, Kansas, and a man from Salina.

I am excited to return to Kansas because when I am in a prairie, I feel more connected to nature than anywhere else. Kansas has so much wildlife to inspire us: male Prairie-Chickens dancing to catch a female's eye, cranes migrating overhead by the hundreds, flocks of Swainson's Hawks swirling around the smoke of a dying prairie fire looking for an easy meal, the first call in the spring of an Upland Sandpiper or Common Poorwill, and the list goes on . . . . Besides wildlife, the picturesque sunsets, the dark sky, and the waves of blowing native grass are as calming as a spring thunderstorm is thrilling.

A male Lesser Prairie-Chicken courts a robotic female. The carpeting prevents the robot from getting caught in the grass.

Tell us a bit about your work with Prairie-Chickens. What were the issues your research addressed, what are the challenges faced by the species, and what are some interesting things you learned?

Jackie's decoy Prairie-Chickens—four-wheeled Galliforms

Most prairie-chicken researchers are focused on answering questions related to the survival of the species. They ask questions like, "What types of habitats are prairie-chickens using for nesting and brood rearing? Which cattle stocking rate enhances prairie-chicken survival?" The questions I ask are more basic and connected with gaining intrinsic knowledge about the species. My research can be summarized with the question, "What makes some male prairie-chickens sexy and others unsuccessful at attracting a female?" For my doctorate, I focused only on Greater Prairie-Chickens and discovered that male mating success increased with more testosterone and more intense display and aggressive behavior. After getting my doctorate, I had a temporary position in southwestern Minnesota where I studied hybrids between Greater Prairie-Chickens and Sharp-tailed Grouse. After I landed the position at Ohio State Lima in 2009, I tried to just study Greater Prairie-Chickens again, but I was hooked on hybrid zones. I have spent the last 6 years in western Kansas studying the Greater/Lesser Prairie-Chicken hybrid zone in Gove and Trego Counties. I most recently studied whether males can tell the difference between females of their own species and the other species (and if they care). I utilized robotic taxidermy mounts on a custom 4-wheel drive chassis to study this question. I have had graduate students that studied 1) whether Greater Prairie-Chickens can identify individuals by their booms, 2) how color of the fleshy parts of male prairie chickens (air sac in the throat and comb above the eye) influences male sexiness, and 3) how they can stomp their feet so fast during the beginning of their display.

Although I am organically attracted to prairie-chicken behavior, I know that both greater and lesser prairie-chicken numbers are declining throughout much of their range. In the last 150 years, both species have lost vast portions of their ranges when prairie was converted to cropland, and the fragmentation of the remaining habitat with roads and power infrastructure. Currently, woody encroachment, annual burning with intensive early season stocking, industrial power infrastructure, and climate change are huge threats to their future persistence. AOK gives me an avenue to do something to save these fascinating birds that have given me so much enjoyment over the years.

You have had considerable success energizing the local or regional Audubon groups in Ohio during your time there. Can you tell us a little about the situation on the ground as you found it, what you did to organize and motivate those groups, and what innovations you see as transplantable to Kansas and AOK as a coordinating center and facilitator for our various regional Audubon groups?

Ohio is where I became passionate about National Audubon Society's mission to "protect birds and the places they need… using science, advocacy, education, and on-the-ground conservation." I first became involved in my local chapter, Tri-Moraine Audubon Society. I have coordinated speakers to attend our monthly meetings (September-May) for nearly 10 years. Additionally, I have served on the Board, helped develop their strategic plan, led the revision of the constitution, and coordinated other events. I am most proud of my work with South Science Technology Magnet, a public school in Lima, OH. This school serves a diverse student body that is 60% minority, mostly black. I worked with teachers to develop a curriculum where students learned which native plants are hosts to particular native caterpillars. I applied for and was awarded a Burke grant from National Audubon to fund the planting of a native plant school garden. Students planted the native host plants that they studied.

My work with the local chapter led to my involvement with the statewide Council of Ohio Audubon Chapters (COAC). This organization had been inactive, and one of Ohio's chapters was trying to reinvigorate it. They organized several meetings with all the chapters in the state, and hired an administrator to help with its organization. After being involved a short time, I could see that the organization was struggling, spending money at an alarming rate, and lacked leadership. I volunteered to join the Board, and recruited others to serve with me. The Board appointed me President. In a year, I was able to pass a balanced budget, draft bylaws and get them approved, hold in-person and virtual meetings, draft volunteers to do the duties of the administrator, and garner chapter support. I am proud that 10 chapters are actively involved and have supported COAC financially (2 of those at the $500 sustaining membership level).

One of the best things that COAC has done was to have monthly membership calls. These calls connect chapters

throughout the state, provide a venue for celebrating successes to inspire other chapters, and act as a sounding board to discuss organizational matters (how to re-write bylaws, insurance suggestions, etc.). This very simple idea would help support those members in struggling chapters and help successful chapters increase their impact.

As President of COAC, I am also a resource for chapters. I can supply a presentation, connect chapters with presenters on specific topics, refer chapters to resources from National Audubon, or provide advocacy or strategic planning training. I hope to continue to be a resource for Audubon chapters in Kansas.

You gave up a tenured academic position to accept the Executive Directorship of AOK. That is a big step. What drew you to AOK? How do you see this executive leadership position as giving you more scope to use your experience, talents, and skills?

While an Associate Professor at Ohio State Lima, I was given several administrative positions including Biology Program Coordinator, and Honors Program Coordinator. I was also on many committees, such as the Executive Committee, Strategic Planning, hiring committees, and Budget and Space. All of these experiences helped me value and develop skills in leading by consensus, strategic thinking, and financial planning.

AOK is currently at a critical juncture. We must continue Ron Klataske's accomplishments over the last 21 years protecting the wildlife of Kansas through environmental advocacy and on-the-ground habitat conservation. At the same time, AOK must also reach out and develop new leaders to take on current and future environmental challenges. I know I have the skills to lead AOK through this transition.

Following up on the last part of that last question, you are an experienced field biologist, teacher, and researcher; you impressed the hiring committee of AOK as an excellent communicator, a very organized, detail-oriented person, with great drive and enthusiasm. What do you see as your particular strengths for moving AOK ahead into the twenty-first century?

My first strength is my ability to connect people – whether that be connecting a chapter to a resource they need, or building a team to undertake a task. I am great at organizing teams, giving explicit goals, keeping people on track, and celebrating their successes.

Another strength of mine is focusing on the big picture and small steps at the same time. An example of this is my perspective on successful advocacy. When I am Executive Director, I will be pushing politicians and government agencies to do more for wildlife. I know real, substantive change is difficult and takes time and persistence. Therefore, I will break up that large change into smaller goals. I will use the small goals to build support to pressure for larger changes.

Finally, what is your assessment at this point of the strengths of AOK as an organization? What are we doing well? What could we be doing better?

The most obvious strengths of AOK are the dedication of its Board of Directors and the diverse skills and perspectives they bring to the organization. I have been overwhelmed with the offers of support both professionally and personally. I know that I have the resources to be successful. Another strength of AOK is its recognition throughout the state for being an unwavering advocate for wildlife.

With new leadership comes a new perspective. I will push the organization to think about why AOK does what it is doing. What are we hoping to accomplish with sanctuaries? With the Celebration of Cranes? With advocacy? With a large Board? Are we accomplishing those goals? What can we change to make more of an impact?

What activities or cooperative relationships should AOK be engaged in that have not yet been sufficiently realized, and how would you go about initiating them?

The most obvious cooperative relationship is between AOK and the Audubon chapters in Kansas. AOK was founded with the support of chapters, but the involvement of chapters in AOK matters has waxed and waned through the years. I would like to see a stronger connection between AOK and chapters. Additionally, I would like to explore what chapters would like from AOK so that the relationship is truly cooperative and not unidirectional.

Jackie, holding a chicken and measuring its eye.

Moon over the prairie and Jackie's blind for her study of Prairie-Chickens in Gove and Trego Counties

Although AOK is independent of National Audubon, there are resources that National offers to support chapters including advocacy training, smaller and larger grants, and programming. AOK could be a way that chapters connect with National and that National connects with chapters. I have been successful in fostering such a relationship through COAC in Ohio, another state nonprofit that is not officially connected to National. I will use my contacts within the Great Lakes wing of National Audubon to connect with their counterparts in the Central Flyway region.

Finally, conservation must happen on private lands if we are to conserve the wildlife that lives in or migrates through the Great Plains. There are federal programs and other nonprofits trying to connect with wildlife-friendly landowners. AOK could collaborate on those efforts, which would perhaps lead to the expansion of our network of members throughout the state.

In the light of that last question, your application emphasized the importance of strategic planning. At this point in your involvement with the organization, what do you envision as top priorities for AOK in the next year, the next five years, the next decade? Where should the organization be at each of those milestones?

I am currently working with the Strategic Planning Committee to develop a strategic plan for the next 3-5 years. We already completed a brainstorming step where we gathered feedback from the Board and environmental leaders in the state. We have organized those ideas into broad categories for discussion. In the next year, we want to 1) continue building upon AOK's past successes in advocacy and sanctuary management, 2) examine administrative procedures to determine if the organization could function more effectively, and 3) build relationships with Audubon chapters, individuals, and organizations throughout the state.

In the next five years, I want to expand in the number of Audubon chapters. This may include resurrecting inactive chapters, creating new chapters in underserved areas, or starting student chapters. Additionally, I want to expand our environmental education and outreach program with a focus on statewide initiatives, fund-raisers, or those associated with AOK's sanctuaries. Finally, I would like a robust sanctuaries program that includes adaptive management for targeted species or habitats, transparent procedures for acquiring new properties, and endowments that can support the management of the properties.

10 years from now? To quote Marcus Aurelius from my favorite movie (*Gladiator* 2000): "There was once a dream that was Rome, you could only whisper it. Anything more than a whisper and it would vanish… it was so fragile." I'm not building Rome, but I do have big dreams that I am fearful to even whisper yet, much less put them in print! Ask me about them when we meet. I will make myself available to anyone who would like to meet starting in January.

An Experienced Hand in a Key Position: AOK's New Director of Philanthropy

Introducing McKay Stangler

In early 2020, Audubon of Kansas welcomed a new Director of Philanthropy. McKay Stangler, who is based in Johnson County, spent the last two years on the fundraising team of Donnelly College, where he served as the lead field officer for a successful $34 million capital campaign. Prior to that, Stangler was a professor of humanities at Berry College and Donnelly College. He brings several years of fundraising experience and, even more importantly, a passion for wildlife and ecosystem conservation.

"As a transplant to Kansas, I just fell in love with the scenery and natural abundance of the Great Plains,"

Stangler said. "There's so very much to love, ranging from the hilly ecotone of eastern Kansas to the sandhills of Nebraska to the stunning, almost ethereal beauty of the Flint Hills."

Formerly a board member of the Jayhawk Audubon Society, Stangler has spent his early AOK days contacting existing donors, shoring up the group's online presence, and making it easier to donate as a monthly supporter. He has also worked closely with AOK staff to develop strategy and execution for new fund-raising appeals, and has worked on mapping out a giving strategy for the next two years under a new executive director.

"Certainly the loss of Ron Klataske is a big one," Stangler said. "Ron's name is synonymous with conservation in this area. But Jackie Augustine coming aboard in 2021 is a huge opportunity for AOK. It's an exciting time for the group."

For any fundraising questions, ideas, or if you just want to talk about birds, write to Stangler at mckay@audubonofkansas.org.

Celebration of Cranes– An AOK Signature Event

Cindy Jeffrey

In 2018, the AOK board of trustees discussed ways to broaden the organization's outreach, to educate and celebrate who we are and what we do. One of the ideas that rose to the top, was to hold a Celebration of Cranes at Quivira National Wildlife Refuge. Back in 1971, Executive Director of AOK Ron Klataske had organized an event for the National Audubon Society, for which he was then working as a regional director, to draw people to witness the spring staging on the Platte River in Nebraska of nearly half a million migrating Sandhill Cranes. In subsequent years, that event had become one of Nebraska's greatest wildlife tourist attractions.

The Board of AOK realized that we had at hand right here in Kansas an internationally important wetland that provides a necessary stopover for migratory birds, as well as home to many plants and animals associated with wetlands. While all the shorebirds, ducks, geese, songbirds and Sandhill Cranes that stop here are special, the rare and endangered Whooping Cranes that may be spotted here during migration make the Quivira salt marsh an extra special attraction. It is an exciting and wonderful experience to see these representatives of a species that was almost extinct, with numbers as low as 21 in 1941, but that with concerted effort, now numbers over 800.

This first Celebration of the Cranes in 2018 needed to come together quickly as the time of the migration was nearing. It was planned for a time when the Whooping Cranes are statistically most likely to be at Quivira, Saturday, November 3, 2018.

Ron Klataske arranged the vans and guides to be there that Saturday for tours, beginning at 8 am from the Headquarters/Visitor's Center at the refuge. Scopes were set up in appropriate locations with a guide to help visitors spot the cranes. As late as Wednesday before the scheduled event, only about twenty people had signed up. But notices in Hutchinson and Wichita papers resulted in an inundation of calls to Quivira Headquarters. Early on Friday, when Margy Stewart, Mary McCoy and Beth Schultz arrived to get things ready, they were met by 15 people who had heard about the event, and were ready to go see the birds. The first tour took place when they headed up to the Big Salt Marsh, accompanied by this informal group of early arrivals.

On Saturday the tours went on all day until the cranes returned to the marsh at dusk.

"Ron was on his feet pre-dawn picking up the van and then giving tours for 12 hours straight, without rest or food, while genially interacting with droves of people, even after burning his tongue on my hot cider!" said Margy Stewart. Ultimately, probably one hundred fifty people turned up for the van tours and conversations in the headquarters.

After the event, Margy Stewart sent a letter to all the attendees asking for feedback. And we received some wonderful comments:

"…the excitement"

"Whooping Cranes are life birds for us"

"We got out of the car and were totally swept up in the magic of wings and contact calls as flock after flock flew over us, almost low enough to touch. I can feel it still. Unforgettable!"

We also got some good suggestions on how to improve the event. We realized that planning should begin much earlier. At the next board meeting a committee was formed to plan the 2019 Celebration of Cranes, and heed many of these suggestions.

The 2019 Celebration of Cranes had a tour Friday evening, three on Saturday, and one Sunday morning, with a guide and a driver in each van. Spotting scopes were set up ahead of time at the best locations for viewing. We coordinated with the Quirvira NWR staff and made sure that all inquiries came to us. Online registration was made available. Margy Stewart contacted and made arrangements for our three excellent speakers. They presented in the morning and the afternoon at the Visitors Center on Saturday: Rex Buchanan talked about the geology and water of the refuge, Elizabeth Smith talked about Whooping Cranes

specifically, and Anne Lacy, Crane Research Coordinator, talked about Sandhill Cranes.

There were activities for children thanks to Lucia Johnson, a display about Bison by George LeRoux, and literature about AOK, the refuge, and maps, etc. were available. Hot cider and refreshments were provided throughout the day. We also added the option of a sack lunch participants could order ahead of time, giving the local town of Stafford some business.

And they came, approximately 85 people who registered to attend. The vans were never idle! People filled the room for the speakers' presentations (given once in the morning and once in the afternoon). The weather even cooperated. 2019 was an even bigger success than the previous year!

We looked forward to 2020. And then 2020 came and threw us all for a loop. What do we do now, do we cancel the event completely? Like so many things in 2020 we decided to go virtual. While not comparable to visiting the refuge in person, seeing this wondrous place with your own eyes and ears, it would at least be an opportunity for education, and perhaps entice people to go on their own. Six distinguished speakers agreed to give presentations via live streaming: "Overview of Quivira National Wildlife Refuge" by Mike Oldham; "Shorebirds and Wetlands" by Robert Penner; "Sandhill Cranes: Living on the Edge of Winter," by David Rintoul; "Whooping Cranes" by Elizabeth Smith; and "Water" with Rex Buchanan and Burke Wade.

No refreshments, no hot cider (unless provided at home), but the migration continues, the Sandhill Cranes, Whooping Cranes, shorebirds, ducks, and warblers still follow the ancient rituals. We must do all we can to sustain these essential wetlands for them. That is the purpose and goal of the Celebration of Cranes.

Photo Captions:

1. Anne Lacy, Crane Research Coordinator with the Whooping Crane Eastern Partnership
2. Elizabeth H. Smith, North America Program Director and Texas Whooping Crane Program Leader, International Crane Foundation
3. Rex Buchanan, Director Emeritus, Kansas Geological Survey
4. George LeRoux, Bison Rancher and Board member of AOK

Farm cart against the dawn

Hutton Journal: Three Days in July along the Niobrara

Elizabeth Dodd and Dave Rintoul

The five thousand acres or so of the Hutton ranch abut the south bank of the Niobrara River, land that remained in the Hutton family from their arrival in 1882 until 2001, when Lucille Hutton willed the property to Audubon of Kansas as a wildlife sanctuary. In a privately published family history which I read in the bay-windowed guest house, Harold Hutton described how his family came to settle in the Niobrara valley.

The Huttons arrived not long after the federal government's removal of Pawnee people from their homeland. Three treaties had forced the Pawnee from what would become central Nebraska: one in 1848 removed the people from their lands in the Grand Island region along the Platte; another in 1857 established a reservation in north central Nebraska, along with the mandatory Indian boarding schools that suppressed native languages and attempted to turn tribal people into European-style tenant farmers; another in 1875 forced their relocation to Indian Territory in what would become Oklahoma.

Thomas Hutton and his brothers, John and Jacob, all Civil War veterans, began investigating land in the region where Rock Creek feeds into the Niobrara in 1880. Two years later, Thomas, a widower, brought his seven children to settle on the south bank of the river. As Harold wrote,

> In the spring of 1882, my grandfather sold the farm in Iowa and brought his family out to the Niobrara country. He shipped on the railroad to Stuart and unloaded there since there was no depot either at Newport or Bassett; in fact, there was almost nothing at all at either place, other than the designation. The wagon had been shipped knocked down, and he unloaded it piece by piece from the freight car, reassembled it,

All photos by Dave Rintoul

Crane portrait, petroglyph at Three Rivers, New Mexico.

loaded the possessions he had brought, hitched up and headed out to the homestead, 25 miles away.

*Years ago, my college friend Karl wanted to see the Sandhills so much that when an academic conference he and I both frequently attend was scheduled for early October in South Dakota, he decided this was his chance. "Let me fly to Manhattan from Cincy," he gushed. "Since you guys are driving anyway, let me come along." Of course, there are no direct flights from Cincinnati, Ohio to Manhattan, Kansas, so he had a long day of travel and a quick overnight stay in the guest room before we all drove north and west, with two men over 6'4" folded into the front seats. But Karl knew—Nebraska has landscape and habitat that combine subtlety with sublimity. I thought of Karl's eco-enthusiasm as Dave and I headed to the Hutton-Niobrara Sanctuary for the first time.

*The two earliest written appearances of the word "map" in English are from 1527 and 1547. Both suggest something diminutive in size: "a little Mappe or Carde of the world" and "a litle Mappe … of parchement sette in a frame," respectively. I love maps of all sizes. The granular-detailed survey maps of Scotland and England where every footpath and stile the walker might want is perfectly pinpointed with a litle Icon; the huge, roll-down maps that once hung in classrooms where I teach, though they have mostly been taken down. The paper USGS quad maps you used to buy all rolled up and then had to figure out how to carry along with you; the later plasticized topo maps that folded much more neatly to fit in your pocket.

The map I had of the Hutton was a color printout on cheap, 8 X 10 inch paper. The roads and trails doglegged and meandered unmistakably in bright colors but somehow the land wasn't interested in such clear delineation, so pretty quickly I just folded it back up and headed across country. This mapless method worked well as I dropped down from the grazed headland of the upper northeast sector of the ranch and followed a draw steadily north, north, north, bound for the river. Within minutes, through the cedar canopy came the bright sound of water. Where the rivulet pooled, a tortoise sheltered on a mossy bank no wider than my size-six boot. From there, I could follow the stream clear to the Niobrara.

*Grassland draped beneath the palisades of cottonwoods is one of my favorite landscapes on the planet. The environmentalist Paul Shepard would tell me this is an ancient preference, a memory in the DNA that dates to when our primate ancestors left the dark forests for the African savannahs where, finding it good, they slowly became our human ancestors. My own memory goes back decades, not millennia, to visions of aspen leaves quaking yellow in the autumn light from family trips into the Front Range foothills; I think my preference might be personal, not evolutionary. But then again, it might be both. The sprawling copses of cottonwoods on the uplands between Willow and Rock Creeks were lush and green in our Mid-July visit but in late-day light the scene seemed golden enough.

*Dave and I have seen sandhill cranes in many parts of the world. Flocks wintering in the marsh-and-cottonwood Bosque del Apache refuge of New Mexico, where the proprietor of the B&B where we were guests got up at 4:00 AM to light the woodstove and begin making tamales.

Hutton Ranch Savanna

All photos by Dave Rintoul

Sandhill Crane pair with colt, Hutton Ranch

Tamarisk-clogged Muleshoe National Wildlife Refuge in Texas. Along the Platte River, year after year of watching from blinds on the Rowe Sanctuary, camping at Ft. Kearney, standing on bridges overlooking the icy spring current, often with students (mine) or children (Dave's) along. At Quivira and Cheyenne Bottoms—wetlands that Audubon of Kansas, and surely many readers of *Prairie Wings*, have helped protect through defending their water rights. Along the Gulf Coast, keeping company with the occasional whooper. Lanky colts and parents in the brilliant high-latitude light of summer in Alaska. Once, amazingly, an ancient petroglyph on a rock at Three Rivers, New Mexico; the Ancestral Puebloan artist, who may have carved the image hundreds of years before the arrival of the Spanish conquistadors, had used the curve of the rock to give shape to the bird's face, and a small bump served as the crane's watchful eye.

Until our stay at the Hutton, the only cranes I'd seen in Nebraska were in transit, during their cacophonous, dancing pause along the Platte. The ornithologist-author Paul Johnsgard says that, in their long migrations, cranes live always at the edge of winter. But from a slope between the mouths of Rock and Willow Creek, Dave and I watched as silent birds the color of summer-parched reeds moved in the tawny foliage. At once, they knew we were there and disappeared. Then one stretched its neck and looked intently toward the gallery woods along the river. Over the course of long, light-filled minutes the birds entered and exited our sight, rejoining as a family group, and then passing into the trees, shadows that felt, suddenly, like the edge of summer.

*A few hundred miles north as the teal flies, as the crane flies, as the Black Tern flies, and you're really in prairie pothole country, stretching across the Dakotas and Minnesota. The

All photo by Dave Rintoul

Hutton lies right on the edge, according to a USDA map I found—Nebraska hasn't figured much in the decades' worth of studies tallying agricultural destruction of potholes, but it's part of the picture all the same. Four miles south of the guest house, Dave discovered an ephemeral wetland—water pooled on both sides of the road, the short grass pasture stretching on beyond. It seemed like the ghost of a prairie pothole, refusing to really give up the ghost, and in this wet year it hosted a small exuberance of associated wildlife. The photographer and his passenger could simply park the car and watch. Most exuberant were several Black Terns busily ladling up pollywogs. The birds skimmed over the surface, circling back once or twice if they came up empty-billed. But pretty quickly, each seemed to make a successful capture and then wheeled back to where a handful of babies were lined up on a fence wire, waiting to be fed. Or they zig-zagged to the edge of the pasture and dropped the froglet for the fledglings to practice pouncing. Once or twice we watched a parent dip back down to the pool to dunk the frog back in the water, as if washing off gunk or a strand of wet weed. We think they were American bullfrogs on the menu: huge tails and legs akimbo as the parents wheeled toward the hungry young.

The glare of a Burrowing Owl always suggests to me that if the bird ever dreamed it were a mammal, it would appear as

Black Tern with Bullfrog tadpole

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All photos by Dave Rintoul

Burrowing Owl

a top predator: a wolf, even a grizzly. The closest we came to one was just down the road from the pollywog-fest; the bird had staked out an old badger hole in the roadside embankment and took off into baleful flight when we approached. But the uplands deep within the Hutton Sanctuary provide prime habitat for prairie dogs; and dog towns, unmolested by landowners or county exterminators, can support both owls and another endangered predator, the Black-footed Ferret. Audubon of Kansas has contributed to the reintroduction of ferrets elsewhere in the Great Plains and has been working to establish a viable dog colony in the heart of the Hutton.

It's a fine thing to be held in the gaze of a Burrowing Owl. She could be sizing us up, taking the measure of our environmental ethic. She could be looking through us to a possible future. Or she could be doing neither at all, judging only the threat of the moment, before turning her head, keeping her thoughts to herself.

"Grassland draped beneath palisades of cottonwoods"

Ron Klataske

Teamwork Builds the Sanctuary Envisioned

Connie Achterberg Wildlife-Friendly Demonstration Farm

One can have confidence that if Connie Achterberg were present, she would be pleased. She would be pleased with the partnership she initiated with Audubon of Kansas to manage and share the land that was her childhood family farm. Connie often reflected on memories of hard times on the farm including dust storms, and good times involving her grandfather's watermelon patch, exploring the woods, and fishing along Bullfoot Creek during the 1930s.

She would have been especially delighted this past summer when two Kansas State University students played a lead role in the design and clearing of a trail within the riparian woodlands along Bullfoot Creek. Emma Pettay—one of Ryan Klataske's students in anthropology and environmental science at K-State—and her friend, Emily Larocco, partnered in this internship program.

Emily and Emma enjoy the Leopold bench

Monarch on Maximilian Sunflower in Pollinator habitat

It was difficult finding days when the temperature was lower than 90 plus, so that became the standard for the field work. AOK Trustee Chair Gary Haden brought his chainsaw and joined us for the first of several hot days.

In addition to the trail, Emma and Emily built several Leo-pold benches to provide places where visitors walking the trail will be able to relax and enjoy the serenity of natural silence and sounds, sometimes accented by the pastoral sounds of nearby farming and ranching activities. Aldo Leopold, the person regarded as the father of 20th century wildlife management and author of *A Sand County Almanac*—his most widely read book—is credited with making the bench popular among outdoor enthusiasts. One can sit backward on the bench, prop their elbows on the backrest, and hold binoculars steady.

The Leopold benches bring to mind Leopold's famed "shack" in Wisconsin where he and his family restored an abused farmstead and where much of his writing occurred. The inspiration to select this design was provided by our good friend Ed Pembleton. In addition to a career with Audubon, he served as director of the Leopold Education Project for Pheasants Forever. Ed and Sil have a Leopold bench at their home here in Manhattan!

The trail that Emily and Emma worked on is the first of what will likely be two or three when fully developed. Plans call for

All photos by Ron Klataske

Pollinator habitat on Achterberg Farm

this original trail to possibly be extended on the south side of Bullfoot Creek, likely along but possibly over Horse Creek—if we find funding for a footbridge over that stream. Grant funding opportunities for this purpose, for surfacing, and for more signage and educational information will be pursued.

Other highlights this year included the spectacular response of native wildflowers and native grasses within the upland bird habitat introduced by field border plantings and filter strips surrounding all five cropland fields within the farm, as well as within the small field planted entirely to pollinator habitat in 2016. These areas are enrolled in the USDA Conservation Reserve Program (CRP). Management requires prescribed burning once or twice during the contract term, depending on whether they are ten-year or fifteen-year contracts. With volunteer assistance of George LeRoux, an AOK Trustee from Wabaunsee County, on April 13 I took out my relatively old farm pickup with a spray unit custom built by a friend and we burned about half of the acres enrolled in CRP. We protected the shrub thicket plantings included in the field border strips, while "rejuvenating" the native grasses and wildflowers by burning the thick thatch that builds up in the absence of mowing or grazing over an extended period of several years. Soil moisture and weather conditions were ideal.

A covey of Bobwhite Quail flushed from the security of a chokecherry thicket, as usual demonstrating the birds' affinity for shrub thickets located near grassland habitat and fields planted with small grains, especially grain sorghum. Bobwhite Quail were Connie Achterberg's favorite bird, and they are much loved by many of us who grew up on farms during an earlier era when many or most farms had a diversity of habitats along fencerows and natural waterways that supported the birds' year-round needs.

Those differing cover types, including vegetation that is often referred to as annual weeds, are important as sources of invertebrates for young quail chicks and for many passerine

Heavy work preparing pollinator field

birds during the summer months. These plants also provide highly nutritious seeds throughout the year. Decades ago, crop subsidy programs used to require idling some acres to reduce grain surpluses and when areas grew up in annual weeds, they were the "cat's meow" for pheasants, quail and seed-eating songbirds. Considering that idling acres is no longer encouraged within many cropland landscapes, our approach on the Achterberg demonstration farm is to utilize plantings of perennial forbs/wildflowers as we have done within the pollinator habitat planting and field borders.

Demonstrating these strategies for enhancing and managing habitats for wildlife is part of the framework for our agreement with Connie to name this sanctuary as a "Wildlife-Friendly Demonstration Farm." She also appreciated productive farm and ranching operations when wildlife conservation is incorporated on the land. Thanks in no small part to Ron Buttonhoff, our tenant farmer, a bountiful harvest of soybeans and milo were harvested this fall.

All photos by Ron Klataske

Emma and Emily working on the trail

Above: Connie Achterberg pitches in planting shrubs in 2016
Right: Characteristic limestone fence posts of 'Post-Rock Country'

Lincoln County is in the heart of an area of about 3 million acres given the distinction of "Land of the Post Rock." Early European settlers found insufficient timber to supply their needs for fence posts, but they discovered that a layer of limestone near the surface could be readily mined and used for this purpose and for building. Connie recalled that the boundary of their farm was lined with rock posts. However, at some point a neighbor asked if he could take them and her father agreed. Hundreds if not thousands of miles of rock posts have been removed, but many remain in use, or as monuments to the hard work of previous generations throughout the area.

One of our goals has been and remains to obtain posts that have already been removed and then restore them along part of the boundary surrounding the Achterberg Farm. Some have been offered and our next challenge is to secure the assistance and equipment to make their transplantation a reality and restore an added element of this property's historical heritage. The local community welcomes our initiatives to make the sanctuary inviting for visitors, and one of our most appreciative fans is Aaron Zier, an adjacent farmer who enjoys seeing more Wild Turkeys and other wildlife on the property than ever before.

All photos by Ron Klataske

All photos by Lisa Grossman

Beth Schultz

Lisa Grossman,
Painting the Luminous Kansas Landscape

On a back road in the Flint Hills on a sunny day, you can drive for miles, seeing only the plains unscrolling toward the horizon. However, on such a trip you also might be surprised to see a woman standing in front of an easel, intent upon painting these undulating plains and that horizon. Her truck, loaded with her painting and sleeping gear, would be parked off to the side. She would be glad to see you, however, and reaches out her arms as if to greet you and to embrace the entire prairie stretching out before you.

This enthusiastic and dedicated painter most probably would be Lisa Grossman, who has been committed to painting the prairie *en plein air* since 1990. Lisa explains that her paintings' "central theme has been open space, my inspiration the wide skies and prairies of eastern Kansas and the Kansas River Valley. The power of this place and my emotional responses to it are the true subjects of my work. My wish is to share some of what I've discovered and to offer a new way of seeing these open prairie spaces and waterways." Through numerous exhibitions and with over 1800 of her works in public and private collections the world over, Lisa has succeeded in illuminating and sharing her vision of these wondrous places.

Raised in rural Slippery Rock, Pennsylvania, Lisa has painted since she was a child, studying art at the Art Institute of Pittsburgh and later at the University of Kansas. She explains that she came from a rural, blue-collar family, but that so long as she can remember, she has had a drawing utensil in her hand. She feels "deeply fortunate" that for her the line between art and life has always been blurred. Out kayaking these days on the Kansas River, she says, she is thinking of painting, and when she is painting, she is thinking of kayaking.

The Kansas River threads its way through sandbars and a darkening prairie.

Lisa renders the sky and rolling prairie in an impasto rhythm of line and shadow.

Although as a child, she had fantasized about "wide, open spaces" through The *Little House on the Prairie* books and through movies, she became transfixed by the Kansas landscape soon after coming to work for Hallmark Cards in 1988. Since moving to Lawrence in 1996, she has dedicated herself to painting the Flint Hills, the Kansas River, and other Eastern Kansas prairie sites—in all seasons and all weathers, at all times of day and from diverse perspectives. She remembers her early response to the prairie, pondering "how to make something interesting out of a spare landscape." She wondered then how Georgia O'Keeffe might see the prairie. After buying her first car which allowed her to leave Kansas City to spend time seeing the prairie, Lisa discovered it was "exhilarating to be outside painting."

She realized above all that "the prairie's great gift is space. Here I can think. Here there is room enough to feel expansively. Prairie-time is time for thinking and feeling." Her encounter with the land's shifting patterns of light and shade, its response to weather, its undulating rises and dips, and its long horizon precipitated her profound and ongoing commitment to her craft. Generally, Lisa prefers painting in the fall, winter, or spring, in late afternoon or evening. Surrounded by the prairie's immensity, she says she experiences "an inner expansiveness: there is room for vaster thinking that leads to discoveries."

Although for years Lisa worked primarily on land before an easel, when the sinuous, sensuous, unwinding Kansas River came to be central to her vision of the prairie, she recognized that the river was best visualized from the air. Photographing from a plane thus became her primary means for capturing the river's undulations. Now she also uses a drone to capture images of both the land and the river from the sky's perspective. Contemplating the importance of the river for her prairie vision, she recognizes that "my work really does emerge from the prairie much as the Kaw River emerges from the same prairie. Ideas and impressions are filtered by the wind and grasses, soils, limestone, from many points of view, but following the shape of the watersheds and converging into several tributaries, gathering into one massive body of work downstream. . . . I know there are endless metaphors related to rivers, but I thought how, really, the river emerging from the prairie has inspired it all for me."

Considering her ongoing, overall commitment to painting the prairie environment, both land and river, Lisa often invokes the significance of the horizon: "I have been intrigued by the idea that I might be in pursuit of the horizon, a moving target, from various vantage points." But above all it is the sense of space—inner and outer—which characterizes her paintings of both prairie and river and which she seeks to convey in her painting.

From the beginning of her vocation as a *plein air* painter, Lisa has been recognized nationally and throughout Kansas as bringing a new visual interpretation to the prairie. Numerous distinguished museums, hospitals, universities, banks, convention centers, businesses, and law firms have purchased Lisa's paintings for their collections. In addition to painting Kansas' landscapes, she has also illustrated fifteen of the state's iconic creatures—mammals, birds, insects, reptiles—in the award-winning *Kansas Bestiary* (2013). A dedicated environmentalist, she has been artist-in-residence through the National Parks Service in Alaska, Arizona, Colorado, Kansas, Nebraska, and New Mexico. She is committed to working with diverse Kansas environmental organizations, including the Jayhawk Audubon Society, the Land Institute, and the Symphony in the Flint Hills. As secretary of Friends of the Kaw, Lisa helps guide river trips and provides visual materials for outreach and education, in addition to fundraising. Finally, Lisa maintains that the open spaces of Kansas have given her a tremendous gift: an inner expansiveness, a sense of enhanced possibilities and discoveries. She believes as well that painting open spaces connects her "to the seasons and cycles of celestial bodies, to Earth's shadow at either end of the day, and to the planet's curve as it is revealed in long, arcing clouds." As an artist of the prairie, she hopes, above all, to inspire people to connect with a particular place and, thus, to connect with the planet itself.

Wind power on the prairie: the old and the new. Photo by Ron Klataske

Green Power is Good, **But Siting is Crucial**

Note: A fuller version of this article, with notes, can be consulted on the AOK website under "News and Articles," "Prairie Writers."

Michael L. Donnelly

Backgrounds

Even living as we are in the throes of the third industrial revolution, as the service sector outpaces manufacturing, and electronics and high tech displace heavy industry as the drivers of GDP, our economy has not outgrown its need for energy. The graph of US energy usage per capita from 1960 to 2015 has fluctuated in a narrow range from a low of 5,612.08 kg of oil equivalent in 1960 to a high of 8,438.40 kg in 1978, with 6,803.92 kg the latest reported figure, from 2015. But total US energy consumption has increased in almost every year since 1949. In 2017, coal accounted for 17.8% of US primary energy production, trailing petroleum (including crude oil and natural gas plant liquids) at 28%, and natural gas at 31.8%. We—the US, the planet—cannot continue in this addiction to increasing consumption of dirty, polluting energy sources if we hope to avoid a greater than 1.5 degrees Celsius increase in global warming by mid-century—the predicted tipping-point beyond which, for our complex societies, the planet rapidly slides into becoming uninhabitable.

A shift to renewable, wind-powered energy production would appear to be a godsend, particularly in Kansas, where all of the state except the eastern-most sector is blest with some of the highest average wind speeds of any place in the country, high even for the so-called "central U.S. Wind Belt." In eleven years in Kansas, from 2005 to 2016, wind energy jumped from less than 1% to 30% of total electricity generated in the state. Kansas is part of a seventeen-state

area that "encompasses nearly 80 percent of the country's current and planned onshore wind capacity (AWEA 2019a)."

Kansas has been ranked third in the nation for its potential wind resources. However, it also contains our largest remaining tracts of intact temperate grasslands, among the most altered and least protected habitats in the world (Hoekstra et al. 2005).

Of what was once some 170 million acres from Texas to Canada, the habitat of bison, pronghorns, elk, wolves, and bears, only about 4% of tallgrass prairie remains, two-thirds of it in the Flint Hills of eastern Kansas and Oklahoma. The Flint Hills supports more than 30% of the global population of Buff-breasted Sandpipers during their migration, and has been designated as a Western Hemisphere Shorebird Reserve Network site. But destruction and fragmentation of habitat and other human activity have particularly devastated the ground-nesting grassland birds of this region, as well as the shorebirds that use the prairie lakes and playas, and the big refuges like Cheyenne Bottoms and Quivira National Wildlife Refuge, that are essential resting and refueling sites for their long-distance migrations. An article in *Science* in 2019 reported a decline in grassland-breeding bird populations across the U.S. and Canada of more than 50%, while migratory shorebirds have declined more than 70% in that same period. Species like Least Terns and Piping Plover, as well as Lesser and Greater Prairie-Chickens, are other hallmark denizens of regional habitats have become "species of concern" to the USFWS.

Prospects

So the great Midwestern grasslands are the site of a rapidly growing source of "green" energy—installed wind-generation capacity in Kansas has jumped 500% in the last decade, and in 2019, Kansas ranked fourth nationally in installed wind capacity. But they are also the increasingly threatened, diminished remnant of a once-grand and incredibly rich ecosystem.

The urgent question we face is, can we have both, power and wildlife? And if so, how?

It is true that according to research published back in 2015, bird mortality from wind turbines is dwarfed by other causes: domestic and feral cats account for an astonishing 2.4 billion bird deaths in the U.S. Deaths attributable to wind turbines amounted to only 234,000 in the U.S., augmented by another 17,000 in Canada. Recall, though, that reported 500% increase in wind-generation capacity in Kansas alone in the past decade. Barring drastic changes in engineering of the turbines themselves, improved bird detection measures, and/or avoidance of inappropriate siting, more wind turbines will inevitably mean more avian (and chiropterid!) fatality statistics. The Obama administration set a challenging target of having wind supply 35 percent of power by 2050 (a huge leap upwards from the 6 percent today). But a 2016 National Renewable Energy Laboratory exploratory study calculated that 73 percent of wind energy's technical potential might be affected by wildlife issues, and 28 percent by Golden Eagles alone. And Golden Eagles are a "species of concern" on the USFWS radar.

The *USFWS Wind Energy Guidelines* (March 23, 2012) declare that the guidelines are specifically designed to "form the best practical approach for conserving species of concern"—which are defined as including migratory birds, bats, Bald and Golden Eagles and other birds of prey, Prairie and Sage Grouse, and "listed, proposed, or candidate endangered and threatened species." And raw statistics quantifying bird mortality in general prove a blunt instrument when threats to particular species or types of creatures, such as Golden Eagles, become the urgent question.

When endangered species are at risk, comparing domestic cat kills with wind turbine mortality is beside the point. Some deeply disturbing incidents have been documented, particularly involving raptors. Wind farms first appeared in the United States in the early 1980s. One of the first big

Golden Eagle. Photo by Bob Gress, BirdsInFocus

complexes was sited along the mountain ridges at Altamont, California, a geographical feature frequented by hawks and Golden Eagles riding the wind currents that rise off the slopes. At one time, over 7,000 wind turbines spinning

along the ridge tops killed an estimated 1,300 raptors per year. Lawsuits launched by several local Audubon groups and the California Attorney General brought about a settlement with the operators of the turbines to reduce deaths of Golden Eagles, Red-tailed Hawks, Burrowing Owls, and bats by half. Progress was achieved both by powering down the blades when birds were at risk, and by replacing older turbines with newer versions less lethal to raptors. Nevertheless, Pam Young, the Executive Director of the Golden Gate Audubon Society in Berkeley, California, reported recently that further measures need to be pursued: monitoring of just one Altamont Pass Wind Resource Area site recorded 32 Golden Eagles killed, 111 Red-tailed Hawks, and estimated kills of 49 Burrowing Owls and 1,742 bats, fatality figures that still exceed levels stipulated in the mitigation agreement between the operators and the USFWS.

Proponents of wind energy might argue that we should eliminate feral and outdoor prowling domestic cats before we fight to prevent the expansion of their desperately needed "green" energy, while bird enthusiasts and the USFWS point out that poorly sited wind farms pose an unnecessary, out-sized threat to particular iconic, hallmark species, species already endangered, in some cases, to the tipping point.

But wind energy and conservation of native birds and bats, especially endangered "species of concern," need not be an all-or-nothing choice.

Joel Merriman, Director of the American Bird Conservancy's Bird-Smart Wind Energy Campaign, points out that "wind energy and birds can coexist, but only if turbines are sited and managed properly. Alternative energy is critically important to address climate change, but we strongly believe that renewable energy sources should not be embraced without question. It must be demonstrated that the benefits outweigh the impacts." And Amanda Rodewald, Co-director of the Cornell Laboratory of Ornithology's Center for Avian Population Studies, cautions that we need to be mindful that generating energy in any manner will impact birds directly or indirectly. Bird mortality from wind turbines may be more obvious than from other sources, but the habitat loss, water contamination, pollution, and greenhouse gas emissions from other energy sources, especially coal, are far more detrimental to birds and other species, including humans. Fortunately, the conservation community has a real opportunity to reduce negative impacts from wind energy by working with industry to properly site turbines and avoid important bird areas.

Particulars

In the past decade, conservation organizations, the government, and cooperative efforts involving both the conservation community and the wind energy industry have devoted a great deal of work to devising practical, sound guidelines for wind turbine site determination, research on potential impact on wildlife and habitat, construction impacts, monitoring of operations, and, when necessary, mitigation of adverse consequences of wind energy generation. Guidelines have even been published to set best practices for decommissioning wind energy operations when their useful lifetime is over (estimated at 20 to 25 years for the average machine).

Guidelines have been published by numerous groups, including the American Bird Conservancy (a wind-risk assessment map highlighting areas important to birds); various state and National Audubon Society chapters; the Nature Conservancy; The Kansas Energy Council; the Kansas Department of Wildlife, Parks, and Tourism; and the already-mentioned national standard, published 23 March 2012, as *U.S. Fish and Wildlife Service Land-Based Wind Energy Guidelines*, a publication based on the work of the Wind Turbine Guidelines Advisory Committee, which served from 2008 – 2011. Rob Manes of the Kansas Nature Conservancy and AOK Board Member Professor Robert Robel from Kansas State University were members of the advisory committee, and there were representatives of renewable energy companies and state wildlife departments, as well as National and Massachusetts Audubon, The Nature Conservancy, Bat Conservation International, Defenders of Wildlife, and the Blackfeet Nation.

All these guidelines agree on basics. There is agreement that wildlife conservation concerns must be addressed at all stages of land-based wind energy development.

"The most important thing a developer can do is to consult with the [USFW] Service as early as possible in the development of a wind energy project."

The first caveat for developers is that, even if not precluded by federal law, some areas "may be inappropriate for development because they have been recognized as having a high wildlife value based on their ecological rarity and intactness." But there are other rare and intact values besides wildlife value to be considered. As the Nature Conservancy "Site Wind Right" publication notes, beyond Wind Energy Guidelines, local regulations, and consultation with state and federal wildlife agencies, "there are other social and cultural factors that may make utility-scale renewable development inappropriate in some sites." In addition to recognizing the need

to avoid siting in unaltered, intact native prairie and other diminished ecosystems of unique features and value, this stipulation recognizes what one AOK member characterized as "people's desire to embrace and defend their land community—their sunrise and sunset, their night sky." Rancher and song-writer Annie Wilson describes these relatively intangible and non-monetizable values in one of her songs as "The Clean Curve of Hill Against the Sky"—"The idea is that there are just so few places on earth that you can see that, but you can see it here, where there are no trees, no towers, no buildings. . . just the prairie horizon." In the case of these unique, irreplaceable scenes and experiences that have roots deep in the psyches of the people who live and work there no less than in the life-modes of the other creatures that inhabit them, it is best, in the words of the title of David Gessner's recent book (with a nod to Teddy Roosevelt) to *Leave It As It Is.* If for no other reason than goodwill (and avoidance of acrimony and lawsuits), a wise developer will avoid antagonizing the local populace by imposing a wind generation facility on a site where it is widely and bitterly resented.

Clearly, a developer will want to consider whether a wind generation project can profitably be sited on any given piece of land. But to avoid possible legal and financial difficulties down the road, the developer needs to evaluate the potential impacts of the projected facility during construction and operational life on the landscape, the habitat at the site, and the behavior and well-being of the wildlife on site and in the vicinity. Initial surveys should provide a baseline catalogue of resident and visiting fauna as well as indigenous plant species to facilitate monitoring impact through the life of the project. As outlined in the USFWS *Guidelines*, this research and collection of data may take a year or more, and require consultation with experts. "To establish a trend in site use and conditions that incorporates annual and seasonal variation in meteorological conditions, biological factors, and other variables, pre-construction studies may need to occur over multiple years."

On the basis of the site-specific data collected in this period of research and observation, it will be possible to assess potential impacts on wildlife and plant communities of two kinds: there are first, the obvious direct risks involved in the disruption from construction and the continuing alteration of the landscape by the presence of the turbine towers and ancillary structures, and the threat of birds and bats colliding with the rotor blades. Second, there are "indirect risks:" less obvious effects degrading habitat over time, affecting behavior of wildlife, perhaps having ramifications compromising a larger regional population.

Collision risk in the "rotor-swept zone," the first thing that would occur to most people anticipating problems, is a direct risk most likely to affect greatly only species like raptors and cranes and waterfowl, the latter especially if installations intercept the birds' flight path to refuges and wetlands habitually used; however, the possible danger of collision for migrating passerines, vulnerable during their ascents from and descents to stopping places, and during inclement weather, must also be considered. A study around the Great Lakes using radar has suggested that many migratory birds often fly at lower levels than once thought. More studies are called for.

B*ats are a whole subject to themselves; see the longer version of this paper on the AOK website for a brief discussion of barotrauma and direct impact of tips of seemingly leisurely rotating blades that in fact reach speeds approaching 200 miles an hour.*

The rotating turbine blades at normal speeds produce another effect on wildlife less obvious than the danger of collision. They can generate levels of sound beyond ambient background levels, masking communication between animals and lessening their ability to detect danger.

"Data suggest noise increases of 3 dB to 10 dB correspond to 30 percent to 90 percent reductions in alerting distances for wildlife, respectively."

In addition to possible damage to hearing from acoustic over-exposure, turbine rotor sound can cause deleterious behavioral and/or physiological effects.

Other direct effects on wildlife from wind turbine projects include habitat loss owing to construction of turbine pads, roads, and other infrastructure, and habitat fragmentation.

No less than direct impacts, indirect impacts on wildlife and habitat demand attention. As a largely indirect effect, habitat fragmentation is a less apparent issue than replacing prairie grass and sod with concrete, electric transfer stations, and fencing, but its impact on species already beleaguered by regional degradation of preferred habitat can be subtler and far-reaching. Smaller, isolated tracts may strand breeding populations, causing genetic problems and loss of population vigor, and expose a local population to extinction owing to disease or natural disaster (think of the Heath Hen). Fragmented habitat disrupts foraging and shelter, and increases "edge" effects, creating both barriers to traditional patterns of movement, and pathways opening the way to nest predation and nest parasitism. Habitat fragmentation favors introduction of invasive plants, access by predators, and alterations in the natural fire regime, all of which may only become apparent over time. "Indirect impacts may be difficult to quantify but their effects may be significant." Remember that the prairie ecosystem that

Ferruginious Hawk. Photo by Bob Gress, BirdsInFocus

is our concern here is seen as already the most threatened and diminished of any of our North American landscapes.

In the initial stages of choosing a site for a wind energy generation facility, the developer needs to consider the possible impact on particular species, the "species of concern" of the USFWS guidelines. These include, but are not limited to, species covered by the Migratory Bird Treaty Act (MBTA), the Bald and Golden Eagle Protection Act (BGEPA) and the Endangered Species Act (ESA). Species of particular concern in our area include the Whooping Crane, Greater and Lesser Prairie Chicken and other prairie grouse, and raptors in general; the Least Tern and Piping Plover; and the Black-footed Ferret and Prairie Dogs – the last because Prairie Dog towns harbor the endangered ferret, provide nesting holes for Burrowing Owls, and are a magnet for Golden Eagles, Ferruginous Hawks, and other raptors. Although research on the Greater Prairie Chicken is inconclusive, prairie grouse in general have been thought to avoid nesting in proximity to tall structures, like wind turbines. There are reports of leks being abandoned because of nearby construction of wind farms, though there are other studies that show no disruption or a return to use after construction activities ceased. Older investigations recommended 5 mile buffers around leks; however, a more recent seven-year study led by Brett Sandercock of Kansas State University indicated that wind turbines have little effect on Greater Prairie Chicken populations, while other range management practices are much more crucial. In any case, until more solid and consistent data on other species of prairie grouse are available, the Nature Conservancy Site Wind Right guidelines recommend avoiding siting wind facilities in any areas where there are known occurrence records of Attwater's Prairie Chicken and in the Refugio-Goliad Prairie Conservation Area in Texas; avoidance of Columbian Sharp-tailed Grouse production areas and winter range in Colorado; and creation of buffer zones ranging from 5 km to 2 km around known leks and production areas of prairie grouse in Wyoming, Colorado, Kansas, Oklahoma, and Missouri. Clearly, more research is needed, but in the meantime, prudent avoidance of new wind farms impinging on leks and associated nesting habitat of prairie grouse would seem to be indicated.

Lesser Prairie-Chicken. Photo by Bob Gress, BirdsInFocus

Sharp-tailed Grouse. Photo by Bob Gress, BirdsInFocus


Verbena Dakota Mount Mitchell and Lythrum alatum Winged Loosestrife.

Procedures

Substantial agreement exists among all the various published guidelines on basic principles governing siting of wind generation facilities, most of which points are articulated concisely by the KDWPT official statement published in November 2017. They are: 1) Siting should be on previously altered landscapes such as areas of extensive cultivation or urban and industrial development, avoiding intact native prairie and sensitive wildlife habitats and important migration corridors and staging areas. 2) Projects should conform to siting guidelines, such as the *Land Based Wind Energy Guideline*s produced by the USFWS. 3) Adequate studies by qualified experts should be conducted before construction begins, during construction, and during operation of the completed facility, to inventory plant and animal communities and enable careful monitoring of impacts, and devising correctives. 4) Avoidance of siting that creates unmitigable high risk to birds and bats is always preferable to compensatory offsite mitigation efforts. 5) During operation of the site, qualified experts should be employed to conduct censuses of plant and animal communities following on baseline studies, and to determine seasonal use, as for example, rest and refueling sites during migration, or wintering sheltering areas. 6) Scientific experts as well as staff of federal and state wildlife agencies should be involved in assessing impacts of the project's wind energy generation on wildlife and habitat. 7) Finally, most guidelines provide directives anticipating the retrofitting and repowering of the turbines during their useful life, and their eventual decommissioning and restoration of the site to its original state, as nearly as may be. Running through all these guidelines the importance of early and regular communication between developers and the USFWS is stressed.

The USFWS publishes the most comprehensive set of guidelines, breaking down the recommended steps to be taken into five "Tiers," and providing 27 briefly summarized "Best Management Practices" for operations, plus five more covering retrofitting, eight on repowering, and nine on decommissioning. The tiered approach is designed to assure early discovery of problems, and to facilitate and regularize the process of choosing a site, assessing potential impacts and risks, and dealing with unforeseen problems.

The thoroughness of the "Best Management Practices" recommended in the USFWS *Guidelines* is indeed admirable; many points of detail are worth incorporating into any proposed state or county regulations.

–Bury low and medium voltage connecting power lines associated with the wind energy development, or, if burial is impracticable, locate away from such high bird crossing areas as between roosting and feeding areas, or between lakes, rivers, and prairie and sage grouse leks and nesting habitats;
–Mark them in accordance with Avian Power Line Interaction Committee (APLIC) collision guidelines, and follow the 2006 or most recent APLIC "Suggested Practices for Avian Protection on Power Lines" for power lines, transformers, and conductors.
–Avoid guyed communication towers.
–Equip lights used with motion sensors and switches to keep lights off when not required; likewise, direct lights downward to minimize horizontal and skyward illumination; minimize high intensity lighting.
–Install non-disturbance buffer zones to protect sensitive habitats or areas of high risk for species of concern, as identified in pre-construction studies, determining their extent in consultation with "credible experts as appropriate." (These buffers also protect the turbines from damage during periodic controlled burns.)
–Avoid impacts on hydrology and stream morphology; use appropriate erosion control measures.
–Use invasive species prevention and control measures as directed by county, state, or federal requirements; clean vehicles and equipment that might import known invasive species into the site, use locally sourced topsoil, and monitor for and remove invasive species at least annually.
–Use native species when seeding or planting during site restoration.
–Demolish or remove no longer needed roads and facilities when the wind facility is retired, and stabilize and re-seed their footprint with native plants appropriate for the soil conditions and native habitat.
–Stockpile topsoils removed during decommissioning and use as topsoil when restoring plant communities.
–Restore the natural hydrology and plant community "to the greatest extent practical" in conjunction with the land owner and state and federal wildlife agencies.

Problems

Attempts to manage the wind industry with voluntary as opposed to mandatory permitting guidelines are not working

Clearly, an immense amount of thought and discussion has gone into devising these detailed guidelines for siting wind energy facilities to minimize impact on vulnerable wildlife and habitat. But the fundamental problem consists in the fact that all these suggested practices and step-by-step directives are just that: "guidelines," "suggestions," "voluntary engagements." Everything is presented in the subjunctive mood: "developers *should*," "studies *may* need to occur." Says Dr. Michael Hutchins, National Coordinator of the American Bird Conservancy's Bird Smart Wind Energy Program, "Attempts to manage the wind industry with voluntary as opposed to mandatory permitting guidelines are clearly not working. Wind developers are siting turbines in areas of vital importance to birds and other wildlife, and this new data shows that the current voluntary system needs radical improvement." Concerning pre-construction surveys of risk called for in the USFWS guidelines, the ABC reports:

> these assessments are typically conducted by industry-hired consultants. We consider such non-independent analyses of risk to be a conflict of interest. Indeed, ABC and others have noted several cases of paid consultants downplaying the potential risk to wildlife so that their clients can obtain the necessary permits and begin construction, including at least two cases in Minnesota. This is highly problematic since, to our knowledge, no wind energy company has ever been shut down post-construction, not even the notorious Altamont facility that has killed thousands of federally-protected birds.

Moreover, the ABC asserts that the USFWS recognizes wind energy companies' claim that statistics on bird kills on their projects are property of the companies, as if they were "trade secrets." Without access to such data, how can government agencies, conservationists, or the public hold wind energy companies accountable for damage done?

The only enforcement "teeth" that the voluntary USFWS guidelines have is the option of the government bringing suit against a wind company to recover fines and mandate corrections when "species of concern"—species protected under the MBTA, BGEPA, or ESA (and "candidate species") are "taken." Since fatalities among these protected birds exceeding the predicted norms for any given project could result in millions of dollars in costs to an energy company, even after a project has been completed and is operational, there is a strong incentive for companies to be less than forthcoming with data on bird kills. The ABC warns that

> Self-reporting of bird (and bat) fatalities continues to be a major conflict of interest, especially since wind energy companies may be subject to expensive fines, mitigation, or prosecution if they are forthcoming. We believe it is time for independent monitoring of bird deaths at wind energy projects.

Although over 400 MBT violations were lodged by the government against oil and gas companies in the two decades preceding the promulgation of the wind energy guidelines, there had been no prosecutions of a wind energy company prior to the issuance of the guidelines. In 2013, however, Duke Energy Renewables was charged with killing 163 protected birds including Golden Eagles, larks, and blackbirds at two Wyoming sites. The following year, also in Wyoming, PacifiCorp Energy was prosecuted for avian mortalities at two of its sites. Both companies pled guilty to having knowingly constructed facilities that they knew would likely kill protected birds. Both companies were fined—Duke $1 million, PacifiCorp $2.5 million—and ordered to put in place mitigation plans. However, as noted above, in November 2014, PacifiCorp sued the USFWS to keep information on bird kills secret. As long as such information is not available to the public or researchers, as well as the USFWS, all the provisions in the USFWS guidelines stipulating projections of likely impacts compared with studies of actual mortality figures are nugatory.

Tens of thousands of turbines already exist in sensitive areas for birds, and tens of thousands more are planned.

The ABC has published a very useful bird risk assessment map, which identifies particularly vulnerable areas: "major migratory routes, breeding areas, and sensitive habitats such as wetlands." The areas identified as "critically important," colored red on the ABC map, "have extreme potential for major negative impacts on federally protected birds," but these comprise less than nine percent of the total U.S. land area. In Kansas, the areas around Cheyenne Bottoms and Quivira National Wildlife Refuge and the extreme southwestern corner of the state are the only areas colored red on the ABC map. However, all of the state from Salina and Hutchinson in the east to west of Goodland, Garden City, and Liberal are overlaid with three shadings of yellow-ochre, with the darker shadings that represent Bird Areas of Globally High Importance covering most of the center of the state west of US Highway 81. (There is also a "critically important" red area that starts just north of the Oklahoma state line southwest of Wichita, adjacent to several concentrations of existing wind turbines.) The ABC concludes that overlaying their Bird Risk Assessment Map with U.S. Geological Survey and Federal Aviation Administration maps shows

that "tens of thousands of turbines already exist in sensitive areas for birds, and tens of thousands more are planned." 5,500 existing turbines are already located in the migratory corridor of the endangered Whooping Crane, and 18,500, with their associated power lines and towers, are planned for that critically important area. "Wind turbines may now be among the fastest-growing human-caused threats to our nation's birds. Attempts to manage the wind industry with voluntary as opposed to mandatory permitting guidelines are clearly not working. Wind developers are siting turbines in areas of vital importance to birds and other wildlife, and this new data shows that the current voluntary system needs radical improvement", said Dr. Michael Hutchins, National Coordinator of ABC's Bird Smart Wind Energy Campaign. Research by ABC with the dateline August 20, 2014 showed that nearly 30,000 wind turbines have already been installed in those red areas marked of "high importance" to federally protected birds in the U.S.; at that time, another 50,000 more were planned in similar areas, including more than 16,000 in the Whooping Crane migration corridor, and 1,800 in sage-grouse breeding strongholds. "We were dismayed not only to find that the wind industry is building turbines in high bird impact areas but also in areas where the wind resources and return on taxpayer investment are marginal at best," said Dr. George Fenwick, President of ABC. "In fact, more than 10,000 turbines are planned in or close to sensitive bird locations in areas with wind power class grades one or two, the lowest categories for profitability."

Site proposals included native prairie, migration corridors, wildlife gathering spots, and sites too close to state wildlife areas, all violating state and federal guidelines.

When wildlife advocates in three separate counties in Kansas—Reno, Marion, and McPherson Counties—recently contacted AOK because industrial wind companies were threatening their "land communities," AOK found that site proposals included native prairie, migration corridors, wildlife gathering spots, and sites too close to state wildlife areas, all violating state and federal guidelines. In Reno county, eight proposed turbines would incur multiple violations, fragmenting native prairie, impacting wetlands, degrading critical habitat for threatened and endangered species, and violating the three-mile buffer around Cheney State Park and the Cheney Lake Wildlife area. The developer ignored objections, noting that Kansas's guidelines were "purely a recommendation—not a rule or regulation." When objections were raised, the developer of a proposed site in Marion County simply refused to schedule the recommended KDWPT official site review.

Clearly, there may be good citizens and bad citizens among wind energy producers. Organizations like the American Wind Energy Association and the American Wind Wildlife Institute have cooperated with the Nature Conservancy's Great Plains Site Wind Right initiative. Evergy, a power company serving more than 1.6 million customers in Kansas and Missouri, is reportedly using Site Wind Right maps in making their wind facility siting decisions. The Skookumchuck Wind Energy Project in western Washington State contrasts markedly with the Humboldt Wind Energy Project on the Bear River and Monument Ridges in California. Skookumchuck, the only approved wind energy project in the Marbled Murrelet's breeding range, has complied with stipulations that it curtail turbines during high bird activity periods in the Marbled Murrelet breeding season. Curtailment (turning off the rotors) is an approved best practice for wind energy projects at discreet periods when bird or bat activity threatens unacceptable fatalities; it is even used at some California wind turbine sites, for example, at the Tehachapi Wind Resource Area, when an individual condor sporting a miniature radio transmitter or GPS transmitter is tracked as approaching operating turbines. This is a process often referred to as "informed curtailment." It has been used to avoid collisions of rare and protected species such as Whooping Cranes and Golden Eagles, in addition to California Condors. It is enjoined on the operators in both the PacifiCorp and Duke plea agreements in 2014. (Clearly, fitting all species of concern with radio transmitters or GPS would be impractical; it works for condors because there are so few of them, most released from captive breeding programs.) Some curtailment regimes employ human spotters—a labor-intensive approach that might serve in predictable, limited periods of high activity, say, of Whooping Cranes in migration approaching known resting areas.

Much remains to be known about actual consequences of wind turbine interactions with wildlife and wildlife habitat; research continues, and evidence accumulates for the accuracy of preliminary estimates of impacts on species of concern and others, and for the effectiveness of measures taken to compensate for or mitigate losses predicted in those estimates. But fundamentally, in the USFWS *Guidelines for Best Practices* and similar guidelines issued by state wildlife agencies, conservation organizations, and local governments, we find that we already know that the first requisite for an acceptable wind energy facility is proper siting; and we already know what factors determine proper siting, and what locations and conditions ought to be avoided altogether. But all this accumulated and accumulating knowledge is rendered useless by slapdash preliminary screening of potential sites, short-circuiting of consultation with the USFWS and qualified local authorities, rejection of sound practices as "suggestions, not laws," and lack of candor in assessing and reporting project impacts.

This is not to mention the reports of wind project developers steam-rolling local authorities to gain permissions, threatening lawsuits if denied, presenting one set of plans for approval and then switching after approval is secured (for example, building wind towers many feet higher than the dimensions submitted and authorized). Bad actors that engage in such behavior can scarcely be expected to follow through with the monitoring studies and reports that assure the safest operation of their facility. That lack of follow-through is doubly damaging, because such studies and reports would become part of the base of information on which future changes to the guidelines will depend.

Federal regulations and laws, not just "guidelines" and suggested practices, are essential.

Despite the shining examples of good citizenship and cooperation afforded by some wind energy companies, a patchwork of state "suggestions" and the largely voluntary federal guidelines constitute a wholly unsatisfactory solution to a growing environmental problem. If nothing else, the lack of a uniform national code that is enforceable would present a constant threat to migratory birds that pass from one jurisdiction to another, and to environmental resources that, in some cases, like our national parks and monuments, though actually located in one state or more, are part of the heritage of the American people at large. This is why federal regulations and laws, not just "guidelines" and suggested practices, are essential.

It will be hard, in America, to persuade legislators to enact adequate laws that would answer to the need. Politicians are reluctant to interfere with owners of private property who wish to supplement their income with wind farm leases, even though the greater good of the community would seem to call for such action. Even the voluntary agreement protecting the Flint Hills in Kansas, negotiated by then-governor Kathleen Sibelius and extended by Governor Sam Brownback, has been challenged by pressure on current Governor Laura Kelly from at least one county board to allow more wind projects into the protected area now known as the "governor's box." "Every time we get a new governor the issue comes up again," says Brad Loveless, Kansas Secretary of Parks, Wildlife, and Tourism. "I don't imagine there's a lot of appetite on the part of the Legislature to legislate at protecting certain areas. All it takes to make a project work is a developer willing to site a project, a county that's willing to accept it and approve it, and somebody that's willing to buy the power. Given the right circumstances, all those things could come together and they could put wind power in a really bad spot."

However, we don't have to oppose wind energy categorically; studies conducted by the Nature Conservancy estimated that even after subtracting sensitive wildlife habitats from the nearly 222 million acres of land suitable for development in the Central Plains based on wind speed and terrain, approximately 91 million acres would remain, amounting to nine percent of the region; and these low-impact areas could yield approximately 1,099 GW of electrical energy. That amounts to more then ten times current U.S. wind capacity and is equivalent to the total generating capacity from all sources (AWEA 2019b, USDOE 2017.)

Green energy is good, but not all wind energy generation is harmless.

"We can and must do better if future generations of Americans are going to have a chance to see some of our nation's most iconic bird species," said [Dr. Michael] Hutchins [ABC National Coordinator of the Bird Smart Wind Energy campaign]. "Our nation's wildlife should not be collateral damage in the battle against climate change, especially when much of the conflict could be easily addressed through better siting of wind projects and improved regulation."

All the birds pictured in this article are among the species potentially harmed by poorly sited wind turbine projects.

--M. L. Donnelly

19 July 2020

Red-tailed Hawk. Photo by Bob Gress, BirdsInFocus

AOK Official Position on **Wind Turbine Siting**

AOK supports the following guidelines and practices for siting and operating wind energy generation in Kansas:

1. Proper siting of wind turbines :
   - –Use available data from state and federal agencies and other sources showing location of sensitive resources and landscape-scale screening of possible project sites
   - –Avoid siting on intact ecosystems, such as undisturbed prairie and wetland habitat
   - –Avoid siting in migration corridors, especially those used by endangered and threatened species, or within three miles of state and federal parks and refuges, state wildlife areas, and other protected areas
   - –Avoid siting within three miles of known prairie grouse leks and nesting areas
   - –Avoid siting that fragments contiguous habitat
   - –Avoid siting between roosting and feeding or resting areas of birds or bats
   - –Follow siting *Guidelines for Windpower Projects in Kansas* of the KDWPT and the USFWS Best Practices
   - –Consider cumulative impacts of new sites in relation to existing siting within flyways and with regard to impact on crucial habitat on a regional basis

   Observance of these stipulations requires thorough preliminary screening of potential sites, and careful examination of local conditions and wildlife presence and habits.

2. If preliminary studies of the potential site by KDWPT or USFWS staff and other qualified professionals indicate unacceptable impacts on wildlife and habitat, the site should be rejected; in cases where impacts are expected, but not sufficiently great as to cause abandonment of the site, plans should be devised to minimize impacts discerned in preliminary studies, and to mitigate or compensate for significant impacts.

3. Avoidance of siting on native prairie and crucial habitat is always to be preferred over compensatory offsite mitigation.

4. Having done preliminary studies of the hydrology and geology of the chosen site, and having inventoried the wildlife and flora, disruption of these physical conditions and biota should be minimized to the extent possible during construction.

5. Report results of studies to KDWPT and USFWS prior to construction, and at regular intervals during operation.

6. Conform to USFWS guidelines for placement of above-ground electrical wires, transformers, and other structures attendant to the wind turbines themselves.

7. Keep lighting at both operation and maintenance facilities and substations located within half a mile of the turbines to the minimum required; lights not essential for safety practices should be hooded and directed downward to minimize skyward illumination.

8. Establish non-disturbance buffer zones to protect sensitive habitats or areas of high risk for species of concern reported in pre-construction studies; determine extent of buffer zones in consultation with USFWS, KDWPT, local and tribal biologists, and land management agencies (e.g., BLM, USFS) or other credible experts as appropriate.

9. When construction is completed, restore the site as far as possible to its original condition, using native plants; minimize impacts to wetlands and water resources.

10. Conduct follow-up studies to confirm preliminary estimates of impact and report them to KDWPT and USFWS in order to make adjustments to minimize or mitigate unanticipated negative consequences, utilizing guidance from credible experts.

11. Monitor for invasive species; use locally approved invasive species prevention and control measures to control or eradicate.

12. When the turbines are retired, remove all evidence of their presence, restoring the soil and flora, using topsoil set aside in construction and native seeds and plants.

13. Overall, in all planning and operations, observe enforcement of existing laws.

The Importance of Baseline Surveys for Wind Turbine Siting Decisions and AOK Sanctuary Operations

John Schukman and Michael Donnelly

John and Galen Pittman have done preconstruction baseline surveys of flora and fauna present on proposed wind farm sites, and John has recorded censuses of bird populations at the AOK Hutton Niobrara Ranch Sanctuary for fifteen years.

Baseline surveys are simply exhaustive censuses or catalogues of all the flora and fauna—the plant and animal life—found on a certain site or property. They are a snapshot in time of the life-forms supported on that site, constituting useful tools for conservation management. In some cases, as in siting wind energy generating facilities, they may be an essential requirement.

Barring traumatic events—conversion of prairie to cropland, mass application of herbicides, biome-altering fires, climate change—flora are less of a challenge to makers of baseline censuses than are fauna. Their mobility complicates cataloguing fauna: birds and animals may range widely to and from the site of a baseline survey, be present at some seasons and not others, and suffer population fluctuations because of disease, parasitism, drought and adverse weather phenomena. It is precisely to have records of the effects of some of these phenomena that baseline surveys are so important, both in determining appropriate sites for wind turbines, and in keeping track of trends on wind farm sites as well as protected habitats, like the AOK sanctuaries.

Baseline studies are an essential first step in assessing the suitability of proposed wind turbine sites from the standpoint of potential impact on birds, animals, and habitat. Potential impact is of two kinds: the most obvious is direct impact, such as collisions with turning blades, and disruption of habitat by construction or, in the case of some species, introduction of large vertical structures. But there is also indirect impact: breaking up contiguous habitat, interrupting patterns of movement from roosting to feeding areas, making inroads by predators easier. Although initial concerns over the effects of wind farms on wildlife centered on collision mortality of raptors and other migratory birds (*e.g., Johnson et al. 2002, Barrios and Rodriguez 2004, Smallwood and Thelander 2008*), concern is steadily increasing about the indirect effects of wind-energy development on birds (*Rubenstahl et al. 2012*). Studies have shown that wind-energy development may cause a variety of raptors and breeding grassland birds to avoid or be displaced from otherwise suitable habitat within wind resource areas (*e.g., Leddy et al. 1999, Larsen and Guillemette 2007, Farfán et al. 2009, Pearce-Higgins et al. 2009, Garvin et al. 2011*). Similarly, although there is a recognized need to explore the implications of wind-energy development for bird productivity, only one study has investigated the indirect effects of wind farms on nesting success (*Rubenstahl et al. 2012*). Nevertheless, from studies exploring the implications of other forms of anthropogenic disturbance on birds, we know that human development and changes in land use can cause nest failure and a decrease in postfledging survival (*Bennett et al. 2011, Johnson et al. 2012*). For example, frequent disturbance by wind technicians at the site, turbine noise, and shadow flicker from rotating turbine blades could alter incubation or nestling provisioning behavior in nesting adults.

A further implication of wind-energy development for breeding grassland birds may be the indirect effect of the wind resource area on predator populations, activity, and behavior (*Martin 1993*). For example, wind-farm access roads may provide travel and foraging corridors for mammalian nest predators (*Frey and Conover 2006*), providing greater access to grassland habitats and increasing the frequency of nest predation. Additionally, the ability of a bird to perceive a change in predation risk may depend on local factors (*Chalfoun and Martin 2010, Kovařík and Pavel 2011*). Again, turbine noise and shadow flicker could affect nesting females' perception of predation risk. Researchers urge prudence in siting decisions: "We recommend that wind turbines be placed within cropland habitats that support lower densities of grassland passerines than those found in CRP grasslands" (*Leddy, Higgins and Naugle, Wilson Bulletin, Vol. 111, No. 1 (Mar., 1999),*).

Long-billed Curlew. Photo by Bob Gress, BirdsInFocus

Wind turbines on formerly intact prairie south of Beaumont, Kansas. Photo by Ron Klataske

Assessment of direct impact might seem simpler, but John Schukman notes that even with careful preliminary bird data, it is often difficult to interpret how mortality of birds might be affected by a given event—such as the introduction of wind turbines. One study concluded that "there was no clear relationship between predicted risk and the actual recorded bird mortality at wind farms." The assumption of a linear relationship between frequency of observed birds and fatalities proved to be incorrect. "Bird mortality in wind farms is related to physical characteristics around individual wind turbines," while Environmental Impact Assessments usually take in the whole wind farm as a unitary entity. Research needs to be species-specific, and focused on specific features of the proposed location. It would also need to consider seasonal changes in conditions, as well as nocturnal and diurnal factors. In other words, the more narrowly specific, the more granular the assessment, the more likely that it accurately represents the actual case for any given machine; the sum of individual cases would give the range of likely mortality on the site (*Ferrer et al. 2011*).

What about the AOK sanctuaries and wind farm sites? John notes that, although there are wind turbines about five miles from the Achterberg Demonstration Farm, he thinks the habitat there is a small plot, and not a high sensitivity area. However, there are no surveys to date other than an eBird checklist with dates and observers recorded.

Many grassland bird species are an object of concern because of falling populations and reduced habitat nationally, but in the limited number of observations on the Achterberg Farm, other than non-breeding meadowlarks, no Prairie-Chickens, Upland Sandpipers, or other species of concern have been listed. [*See chart 1, a summary list of species of birds observed on all three AOK Sanctuaries, keyed to sites where each has been found]*

The Hutton Ranch on the Niobrara River in northwest Nebraska, however, does have good bird lists compiled over fifteen years. *[All observations over the fifteen years are included in the list in Chart 1]* It represents a large area of native habitat, and some literature shows a high sensitivity to disturbance by wind energy development (*Fargione et al. 2012*). Sharp-tailed Grouse, Sandhill Cranes, Bald Eagles, Long-billed Curlews, and Upland Sandpipers are among species of concern that have been recorded over the years at Hutton. Census-takers have recorded both the Marsh Wren and the Sedge Wren, and the Yellow-breasted Chat. The Bobolink is a frequent breeder.

Studies have shown that there exist large areas in the Northern Great Plains where wind development would likely have few additional impacts on wildlife (*Fargione et al. 2012*). Estimates are that the around 1,056 GW of potential wind energy available across this area strictly in areas of low impact on biodiversity amount to over 35 times present development goals. The issue lies in directing development solely to these low-impact areas—and away from sensitive areas that shelter species of high concern, like the Hutton Niobrara Ranch.

Among AOK's other properties, Mt. Mitchell is not likely to be encroached upon by wind turbines, and other prospective properties likewise seem not to be immediately threatened.

John Schukman-- Bibliography of key relevant articles.

Fargione, J, J. Kiesecker, M. Slaats, and S. Olimb. 2012. *Wind and wildlife in the Northern Great Plains: identifying low-impact areas for wind development.* PLOS ONE: https://doi.org/10.1371/journal.pone.0041468

Ferrer, M., M. de Lucas, G. Janss, E. Casado, A. Munoz, M. Bechard, and C. Calabuig. 2011. *Weak relationship between risk assessment studies and recorded mortality in wind farms. Journal of Applied Ecology 49:38-46.* https://doi.org/10.1111/j.1365-2664.2011.02054.x
https://besjournals.onlinelibrary.wiley.com/doi/full/10.1111/j.1365-2664.2011.02054.x

Some Birds of the AOK Sanctuaries

Bell's Vireo. Photo by Bob Gress, BirdsInFocus

Upland Sandpiper. Photo by Judd Patterson, BirdsInFocus

Marsh Wren. Photo by Bob Gress, BirdsInFocus

Common Poorwill. Photo by Judd Patterson, BirdsInFocus

Chestnut-Collared Longspur. Photo by Bob Gress, BirdsInFocus

Blue Grosbeak male. Photo by Bob Gress, BirdsInFocus

Burrowing Owls. Photo by Bob Gress, BirdsInFocus

Yellow-breasted Chat. Photo by Dave Rintoul

CHART 1: BIRDS OBSERVED AT THE AUDUBON OF KANSAS SANCTUARIES

(H - Hutton Niobrara, M - Mt. Mitchell, A - Achterberg)

Canada Goose- H, M
Wood Duck- H
Blue-winged Teal- H
Northern Shoveler- H
Mallard- H, M
Northern Bobwhite- H, M, A
Ring-necked Pheasant- H, A
Sharp-tailed Grouse- H
Greater Prairie-Chicken- H, M
Wild Turkey- H, M, A
Pied-billed Grebe- H
Rock Pigeon- H, M
Eurasian Collared-Dove- H
Mourning Dove- H, M, A
Yellow-billed Cuckoo- H, M, A
Common Nighthawk- H, M, A
Common Poorwill- H
Chimney Swift- H
Virginia Rail- H
Sora- H
Sandhill Crane- H
Killdeer- H, M
Piping Plover- H
Upland Sandpiper- H, M
Solitary Sandpiper- M
Greater Yellowlegs- M
Long-billed Curlew- H
White-rumped Sandpiper- H
Pectoral Sandpiper- H
Wilson's Snipe- H
Wilson's Phalarope- H
Spotted Sandpiper- H
Solitary Sandpiper- H
Lesser Yellowlegs- H
Ring-billed Gull- H
Franklin's Gull- M
Least Tern- H
Black Tern- H
Forster's Tern- H
Great Blue Heron- H, M
Turkey Vulture- H, M, A
Northern Harrier- H, M
Cooper's Hawk- H, M
Bald Eagle- H
Swainson's Hawk- H, A
Red-shouldered Hawk- M
Red-tailed Hawk- H, M, A
Rough-legged Hawk- H
Great Horned Owl- H
Burrowing Owl- H
Barred Owl- M
Belted Kingfisher- H, M
Red-headed Woodpecker- H, M
Red-bellied Woodpecker- H, M, A
Downy Woodpecker- H, M, A
Hairy Woodpecker- H, M, A
Northern Flicker- H, M, A
American Kestrel- H, M, A
Prairie Falcon- H
Olive-sided Flycatcher- H
Eastern Wood-Pewee- H, M
Yellow-bellied Flycatcher- M
Willow Flycatcher- H
Least Flycatcher- H, M
Eastern Phoebe- H, M, A
Great Crested Flycatcher- H, A
Western Kingbird- H, M, A
Eastern Kingbird- H, M, A
Scissor-tailed Flycatcher- M
Bell's Vireo- H, M
Yellow-throated Vireo- M
Blue-headed Vireo- A
Warbling Vireo- H, M, A
Red-eyed Vireo- H, M, A
Loggerhead Shrike- H, M, A
Northern Shrike- H
Blue Jay- H, M, A
American Crow- H, M, A
Black-capped Chickadee- H, M, A
Tufted Titmouse- M
Horned Lark- H, A
Rough-winged Swallow- H, M
Tree Swallow- H, M
Barn Swallow- H, M, A
Cliff Swallow- H, M
Golden-crowned Kinglet- H
Red-breasted Nuthatch- H
White-breasted Nuthatch- H, M, A
Blue-gray Gnatcatcher- H, M
House Wren- H, M, A
Winter Wren- M
Carolina Wren- M, A
Bewick's Wren- M
Sedge Wren- H
Marsh Wren- H
European Starling- H- M
Gray Catbird- H, M
Brown Thrasher- H, M, A
Northern Mockingbird- H, M, A
Eastern Bluebird- H, M, A
Wood Thrush- H
American Robin- H, M, A
Cedar Waxwing- H, M, A
House Sparrow- H, M
House Finch- H, M
Purple Finch- H
Pine Siskin- H, M
American Goldfinch- H, M, A
Chestnut-collared Longspur- H
Grasshopper Sparrow- H, M
Chipping Sparrow- H, M
Clay-colored Sparrow- H
Field Sparrow- H, M
Lark Sparrow- H, M, A
Lark Bunting- H
American Tree Sparrow- H
Dark-eyed Junco- H, M
White-crowned Sparrow- H
Harris's Sparrow- H
White-throated Sparrow- H, M
Vesper Sparrow- H, M
Savannah Sparrow- H
Song Sparrow- H, M, A
Lincoln's Sparrow- H, M
Swamp Sparrow- H
Eastern Towhee- M
Spotted Towhee- H
Yellow-breasted Chat- H, M
Yellow-headed Blackbird- H
Bobolink- H
Western Meadowlark- H, A
Eastern Meadowlark- H, M, A
Orchard Oriole- H, M, A
Baltimore Oriole- H, M, A
Red-winged Blackbird- H, M
Brown-headed Cowbird- H, M, A
Common Grackle- H, M
Great-tailed Grackle- H, A
Ovenbird- H
Black-and-white Warbler- H
Orange-crowned Warbler- H, M
Nashville Warbler- M
Common Yellowthroat- H, M, A
American Redstart- H
Yellow Warbler- H, M
Yellow-rumped Warbler- H, M
Scarlet Tanager- H
Summer Tanager- M, A
Northern Cardinal- H, M, A
Rose-breasted Grosbeak- H, A
Black-headed Grosbeak- H
Blue Grosbeak- H, M, A
Indigo Bunting- H, M, A
Dickcissel- H, M, A

Ron K on BFF restoration & Prairie Dog struggles

All photos by Ron Klataske

The late Larry Haverfield releases a Black-footed Ferret (BFF) on the Haverfield/Barnhardt/Blank ranch complex on December 18, 2008. It was among the first fourteen released there that day. Previously the last BFF documented in the state was in 1957.

Black-tailed Prairie Dog colonies are somewhat like wetlands in shortgrass prairies. They are magnets for a diverse array of other wildlife species. To restore critically endangered Black-footed Ferrets, we need to support and allow landowners to conserve prairie dogs on their land.

A VISION FOR SHORTGRASS PRAIRIE WILDLIFE

Significant strides in conservation of many, if not most, wildlife species take considerable time. The crucial step is often restoration and/or protection of vital habitat by landowners or land managers. Prospects for success are greatly enhanced when there is a high level of public support and supportive public policies. When public and private support are paired with heroic landowners and dedicated individuals, it seems a winning formula should fall into place. In one notable instance in Kansas, in the absence of supportive policies, it was more like climbing Mount Everest than "falling in place."

For some wildlife species, even those in greatest need of conservation, success often requires decades or generations of determination by a few incredibly dedicated individuals. Fortunately, in many cases, other partners who share their values are similarly valiant in their involvement and support for our collective natural heritage.

As a principal participant and observer of wildlife conservation during the past 50 years, I have never experienced or seen anything more impressive than the resilience and dedication of landowners Larry Haverfield and Gordon Barnhardt. They were heroic by any measure. What made it even more impressive was the calm commitment they maintained while they encountered a continuous storm of opposition created by the Kansas Farm Bureau and Logan County Commissioners for a decade or more starting in 2005.

Conservation initiatives are much more challenging—and often blocked—when there are powerful special interest groups and individual opponents hell-bent on

blocking any meaningful conservation. Why? Well, in some cases when an organization is involved, it appears they are trying to create mythical dragons that they will slay. I recall an early Saturday morning Farm Bureau radio commentary that espoused the idea that the three greatest threats to farming were the Clean Water Act, federal wetlands protection and the Endangered Species Act. That propaganda hasn't changed during the intervening thirty years.

I grew up on a diversified farm in the 1950s and 60s, and continue to manage land designed for our cattle operation and wildlife. Hunting, fishing and the pleasure of seeing wildlife were important to many of my friends. I remember the first deer and, fifteen years later, the first Wild Turkey I saw in Kansas. Most people in rural communities were, and still are, interested in and supportive of wildlife.

But I also recall an individual referring to various kinds of wildlife with the question, "What good are they?" That philosophy has become a banner for a few organizations. They portray programs designed to recover threatened and endangered species—including Lesser Prairie Chickens and Black-footed Ferrets—as threats to farmers and ranchers. After hearing this philosophy over the radio, reading it in publications and having it presented at annual conventions, it isn't surprising that many rural landowners and tenants fear for impairment of their ongoing agricultural operations. As in political rhetoric, once claims are made it is difficult for the source to admit that they are exaggerations, and difficult for conservationists to reassure people that ***the sky isn't falling*** and protection of imperiled wildlife isn't going to result in imminent disaster.

Unfortunately, it now appears that the division is getting deeper and wider like a crevasse in an iceberg. The activism of some individuals, but more frequently organizations, against any meaningful protections or management opportunities for various wildlife species led a friend to describe them as "*extinctionists*." They are the opposite of "*conservationists*."

The divisiveness prevalent today on this and many issues wasn't so prevalent in 1973 when Congress passed the Endangered Species Act, or in 1975 when the Kansas Legislature enacted the Nongame and Endangered Species Conservation Act. Maybe, just maybe, individuals who can find more common ground will emerge within the leadership of their organizations. It is more reassuring, and the fruits are more lasting, if there is agreement, rather than one side prevailing over the other.

In 2011 I wrote an article for that year's edition of *Prairie Wings* entitled, **CONSERVATION of Prairie Dogs and Reintroduction of Black-footed Ferrets REQUIRES COURAGE**, with a subheading highlighting the fact that "*A Dedicated Attorney Along with Old and New Friends are also Helpful*." It detailed the struggle that was necessary to protect the complex of prairie dog colonies on the rangelands owned by Larry Haverfield, Gordon Barnhardt and Maxine Blank from poisoning by the Logan County Commission. These three landowners then hosted reintroduction of captive-reared Black-footed Ferrets to the shortgrass prairies of western Kansas. Their rangeland is the only location where these native mammals remain in the state, and one of the few private land reintroduction sites in the Great Plains and Intermountain West.

Following a late afternoon BFF release in October 2008, Larry Haverfield and Pete Gober, BFF project leader for the U.S. Fish and Wildlife Service, relax in the Haverfield ranch house before a chili supper

If other landowners are receptive, it shouldn't remain the only site within our state's 52 million acres where prairie dog colonies can be managed—in cooperation with federal agencies—for conservation of those two species and many others that benefit from the unique habitat and prey created by the presence of prairie dogs. Participants should not be required to withstand strident opposition from the Kansas Farm Bureau, endure or initiate numerous court actions, and go it alone without any substantial partnership support from the state agency entrusted with responsibility for stewardship of our state's wildlife heritage.

All photos by Ron Klataske

BFF release - people & vehicles

That is why, on behalf of Audubon of Kansas, I have been advocating for several years within the Kansas State Technical Committee (STC)—which advises the USDA's Natural Resources Conservation Service and Farm Service Agency on conservation programs authorized by the federal Farm Bill—that conservation and management to benefit imperiled species, including Black-footed Ferrets, should be authorized. Congress specified that 10 percent of the annual allocations for the Environmental Quality Incentive Program (EQIP) to states should be available for Wildlife Resource Concerns. If that Congressional directive were implemented in Kansas, approximately $3 million of the $33 million allocated for this state could have been devoted to wildlife habitat enhancement, establishment and management just during the 2020 fiscal year. In addition to developing new, and much needed, wildlife habitat initiatives of potential interest to landowners, we all need to help advertise the existing opportunities available through the EQIP.

During the past ten years, less than a third of the available funding for wildlife was utilized for that purpose in Kansas; the unused funds are then redirected to other EQIP practices—including taxpayer investments of hundreds of thousands of dollars in new or established cattle feedlots and hog facilities. Our advocacy for including practices that would allow landowners to apply for cost-share funding and collaborate with agencies to enhance management for the range of species dependent on or associated with prairie dog colonies was opposed by the KDWPT representative and The Nature Conservancy representative on the STC wildlife subcommittee. In tandem with our promotion of conservation practices within EQIP to address the wide swath of imperiled species associated with prairie dog colonies, we have asked a succession of KDWPT secretaries to provide leadership and direct personnel to work with NRCS to develop the necessary standards and specifications and include appropriate EQIP practices. Prospects for more progressive and inclusive approaches to wildlife management were greatly enhanced when Governor Kelly appointed Brad Loveless to serve as KDWPT secretary. Likewise, most of the representatives of wildlife organizations on the Kansas Nongame Wildlife Advisory Council (KNWAC) are committed to conservation of imperiled species. The Kansas Farm Bureau and the Kansas Livestock Association represent agricultural interests. It is always hoped that they will recognize the importance of these conservation measures in preventing species from becoming threatened or endangered within the state, and subsequently making the challenge of recovery more difficult for all stakeholders.

During the fall 2020 meeting of the KNWAC I proposed the resolution provided below.

The resolution was shared online with members of the Council. The first response was from Kent Askren, Public Policy Director for the Kansas Farm Bureau. He suggested that the KFB cannot support the resolution, writing that they "cannot support the resolution to encourage development of EQIP practices that facilitate Black-tailed Prairie Dogs in Kansas. To reiterate, we

All photos by Ron Klataske

find this proposal out of tune with the general purposes envisioned for EQIP and the many great projects that these limited resources could be used for to improve our working lands."

The KFB has been an adamant proponent of retaining the 1901 antiquated statutes that allow counties and township boards to force landowners to eradicate prairie dogs. The organization overlooks the basic foundation for EQIP, and overlooks much of the science related to wildlife management. The KFB represents agribusiness foremost and often overlooks the diverse interests of family farms and ranches. However, we have a responsibility to continue to try to work with them for the benefit of the natural world we share. As we go to press, most of the organizations represented on the KNWAC have not responded.

As a person with roots still planted deeply within my farm and ranch heritage, I am looking forward to a time when I can consider the Kansas Farm Bureau as a partner for conservation of biodiversity within our landscape and for wildlife on "working lands." And, to a time when we can all consider the Kansas Department of Wildlife, Parks and Tourism as equally committed to conservation of nongame, impaired and endangered species as they are to the protection and management of game species.

I am disappointed that many—in some places most—agricultural operations no longer leave a place for natural habitat for wild birds and beasts! Large operations, large equipment, federal crop subsidies and policies, and philosophies that promote maximum production of commodities over all other values have altered entire landscapes. It is not unusual to travel the width of some counties and view only corn, soybeans and wheat fields.

An agrochemical company spokesperson told an audience at Kansas State University several years ago that we have to feed a world's population of 9 billion. I wonder if we can do that without destroying our natural world throughout much of the Great Plains and Midwest? In my view it is only natural that "working lands" should include places preserved for biodiversity. That is the best way to recover imperiled species and keep others from becoming endangered or extinct. Taxpayers expect their contributions to fund conservation, not just commodity production.

RESOLUTION

Whereas *more than $3 million was appropriated by Congress to fund Environmental Quality Incentive Program practices in Kansas during the current fiscal year, and Congress established in the 2018 Farm Bill that 10 percent should be available for Wildlife Resource Concern practices;*
Whereas*, as reported to the USDA State Technical Committee on September 16, less than 2.5 percent of the funds available were obligated for practices involving establishment, enhancement or management of wildlife habitat;*
Whereas *utilization of EQIP funding for Wildlife Resource Concerns has consistently been far below—usually near a third of—the funding available in Kansas, including during all years under the previous Farm Bill when 5 percent of appropriations for each state was earmarked by Congress for wildlife purposes;*
Whereas *KDWPT and NRCS officials have opportunities to work together, along with other stakeholders, to design and develop specifications and standards for wildlife establishment, enhancement and management practices for wildlife habitat;*
Whereas *numerous nongame and imperiled species of wildlife depend in various degrees on Black-tailed Prairie Dog colonies for habitat and as sources of prey;*
Whereas *properly managed Black-tailed Prairie Dog colony complexes are critical for recovery of federally endangered Black-footed Ferrets;*
Whereas *Black-tailed Prairie Dog colonies can serve other ecological and economic purposes, even if not large enough to support Black-footed Ferret populations; and*

All photos by Ron Klataske

Whereas the State of Kansas *adopted a Black-tailed Prairie Dog Management and Conservation Plan in 2002 with involvement of numerous conservation, agriculture, university and resource agency representatives and stakeholders;*

Whereas the State of Colorado *has implemented and successfully demonstrated over a period of years that, given an opportunity and the support of EQIP funding and interagency cooperation with management and control measures, many landowners are receptive to implementation of voluntary practices designed to maintain and/or enhance prairie dog colonies to benefit Black-footed Ferrets and other wildlife; and*

Whereas *the same source of funding is available for a similar program in Kansas which would benefit conservation of Golden Eagles, Ferruginous Hawks, Burrowing Owls, Swift Foxes, other birds and mammals, reptiles and amphibians; now, therefore, be it*

Resolved, that the Kansas Nongame Wildlife Advisory Council urge the Kansas Department of Wildlife, Parks and Tourism to collaborate with officials of the Natural Resources Conservation Service and other stakeholders to develop EQIP practices that will assist landowners with management and conservation of prairie dog colonies for the purpose of benefiting a diverse suite of dependent and/or associated wildlife species.

Recovery of Black-footed Ferrets and Conservation of Black-tailed Prairie Dogs are still dependent on a few other heroes and you.

What can you do to help? (1) Ask your state representative and senator to repeal the 120-year-old prairie dog eradication statutes (K.S.A. 80-1201 thru 80-1208). (2) Ask Brad Loveless to support EQIP practices that will benefit Black-footed Ferrets and other wildlife associated with prairie dog colonies by allowing landowners to work collaboratively with state and federal agencies, and express your appreciation. Brad's email address is: Brad.Loveless@ks.gov (3) Support organizations that express a willingness to work for conservation of imperiled species, and demand that they do.

Cattle truck bringing steers to the Haverfield working ranch.. Photo by Ron Klataske

A Retrospective of Twenty Years for AOK

"Twenty Years of Struggle and Accomplishment: Ron Klataske and Audubon of Kansas"— by **Dick Seaton**, Chairman of AOK from 2001 to 2006

Over the past year, Audubon of Kansas has been celebrating twenty years of active environmental advocacy in the Great Plains. Two members of the Board of Trustees who were there at the beginning share their reflections on some high points in that history.

When Ron Klataske decided to start a free-standing Kansas Audubon organization in 1999, he brought to it 28+ years' experience with National Audubon and a lot of mid-western friends who were like-minded environmentalists.

But AOK was a shoestring operation at the start. We used the existing charter of the Kansas Audubon Council and renamed it Audubon of Kansas. Bill Browning was our first chair, and Ron our sole employee.

Rather quickly though, AOK received a large gift of land and endowment funds from Harold and Lucille Hutton of Nebraska. Over time, Ron has parlayed his grant skills into about one million dollars additional funding for improvements at the Hutton Niobrara Ranch Wildlife Sanctuary in northern Nebraska.

Here in Kansas, AOK has been especially active in advocating for the environment, both at the legislature and in state and federal agencies. Here are some of the highlights:

*Ron has fought off repeated efforts to dilute or eliminate laws which encourage conservation easements and protect non-game and endangered species.
*He has served for years on USDA's state technical committee, advising NRCS and FSA on Kansas conservation programs.
*He has worked tirelessly with the Kansas Department of Transportation to reduce roadside mowing and spraying on its 150,000 acres of right-of-way, in order to encourage native wildflowers and grasses.
*AOK helped facilitate the "Heart of the Flint Hills" project initiated by Governor Sebelius and enlarged by Governor Brownback, to keep industrial scale windpower facilities out of the Flint Hills.
*AOK filed a friend of the court brief with our Kansas Supreme Court in Zimmerman v. Wabaunsee County Commissioners, advocating in favor of the county's prohibition on large scale wind complexes. The court upheld the ban in 2011.
*We have fought strenuously for restoration of the water rights of Quivira National Wildlife Refuge, which hosts a number of threatened and endangered birds such as Whooping Cranes, as well as thousands of Sandhill Cranes, each year.
*Ron has publicized many warnings about the dangers of Old World Bluestems,invasive species that kill native plants and encourages erosion.
*He has advocated for years that the Sandhill Crane hunting season be reduced and limited to certain hours in order to protect Whooping Cranes, which migrate with them.

Today, AOK manages the Hutton Sanctuary and the Achterberg "Wildlife Friendly Demonstration Farm" in Lincoln County. It is also the owner of Mt. Mitchell, an historic park and sanctuary in Wabaunsee County, which we acquired by legislative action from the Kansas Historical Society in 2006, and helped expand in 2007.

We encourage other owners who want to preserve their land to consider adding it to our "archipelago of sanctuaries."

Ron Klataske has been recognized over the years for his environmental accomplishments. A few of his awards are:

*The John K. Strickler Award from the Kansas Association of Conservation and Environmental Education.
*The Conservation Professional Award from the Nebraska Wildlife Federation.
*The President's Award from the Western Association of Fish and Wildlife Agencies.

Ron retires from the executive position on December 31, 2020 and will be succeeded by Jackie Augustine. He has had quite a career, and his passion for the natural world will continue to inform and inspire AOK for years to come.

"Ron K, the Hutton story, and the Prairie Dog Wars"—reminiscence by **Bob McElroy**, a.k.a. "Prairie Doc;" Chairman of AOK from 2006 to 2012

It was about 1990 when I received a call from the office of the Regional Director of the National Audubon Society asking if I would put together a group of my friends so he could show slides of what the National Audubon Society was doing regarding the environment and especially wildlife. Thus it was that Ron Klataske showed up at my home for an evening discussion and slide show about wildlife. During the course of the evening he casually mentioned that on his farm north of Manhattan he had many coveys of quail and we would be welcome to come and hunt. Several of my friends were avid quail hunters and that offer was immediately accepted and acted on. That hunt still stands out in my memory, Ron had quail all right; some of his coveys when flushed sounded like B-29s taking off, they were so large; the dogs were on continuous point.

Later, around 1999 the National Audubon Society disenfranchised the state organizations and Kansas decided to go it alone. I had several discussions with Ron about potential board members, and not long after received a call asking me to serve. Thus began an association with Audubon of Kansas that has lasted over several decades.

In 2001 AOK was the recipient of 5,000 acres of sandhill ranch land along the Niobrara River, along with a significant endowment from the estate of Harold and Lucille Hutton. The ranch has miles of lush sandhill pasture bisected by two spring fed creeks and three miles of frontage along the scenic Niobrara river.

The Huttons were part of the ranching community that years earlier had opposed the Interior Department building a dam and long canal paralleling the river from north central Nebraska in order to irrigate farmland in eastern Nebraska. At the time Ron worked as regional director for the National Audubon Association and he was very active in organizing and alerting the ranches and communities along the river to the hazards and environmental dangers such a project would produce. A coalition of ranchers, concerned citizens, and environmentalists were successful in stopping the damming project, and getting Congress to designate a section of the Niobrara a scenic river.

From this effort Ron had developed a close relationship with a number of ranchers, especially Harold Hutton. By the time Harold and Lucille approached the end of their lives, Ron was director of Audubon of Kansas. The Huttons considered other options including both national and state environmental organizations, but in the end chose Audubon of Kansas to manage their ranch in perpetuity as a wildlife-friendly property. The fact that they chose an organization based in Kansas rather than Nebraska is a testament to the trust they developed in Ron to follow their desires for management of the ranch.

The original management of the ranch was arranged through the wording of the will and the administrators of the will who were local ranchers. This proved to be a very mixed blessing. Although it was convenient to have local management, it became clear over time that the locals had ulterior motives. Despite the request of the will that the Hutton ranch be wildlife friendly, the pastures were increasingly crowded with cows to the point that, by the end of the five-year contract, the grass had been literally eaten into the ground. Needless to say, nesting and brood habitat for Sharp-tailed Grouse and other grassland birds was devastated.

There is a general rule that for a prairie grouse to nest, there needs to be grass tall enough to hide a football. I accompanied Ron on two different occasions where we measured grass height with the use of a Robel pole. A Robel pole is a two meter pole with ten centimeter markings attached with a two meter line to another unmarked two meter pole. Ron placed a football at the base of the pole with a golf ball on the other side and recorded the height of the grass from the second pole with a camera. With hundreds of randomly selected sightings, we found only one site that had enough grass to hide even a golf ball.

When the original five year lease expired we asked the managers to vacate the ranch because of their abuse of the land. When they contested the eviction order in front of a judge, replying "we used only standard grazing practice," Ron used what I call the dump truck attack. He took the hundreds of documented pictures and dumped the load on them in front of the court. We regained control of the ranch, and the grass has returned— along with the Sharp-tailed Grouse and the Greater Prairie Chickens.

On more than one occasion, riding my Tennessee Walking horses we were able to make wide-ranging explorations of the ranch. Quoting Ron, "You can see so much more from the back of a horse than from walking or a pickup truck." Once when on my horse Strider he was photographing a mother raccoon in the crotch of a tree a few feet above him, I said "if she snarls you will be on the ground when Strider bolts out from under you." But she didn't and Strider didn't and Ron got his picture.

Under Ron's management an extensive water tank system has been put in place so that cows can drink without going into the creek bottoms, traffic which increases erosion of the creek banks. He also arranged for the ranch to have controlled burns to manage cedar invasion. Much of this has been financed through his genius for obtaining government grants. He identified a specific area for reintroduction of Prairie Dogs. The area was fenced in hopes of keeping the Prairie Dogs on site, the grass was cut short, and introductory holes were dug. Prairie Dogs were obtained from a regional federal grassland and released to their new home. The Prairie Dogs initially thrived, deepened their holes and in time new pups were seen. But last year was a wet year, which Prairie Dogs do not like, and with the advances of Badgers the colony has fallen on hard times. Perhaps we can overcome the obstacles and restore the colony in the near future.

Kansas has a law passed about 1901 that if as a landowner you have varmints, i.e. Prairie Dogs, on your land and your neighbors complain about them, you are obligated to exterminate them, or the county will do it for you and bill you for the cost, up to the point of putting a lien on your land. Prairie Dogs are a "keystone" animal: where they are present other wildlife will occur or even thrive. This includes Burrowing Owls, Golden Eagles, Ferruginous Hawks, Swift Foxes, Badgers, and probably an occasional rattlesnake. This list of predator neighbors may explain why Prairie Dogs have a mania about short grass prairie and keeping it short.

With this antique law always in mind Ron was contacted around 2005 by Larry and Bette Haverford of Logan county, who have a multiple thousand acre ranch 40 miles south of Oakley with a prairie dog colony complex of at least five thousand acres. Larry had learned how to range cattle and have Prairie Dogs at the same time. Incidentally, their ranch has all of the above wildlife while the surrounding countryside is fairly bare. But to county authorities, the Prairie Dogs were the problem. Using the 1903 law as a club, several members of the Logan County Board of Supervisors were on a crusade to force the Haverfords to exterminate their Prairie Dogs. Ron was asked to help, and after he surveyed the scene concluded that the Haverford ranch was an appropriate site for the reintroduction of the Black-footed Ferret.

The Black-footed Ferret is the most endangered mammal in North America, considered extinct for a number of years until a small colony was discovered in northwestern Wyoming. These ferrets were rescued by the US Fish and Wildlife Service and the Wyoming Game and Fish Department, which now has three or four hundred in cages awaiting reintroduction to the wild.

The agencies and other partners established an extensive captive breeding program and began releasing ferrets in suitable sites, hoping for species recovery in the wild. The USFWS was contacted by Ron and after doing their own survey, they agreed that it was appropriate to use the Haverfield/Barnhardt/Blank ranch as a first Kansas reintroduction site.

This news of the impending reintroduction of the ferrets by the USFWS was not greeted enthusiastically by the county fathers and many of the local ranchers who saw the presence of an endangered species as a threat providing a rationale for not exterminating the Prairie Dogs. The ensuing public, political and legal struggle to have the ferrets reintroduced in Logan County is beyond the scope of this article, but without the encouragement and leader ship of Ron the USFWS probably would not have acted in the face of considerable negative political pressure. Another environmental organization with a large ranch and significant colony of Prairie Dogs in the county had also received ferrets, but gradually wilted under the pressure and let their effort fail, whereas the Haverfield ferret project has survived and continues to offer a promising future for Black-footed Ferrets and other wildlife.

The outcome of the "Prairie Dog Wars" is but one instance in the story of conservation successes achieved by AOK under the leadership of Ron Klataske since inception twenty-one years ago.

On inside back cover: Two bald eagles (*Haliaeetus leucocephalus*) fight over a salmon carcass along the Chilkat River in the Alaska Chilkat Bald Eagle Preserve near Haines, Alaska. During late fall, bald eagles congregate along the Chilkat River to feed on salmon. This gathering of bald eagles in the Alaska Chilkat Bald Eagle Preserve is believed to be one of the largest gatherings of bald eagles in the world. Recently, Constantine Metal Resources Ltd. of Vancouver, British Columbia along with investment partner Dowa Metals & Mining Co., Ltd. of Japan have begun exploration for a potential site of a copper and zinc mine in the Klehini River/Chilkat River watersheds. Some local residents and environmental groups are concerned that a mine might threaten the area's salmon. Of particular concern is copper and other heavy metals, found in mine waste, leaching into the Klehini River and the Chilkat River further downstream. Copper and heavy metals are toxic to salmon and bald eagles.

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Two Bald Eagles fighting over a salmon, Chilkat River, near Haines, Alaska. Photo © John L. Dengler / DenglerImages.com

The Dalliance of the Eagles

Walt Whitman

ca.1891-1892

Skirting the river road, (my forenoon walk, my rest,)
Skyward in air a sudden muffled sound, the dalliance of the eagles,
The rushing amorous contact high in space together,
The clinching interlocking claws, a living, fierce, gyrating wheel,
Four beating wings, two beaks, a swirling mass tight grappling,
In tumbling turning clustering loops, straight downward falling,
Till o'er the river pois'd, the twain yet one, a moment's lull,
A motionless still balance in the air, then parting, talons loosing,
Upward again on slow-firm pinions slanting, their separate diverse flight,
She hers, he his, pursuing.

Credit: Leaves of Grass, Walt Whitman

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