



Oklahoma City Audubon Society

OKC-AUDUBON.ORG

June, 2012

Titmice in Oklahoma and Texas: what makes a hybrid zone?

Claire Curry will be our guest speaker at the June 18 meeting of the Oklahoma City Audubon Society. She grew up outside of Greenwood, Wise County, TX (north-central Texas, west of Denton). "It's actually on the edge of the hybrid zone, which is partially why I became interested in the titmouse project (since I grew up seeing hybrids). My mom started me identifying birds when I was very young and I have always wanted to study biology since then." Claire is currently a Ph.D. candidate in the Ecology and Evolutionary Biology program in the University of Oklahoma Department of Biology. She received her B.S. in Biology from the University of North Texas where she studied interspecific interactions in dragonflies for an undergraduate honors thesis.



Black-crested and Tufted Titmice hybridize extensively in Texas and Oklahoma. Claire will talk about song differences between the two species, causes of the song variation, how these differences might affect their interbreeding, and how her study of this hybrid zone fits in the context of other studies of speciation.

Come out and bring a friend for a good evening of camaraderie, birds, and great refreshments. Our meetings are held September through June on the third Monday of each month. Meetings begin at 7:00 p.m. in the Will Rogers Garden Center, I-44 & NW 36th Street. Visitors are always welcome.

Remember. . . .

We will not meet or publish a newsletter during the summer months of July & August. Newsletters & meetings will resume in September.

Cookie Patrol

Refreshments for the June meeting will be provided by John Shackford, Nadine Varner, & Mary Lane/Steve Davis

President's Perspective

By Bill Diffin



We are in the process of surveying the Tyranni, one of our 10 "superfamilies" of passerines. By the end of last month's Perspective, we had looked at three of the four Tyranni families, the Pipridae (manakins), Cotingidae (cotingas), and Tyrannidae (tyrant flycatchers). The remaining family is the Tityridae (tityras and allies). This family was first proposed as a distinct group in

1989 based on some distinctive features of the vocal apparatus and skeleton. The uniqueness of the group was later confirmed by DNA studies. Prior to the discovery of the group, its various members were scattered among the three Tyranni families we have already reviewed. There are around 30 species in Tityridae, 16 becardas, three tityras, three Schiffornis mourners, two Laniocera mourners, three purpletufts and several others. The closest species to the USA are the Rose-throated Becard which actually nests in Arizona and Texas in small numbers and the Masked Tityra which is native to Mexico and occasionally wanders into Texas. The becard can be seen and heard here <http://ibc.lynxeds.com/species/rose-throated-becard-pachyrhamphus-aglaiae> (1st video shows globular nest, vocalization available as an audio). The media collection shows that it flycatches and eats fruit. The tityra can be seen and heard here <http://ibc.lynxeds.com/species/masked-tityra-tityra-semifasciata> (2nd photo shows cavity nest, vocalization on an audio and in some videos). The media show that it eats both fruit and insects.

Our review shows the Tyranni to be an extremely diverse "superfamily". Nevertheless there are identifiable trends. The Tyranni are mostly arboreal with a tendency to forage by using one variation or another of the perch-and-sally strategy. Even the entirely fruit-eating manakins forage by sallying from a perch to pluck a fruit. Lekking courtship behavior is common among the manakins and cotingas. The easily accessible literature doesn't discuss general trends in social behavior among the tyrant-flycatchers and Tityridae, but Western Kingbirds, for one, do breed in dense concentrations in places like Eldon Lyon Park.

The next "superfamily" we will study, the Furnarii (Neotropical ovenbirds, antbirds, etc.), is the closest relative of the Tyranni. Between the Furnarii and the Tyranni, there are some differences worth noting. The Furnarii are called the "tracheophone suboscines", and the Tyranni are sometimes referred to as bronchophones". What is key from a birding perspective is that there is a difference in vocalizations which might be identifiable by birders who have trained themselves to hear it. The Furnarii are much more likely to be near the

ground than up high in the trees whereas the Tyranni are usually found up in the trees. The plumage colors of the Tyranni are variable with green, yellow, black, white, gray and rufous being common. The manakins and cotingas can be quite colorful. Except perhaps among the pihyas, predominantly rufous and brown coloration is not common. On the other hand, rufous and brown colors with black, white and gray are dominant among the Furnarii. In fact an interesting introduction to the Furnarii can be had by going to the Tree Of Life website Furnarii page, <http://tolweb.org/Furnarii/67980>, and clicking through the links to see the amazing variety of rufous-based color schemes in the banner photos.

The family level relationships within the Furnarii are undergoing revision based on DNA studies with several different taxonomic schemes having been proposed including the one shown above at ToL. For our purposes they can be handled as a single group. The closest member to the US is the Barred Antshrike with one accepted record for south Texas. The second video here shows a male calling, <http://ibc.lynxeds.com/species/barred-antshrike-thamnophilus-doliatus>. The Furnarii includes the ovenbirds, known for their mud nests, the Neotropical woodcreepers, known for their behavioral similarity to our Brown Treecreeper and its relatives, and many species of birds with "ant" prefixed to their names, i.e. antbirds, ant-thrushes, antpittas, antvireos, antshrikes and antwrens. The reason for the ant-names is that many of these birds forage at least part time around army ant swarms, feeding predominantly on the insects and other arthropods flushed by the ants. Following are links to several southern Mexican Furnarii species including audios which demonstrate a similarity to the Barred Antshrike, <http://ibc.lynxeds.com/species/mexican-antthrush-formicarius-moniliger> (1st audio male singing) <http://ibc.lynxeds.com/species/buff-throated-foilage-gleaner-automolus-ochrolaemus> (4th video male singing) <http://ibc.lynxeds.com/species/northern-barred-woodcreeper-dendrocolaptes-sanctithomae> (1st video) <http://ibc.lynxeds.com/species/olivaceous-woodcreeper-sittasomus-griseicapillus> (1st audio song)



Bird of the Month

By John Shackford



There are a number of things you may observe when you first encounter the Red-bellied Woodpecker (*Melanerpes carolinus*), but most likely you will not see the red belly. There is no more than a faint

wash of red on the lower belly, and it is quite hard to see. It is a lot easier to see with the bird in hand, but still there is not much red there.

Sutton stated that the Red-bellied Woodpecker is a "resident virtually throughout state. Favored habitat bottom-land woods; common in towns" (Oklahoma Birds, 1967). Red-belly distribution covers most of the U.S. from wooded parts of the Great Plains eastward to the Atlantic Ocean. "The current range [of the Red-belly] reflects a northward and westward expansion in the past half century," with the northward expansion "due to maturing northeastern forests and backyard bird feeding," and the westward expansion "occurring mostly along wooded river bottoms extending westward through the plains, and due to maturing urban tree plantings" (Reinking, D.L., 2004, Oklahoma Breeding Bird Atlas). On this species expansion northward, I suspect global climatic changes also may now be a factor.

Food items of the Red-belly are interesting for their diversity—many insects, fruits, nuts and even small vertebrates. C. E. Bendire said that "its food consists of about equal proportions of animal and vegetable matter, and it feeds considerably on the ground. Insects, like beetles, ants, grasshopper, different species of flies and larvae are eaten by them as well as acorns, beechnuts, pine seeds, juniper berries, wild grapes, blackberries, strawberries, pokeberries, palmetto and sour-gum berries, cherries and apples. In the south it has acquired a liking for the sweet juice of oranges and feeds to some extent on them" (1895. Life histories

of North American birds. U.S. Nat. Mus. Spec. Bull. 3). For those of you who use oranges for feeder birds in the winter, you might try—in the summer—slipping an orange slice or 2 into your suet feeder for Red-bellies to see if they "bite." "The Red-bellies also "eat small vertebrates including lizards, snakes, frogs, fish, nestling birds, and bird eggs" (www.psu.edu/dept/nkbiology/naturetrail/speciespages/redbelliedwoodpecker.html). Learning that small vertebrates were food items was quite a surprise to me; although this feeding behavior may not be frequent, it may be one reason why the Red-belly favors bottom-land forests, where small vertebrates are relatively common.

Sutton said that "many nest holes [of the Red-belly] are appropriated by Starlings: in 1959, in attempt to help woodpeckers hold nest fourteen feet up in a

maple, seventeen Starlings were shot [by Dr. Sutton], but Starlings won out" (Sutton, 1967). Doc was not sure if the Starlings that harassed the Red-bellies were consistently trying to use the Red-belly nest for their own nesting cavity, or if the Starlings were sometimes just trying to get a roost hole. In spite of intense competition at some nests from Starlings, the Red-belly seems to be doing well over most of its range. Between 1966-2000 Breeding Bird Survey data for the Red-belly "show an increase of 0.6 percent per year rangewide... but no conclusive trend in Oklahoma..." (Reinking, 2004).



In southwestern Oklahoma, a close relative of the Red-belly—the Golden-fronted Woodpecker—is found. Field marks that can be used to differentiate the 2 are mostly on the upper surface of the head. The Red-belly male is red on the top of its head—from bill through nape (back of neck)—while the female Red-belly has a red nape and a spot of red just behind the bill. The Golden-fronted male and female, on the other hand, have a golden nape and golden spot just behind the bill, and between these 2 golden spots the male Golden-fronted has a red crown. Both the Red-belly and the Golden-fronted have a "zebra" back and the 2 species are known to interbreed.

Chirpings

By Patti Muzny

May/June 2012

After our stifling heat and drought last year, the recent cooler and beautifully damp weather has been totally delightful. It is



definitely contributing to the happiness of our Oklahoma City front yard Eastern Bluebird couple. They raised one brood and as I drove into our driveway the other day I spotted Mrs. Bluebird with a bite-sized meal in her beak for her begging babies in the box. At the time Mr. Bluebird was observing this

procedure from his lofty perch on the utility wire across the street. Their presence for the past couple of years has added many smiles and a lovely bit of "bluebird blue" color to our yard.

Earlier in May I was out walking around the neighborhood one Saturday morning and heard, then saw, a male Painted Bunting in the 20-acre field between south Walker and south Western. That was really a surprise! They nest at our Byars acreage, but I wouldn't expect them to be found that close to I-240. So glad not every bird reads the "Date Guide." Keeps us on our toes.

Also nesting in our OKC back yard are Brown Thrashers, Cardinals, Carolina and Bewick's Wrens, Chickadees, Mockingbirds and Blue Jays. Seen frequently are House Sparrows, Starlings, Crows, various egrets, herons and night herons, the local geese, Mourning and Collared Doves, Mississippi Kites, and the resident Cooper's Hawk and an occasional Cowbird.

The Barn Swallows that own the airspace all around the State Capitol Complex are so entertaining. Their aerial antics can be viewed from four stories up or experienced at eye level as they sweep the lush lawn hunting for meals. Occasionally one will land on the window ledge outside our office. Sometimes they perch along the entrance ramp rails to preen and the sun gets the opportunity to focus on their striking blue-black feathers. Makes me enter the building smiling already! Not a bad way so start the day. And the Scissortails of the city always amaze me. They hawk insects from extremely busy intersections such as SW

59th and Santa Fe or Shields and seem to survive.

A friend in the Harrah area told me about an aggressive crow in their rural area that would dive on humans and even dove repeatedly at their pickup anytime it went down a certain county road. I knew Mississippi Kites would take on vehicles as well as humans, but have never seen a crow do that. The Red-tailed Hawks that raised one nestling on the south side of the Oklahoma River Bridge near the Devon and Chesapeake boathouses were interesting to watch on my daily commute. A day or two after the youngster began "branching," one of our windstorms blew their nest limb down. I think all survived, because I've seen them perched on the nest tree. A Western Kingbird was never far away, using the utility wire as his perch.

The wildflowers in our Crosstimbers Prairie at Byars have been incredibly beautiful. In front of the cabin is a dense population of Monarda (bee balm), mixed with Black-eyed Susans, Coneflower, Milkweed, Indian



Paintbrush, and all of the other expected prairie flowers. All of these flowers make our pasture a haven for butterflies. I don't know my butterflies, but I know I love to look at them and enjoy just standing in the pasture watching them flit from plant to plant. There are many winged wonders of yellow, orange, black and orange, black, white and every color in between. We won't discuss the number of ticks and chiggers per square inch in these beautiful wildflower patches. Mama always said, "Spray the legs of your britches" and go take pleasure in being outside anyway." (Bug bites eventually quit itching, don't they?)

We have not located our Pileated Woodpecker's nest, but we suspect they have set up housekeeping somewhere west of our pond. They can be heard and sometimes we see them zip over the pond dam and disappear along the creek. The Bewick's Wrens have raised one family in front of our cabin and seem to be working on another. Brian photographed the first nest-building several weeks ago.

Summer will be descending upon us soon and I wish everyone a summer of good birds and I'm now getting close to the fall migration mode!



Recorders Report – May 2012

End of Spring Migration

As the final summer migrants arrived to settle in for nesting season, a storm with rain, wind and hail up to 2.5 inches arrived the last week of May disrupting the homes of both people and critters. Plants are growing like crazy creating food for insects which are then eaten by birds. Under the mulberry tree butterflies were feasting, a Scissor-tailed Flycatcher was seen eating a berry and one box turtle was found with suspicious red stains on its mouth.

On the 1st at Lake Overholser Matt Jung walked from the dam to the police station and observed a pair of Baltimore Orioles, an Osprey, Mississippi Kite, Spotted Sandpipers, American White Pelicans, and Double-crested Cormorants. At Ten-Mile Flat in Norman Joe Grzybowski found Horned Lark, and in Stillwater Chris Clay had an **Olive-sided Flycatcher** visit his yard. On the 3rd Jennifer Kidney had a male **Rose-breasted Grosbeak** singing in her Norman yard. James Hubbell at the Lake Hefner Marina saw a Caspian Tern and reported the last White-throated Sparrow for the season.

On the 4th Jimmy Woodard and Nadine birded Yukon City Park and located a **Black-crowned Night Heron**, Eastern Wood-Pewee, Great Crested Flycatcher, Warbling Vireo, and Swainson's Thrush. At the Lexington WMA James Hubbell saw White-crowned Sparrow and Clay-colored Sparrow. On the 5th one mile east of Rose Lake Joe Grzybowski had a single **Whimbrel** preening and at Rose Lake about 6 White-faced Ibises. At Shawnee Twin Lakes Donald Winslow heard a Chuck-Will's Widow. On the 6th Dick Gunn and Anais Starr walked South Jenkins in Norman and discovered Dickcissels by the dozen, Bell's Vireo, Northern Parula, Blue Grosbeak and a Peregrine Falcon.

On the 6th Jimmy checked the Yukon City Park again and located a juvenile Yellow-crowned Night Heron in the nest, and at the Yukon Waste Water Treatment Plant he found a group of Northern Shovelers, Wilson's Phalaropes, and Pectoral Sandpipers. On the 6th Jennifer had a really handsome Harris's Sparrow in her yard, Cedar Waxwings, and a Gray Catbird. On the 7th Matt checked the Rose Lake area with the expected Swainson's Hawk perched on top of a power pole and among the cattle west of Mustang Road were Yellow-headed Blackbirds. On the 8th in Stillwater Tim O'Connell found a Yellow-throated Vireo, and on the OSU cross country course John Polo had a **Least Flycatcher**.

On the 9th Mary and Lou Truex checked South Jenkins and reported **Yellow-billed Cuckoo**, Red-headed Woodpecker, Red-eyed Vireo, Fish Crow, Yellow-

throated Warbler, Field Sparrow, and Summer Tanager. At Lake Hefner Grace Huffman located a Cinnamon Teal. Meanwhile Jimmy was birding Yukon City Park and discovered a migrant "wave" including a **Tennessee Warbler**, Orange-crowned Warbler, Nashville Warbler and Yellow Warbler. On the 12th Dick Gunn birded South Jenkins and discovered his first ever **Bobolink**, and later Jennifer located a Lazuli Bunting.



On the 13th Jim Bates checked the backyard and noticed two warblers flycatching in the top of a Walnut tree, a male Yellow Warbler and a nice male **Blackburnian Warbler**. Meanwhile, in Couch Park in Stillwater John Polo also located a Blackburnian Warbler as well as a **Blackpoll Warbler**, American Redstart, Louisiana Waterthrush, and a Barred Owl. At Lake Hefner Grace Huffman discovered a **White-rumped Sandpiper**. About half a dozen gathered on South Jenkins with reports from Dick Gunn and Brian Davis for at least one Empidonax flycatcher and Northern Rough-winged Swallow. John Raeside and Anais Starr saw two **Least Terns** at Lake Purcell. Dwayne Elmore stopped at Drummond Flats and discovered hundreds of birds in various wetlands scattered about the property including **Western Sandpiper**, over 50 **Buff-breasted Sandpipers**, Long-billed Dowitcher, **Marbled Godwit**, **Hudsonian Godwit** and White-faced Ibis.



On the 14th along South Jenkins Dick saw a kettle of Mississippi Kites (30-100), T K located a Least Flycatcher and White-breasted Nuthatch and in Oklahoma City Jim Bates had a Least Flycatcher in his yard and an Olive-sided Flycatcher at Crystal Lake. East of Lake Stanley Draper Don Maas had an **Inca Dove** at his home. On the 15th along South Jenkins Dick discovered half dozen **Willetts** in the river bed. Jim Bates stopped at Crystal Lake on his way home from work and found a **Magnolia Warbler**, American Redstart, and Rose-breasted Grosbeak. On the 18th Matt Jung saw a Bald Eagle flying north of the dam at Lake Overholser.

On the 25th Dick Gunn discovered a **Wood Thrush** along South Jenkins which was only the third time he has seen the species in the area. On the 31st Sharon Henthorn reported the White-faced Ibises are still at Sara Lake.

During April **155** bird species were reported with **20** new species which increased the year's total to **245** species discovered in the Central Oklahoma area. I appreciate those who help provide the history of central Oklahoma birds and can be contacted by e-mail at emkok@earthlink.net. Esther M. Key, Editor.

TOP 25 :

RIFLEMAN (*Acanthisitta chloris*)

By Mark Delgrosso

FAMILY: Acanthisittidae (or Xenicidae, depending who you ask)

RANGE: New Zealand only (N and S Islands)

HABITAT: forests, particularly those dominated by beech



STATUS: fairly common within its habitat

For such a tough-sounding name the Rifleman is absolutely adorable. Tiny mites of birds (the smallest in New Zealand) they are members of a bird family entirely endemic to that insular nation. The Acanthisittidae are often termed the New Zealand wrens but wrens they are *not*. The true wrens – *our* wrens – are strictly New World (with the exception

of the Winter, the only species to exist outside the Americas) so the similarity is superficial. In fact, though they also resemble nuthatches, chickadees, or creepers to some extent, they have no close affinities to any of these fellow passerines. They are unique.

It is a small family with only 2 species left standing (or perching). Of course, the Rifleman is one and by far the commonest. The other, called alternately Rock or South Island Wren, is an alpine species restricted (now) to the South Island. A recently extinct member, the Bush Wren, may have succumbed to the rats that arrived with humans to these islands within historical memory. The fate of a fourth recently extirpated member of this family is one of the great and woeful tales of ornithology: that of the Stephens Island Wren. Upon the arrival of Europeans to New Zealand this bird was confined to the small island of Stephens Island, a mere dot of land off South Island. It apparently evolved to be flightless as there was nothing out there to get it - until- until the Euro-colonizers decided that it was a perfect spot for a lighthouse. The lighthouse keeper moved in - with his cat. The rest of the story you know, or can figure out. This most infamous cat in history, admittedly doing what cats do, wiped out an entire species! We all know the toll house cats take on *our* songbirds every year.

Yet the Rifleman, though showing declines, is in no immediate danger. Oh, and the name Rifleman comes not from this bird's skill with a Winchester but rather its bright green color. This apparently reminded the bird's namers of the green uniforms of New Zealand's rifle corps.

Oklahoma City Audubon Society

Officers 2012

President	Bill Diffin	722-3778
Vice President	John Shackford	340-5057
Secretary	Nancy Reed	799-1116
Treasurer	Nancy Vicars	732-9885
Parliament	Ted Golden	354-3619
Programs	Warren Harden	364-3491
Recorder	Esther M. Key	381-9170
Conservation	Dave Woodson	601-622-3467
Field Trips	Jimmy Woodard	365-5685
Newsletter Editors:		

	Pat Velte	751-5263
	Carla Brueggen	495-3259
Publicity	Doug Eide	495-8192
Historian	Nealand Hill	388-6759
Refreshments	Sue Woodson	601-622-3467
Webmaster	Pat Velte	751-5263

The Oklahoma City Audubon society is neither a chapter of nor affiliated with National Audubon.

For Oklahoma City Audubon news between newsletters and meetings, be sure to log onto:
OKC-Audubon.org

Minutes of the Oklahoma City Audubon Society

Monday, May 21, 2012

**By Patti Muzny
Acting Secretary**

The meeting was opened by President Bill Diffin at 7:00 PM.

The minutes of the April, 2012 meeting were approved as published in the newsletter.

Treasurer Nancy Vicars presented the treasurer's report, which was approved as presented. There is a Cash on Hand balance of \$6,273.15.

New Business:

Guests Troy Duncan, Bryson Duncan, Hayden Duncan, Ariane Hyatt, Victoria Evans and John Dubala were introduced, as was Mr. Smith from Norman.

We were treated to a rare appearance by one of our club's founding members, Dr. Sam Moore.

There was no field trip report due to our field trip chairman, Jimmy Woodard, being out of town on his honeymoon. Congratulations to Jimmy and Nadine Varner, who were married on Saturday, May 21, 2012.

The annual OKC Audubon picnic will be held at Lake Stanley Draper on Saturday, June 9, 2012, at 6:00 PM. Reservations have been made to congregate at the

picnic area near the Draper Marina, which is on the NW side of the lake. The club will provide burgers and hotdogs, plates, plastic ware, napkins, etc. Members are asked to bring a side dish. Please notify Bill Diffin with the dish/dishes you plan to contribute.

Conservation Chairman Dave Woodson gave a report on the eminent passage of HB 2607, which will decrease the buffer zone between wind energy development operations and territories inhabited by the Lesser Prairie Chicken.

Chairman Woodson also reported that Earthfest at Martin Nature Center was a great success, with over 700 people attending during the day. Also mentioned was a new wind energy project being proposed near Blackwell, Oklahoma.

Following Dave's report was a discussion on a free I-Bird app.

There was no old business.

Various members reported recent sightings in the metro area, one of which was a Bald Eagle at Lake Overholser and Lark Buntings near Fort Reno.

Jim Bates reported a Prothonotary Warbler in one of the Cofferdam boxes.

The meeting and discussion was followed by a well-presented and extremely interesting program by Dr. Timothy O'Connell. We enjoyed getting to know fascinating information about one of our early neotropical migrants, the Louisiana Waterthrush.

Respectfully submitted for Nancy Reed

By Patti Muzny

Conservation

By Dave Woodson

Land-Based Wind Energy Guidelines



On 23 Mar 2012, the Department of the Interior released guidelines designed to help minimize impacts of land-based wind projects on wildlife and their habitats. The U.S. Fish and Wildlife Service anticipate these studies will

include fatality monitoring as well as studies to evaluate habitat impacts. As Birders, we should learn more about these conservation measures and encourage the wind energy companies in our state to adopt these voluntary guidelines. To learn more go to <http://www.fws.gov/windenergy>.

Advances in wind energy technologies and increased interest in renewable energy sources have resulted in rapid expansion of the wind energy industry in the United States. The U.S. Fish and Wildlife Service's final

Voluntary Land-Based Wind Energy Guidelines will help shape the smart siting, design and operation of the nation's rapidly expanding wind energy operations. These voluntary Guidelines provide a structured, scientific process for addressing wildlife conservation concerns at all stages of land-based wind energy development. They also promote effective communication among wind energy developers and federal, state, tribal, and local conservation agencies. In addition, the Guidelines provide Best Management Practices for site development, construction, retrofitting, repowering, and decommissioning.

Early Involvement is Key

Early consultation offers the greatest opportunity for avoiding areas where development is precluded or where wildlife impacts are likely to be high and difficult or costly to remedy or mitigate at a later stage. By consulting early, project developers can also incorporate appropriate wildlife conservation measures and monitoring into their decisions about project siting, design, and operation.

Impacts to Wildlife

The Guidelines assist developers in identifying species of concern that may potentially be affected, 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. These impacts may include:

Collisions with wind turbines and associated infrastructure; loss and degradation of habitat from turbines and infrastructure;

Fragmentation of large habitat blocks into smaller segments that may not support sensitive species;

Displacement and behavioral changes; and

Indirect effects such as increased predator populations or introduction of invasive plants.

Tiered Approach

The Guidelines use a "tiered approach" for assessing potential adverse effects to species of concern and their habitats. The tiered approach is an iterative decision-making process for collecting information in increasing detail; quantifying the possible risks of proposed wind energy projects to species of concern and habitats; and evaluating those risks. Briefly, the tiers address:

Tier 1 – Preliminary site evaluation (landscape-scale screening of possible project sites)

Tier 2 – Site characterization (broad characterization of one or more potential project sites)

Tier 3 – Field studies to document site wildlife and habitat and predict project impacts

Tier 4 – Post-construction studies to estimate impacts¹

Continued on page 8

Oklahoma City Audubon Society
c/o Carla Brueggen
8010 NW 32
Bethany, OK 73008

Land-Based Wind Energy Guidelines (continued)

Tier 5 – Other post-construction studies and research

The tiered approach provides the opportunity for evaluation and decision-making at each stage, enabling a developer to abandon or proceed with project development, or to collect additional information if required. This approach does not require that every tier, or every element within each tier, be implemented for every project.

Adherence to the Guidelines is voluntary and does not relieve any individual, company, or agency of the responsibility to comply with laws and regulations. However, if a violation occurs the Service can consider a developer's documented efforts to communicate with the Service and adhere to the Guidelines.

