



THE BLUEBIRD

The voice of ASM since 1934

**December 2010
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***The Audubon Society of Missouri
Missouri's Ornithological Society Since 1901***

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Deadlines for submissions to the Seasonal Survey Compilers

Winter (Dec. 1-Feb. 28)—to Joe Eades by Mar. 10

Spring (Mar. 1-May 31)—to Kristi Mayo by June 10

Summer (June 1-July. 31)—to Josh Uffman by Aug 10

Fall (Aug. 1-Nov. 30)—to Bill Eddleman by Dec. 10

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Front Cover— This Brown Pelican appeared briefly at Blue Springs Lake in Jackson County on 13-15 July, and is the 9th state record for Missouri. Photo taken by Mary Nemecek on 13 July, 2010.

THE BLUEBIRD is published quarterly by The Audubon Society of Missouri. The submission of articles, photographs, and artwork is welcomed and encouraged. The views and opinions expressed in this journal are those of each contributing writer and do not necessarily represent the views and opinions of The Audubon Society of Missouri or its officers, Board of Directors, or editors. Send address corrections to ASM, 2101 W. Broadway, PMB 122, Columbia, MO 65203-1261.

PRESIDENT'S CORNER—BRUCE BECK



Thank you for being one of the 290 members of the Audubon Society of Missouri! ASM enters its 110th year stronger and with more promise than ever. ASM has two new board members and three new officers. And we have several exciting new projects. Read the enclosed minutes of the board and annual membership meetings for details.

Our most notable new enterprise in this new year will be extensive improvements to the ASM website. Our webmaster Patrick Harrison is working with an outside contractor to make significant site design improvements. We expect to have the improvements functional early in 2011.

1. A more attractive website.
2. A menu easier to navigate.
3. On-line membership enrollment with payment either by check or Pay-Pal.
4. On-line registration for meetings with payment either by check or Pay-Pal.
5. High security for payments and for administration.
6. Dynamic interactive reports.
7. Continuing improvements in the future.

The Missouri Bird Records Committee works under the auspices of ASM to verify bird sightings in Missouri and publish the official list of Missouri birds on-line and in print. This is an essential but often unappreciated activity. The committee members are qualified and devoted.

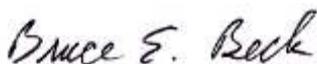
The Conservation Area Checklist (CACHE) and State Parks (SPARKS) web-based databases are powerful practical tools that benefit birders, researchers and agencies. Edge Wade has been diligent in negotiating the agreements and promoting these applications. Thanks to all who post sightings at these locations.

ASM has income from our design, administration and participation in the CACHE and SPARKS projects. That income is being reinvested in bird habitat improvements across the state.

Research projects are being funded through the Paul and Fran Bauer matching Graduate Research Scholarship. You are invited to share in the scholarship program, supporting ornithological research in our state and helping deserving graduate students.

The ASM Spring Meeting will be in Kansas City April 29-May 1, 2011. There will be field trips to unique areas of the state, led by capable birders. The workshops and speakers will be excellent. You will meet other birders face to face from across the state. You are invited to participate. Invite your family and friends to come, too!

The ASM board members and officers welcome your suggestions and participation in ASM.



Bruce Beck
President, Audubon Society of Missouri

CACHE and SPARKS

What Are They, and What Have We Accomplished?

Edge Wade - Conservation Partnership Coordinator

WHAT ARE CACHE AND SPARKS?

CACHE is an acronym for Conservation Area Checklist [project], a cooperative agreement with the Missouri Department of Conservation. We are entering Phase VI. SPARKS is an acronym for State Parks [checklist project], a cooperative agreement with the Missouri Department of Natural Resources. SPARKS is in Phase III.

The basic purpose of CACHE & SPARKS is to build bird checklists for the more than 1,000 MDC owned or managed sites and the more than 80 DNR sites. This came about because both agencies had bird occurrence data for sites--lists, checklists, some fledgling computer databases--but in many different formats of differing age (so different taxonomies, etc.) In these forms, they were of very limited value to birders, to site managers, and certainly of little value for researchers.

In 2005, Brad Jacobs looked at the situation and recognized the limited value of what existed. He had an idea of how to generate new

checklists for areas that had none and to improve the usefulness of extant lists; AND how to finance this work in a way that would have real benefit to Missouri birds and birders. He went to then-ASM president, Sue Gustafson with his idea.

Sue appointed a committee to meet with Brad to work out how to get the project underway. She appointed Patrick Harrison, because of his vital role as webmaster; Jerry Wade because he was the immediate past-president and had a working knowledge of how ASM functions; and me because of my knowledge of birding sites and the birders of Missouri.

The four of us met and began putting the pieces together for the online dynamic checklist project. When we had what we felt was a workable agreement, we took it to Sue and the ASM Board, and CACHE Phase I was begun.

That pattern of hashing out an agreement, having it vetted by agency lawyers and approved by the ASM board continues as the agreement for each phase is developed. A similar process guides the ASM-DNR agreements.

Brad is the project officer for MDC and CACHE; Mike Currier has the same role for DNR. ASM works on the CACHE and SPARKS projects under a Letter of Agreement with MDC, and a Memorandum of Agreement with DNR.

These agreements include payment by the agency to ASM for conducting the checklist project—that is, maintaining and improving **the website and adding to the data. Also included are “measurable deliverables;” that is, what ASM agrees to do as our part of the cooperative agreement.** Examples are website additions, what sites to focus on for checklist development, minimum requirements/goals for **data gathering and other activities such as writing Birders’ Guide** site descriptions and holding special birding events.

WHAT HAVE WE ACCOMPLISHED?: THE CHECKLISTS AND RELATED DATA

The checklists on CACHE & SPARKS are dynamic. That is, they are updated and species added automatically as every trip report entry becomes part of the database for that site and the full array of sites in the program. Anyone can print out checklists for any CACHE or SPARKS site. Missouri is unique in having this resource.

Anyone can search the database for bird occurrence information. The species information entered into the trip reports by CACHE and SPARKS contributors is already being used to make management decisions. We are building enough of a database that some useful research is now possible. Birders seeking certain species can now use the data to make smart decisions about where to bird and when.

With the addition of Phase VI sites, the CACHE project has had 67 sites selected for special emphasis for visits to build representative **checklists. As expected, we've had mixed results.**

At the time of this writing, on the highly successful end, Eagle Bluffs has had more than 1,330 trip reports filed with multiple trips for nearly every week of the year, creating a checklist of 264 species; Kathleen Anderson has been a frequent reporter. Otter Slough has 300 trip reports filed for 255 species, with Chris Barrigar as the most prolific contributor; Schell-Osage tops the species list with 279 with only 121 trips--this is because there was an existing checklist entered into the database; of recent times, Bob Fisher has entered the most trips. Columbia Bottom has a list of 254 with 190 trips reported **by several people, with Bill Rowe's reports topping the list; Coo-**ley Lake has 225 with 216 visits entered by many people, with Mike Beck, Kristi Mayo and Kyle Driggers entering the most trips.

At the other end of the spectrum are 6 target areas with fewer than 10 trips entered and 14 areas with fewer than 100 species on the checklist.

Overall, of the target sites, there are now more than 20 with excellent checklists; more than 30 that are pretty good, but could be improved with some seasonal-specific trips; and about 15 sites that **need many more visits to develop a decent checklist. We've done well; we can do better.**

The SPARKS data show similar variation in number of visits and checklist species. Cuivre River, with 192 species, reflects the faithful reporting of the Schuette family, with more than 200 reports filed for the park. Pershing, with 190 species, is a result of the work of Grand River Audubon members whose regular survey trips are entered in the data. Trail of Tears at 187 shows the effort of many contributors.

Several parks have checklists with more than 150 species. Big Lake, Castlewood (the result of steady reporters like Mike Brady and Pat

Lueders), Lake of the Ozarks, Long Branch, Prairie, and Rock Bridge Memorial show multiple reports from several contributors.

Other parks have unrepresentative checklists. That is, the number on the list is not a good representation of what may be found there. Some of these are due to locations distant from many birders; others are because birders may not think of them as a destination. And some are undoubtedly birded often, but the reports not filed on SPARKS.

QUESTION: Do CACHE and SPARKS compete with eBird?

ANSWER: No. After a check for accuracy, all trip reports entered for CACHE and SPARKS are batch-loaded into the eBird database, and so become a part of the national record. However, data entered by individuals into eBird is not transferred into CACHE or SPARKS. These sightings are not recorded in those databases, so are not part of the occurrence record that can be searched on Mobirds.org by professional managers, researchers and birders.

WHAT HAVE WE ACCOMPLISHED?: CONTRIBUTIONS TO BIRD CONSERVATION

Remember, Brad's idea included financing the checklist project work in a way that would have real benefit to Missouri birds and birders. All this was beginning in 2005, about the time that the Missouri Bird Conservation Initiative (a.k.a. MoBCI) was in the formative stage. MoBCI is an organization of bird-interested organizations--the various groups of Audubon, Ducks Unlimited, Wild Turkey Federation, etc.,--now about 60 organizations whose members value birds and want to see bird populations thrive. These groups understand that for birds to thrive, they must have adequate appropriate habitats.

One of MoBCI's functions is to serve as a clearinghouse to connect organizations and individuals who submit grant proposals for habitat-related projects with those who have resources--dollars, volunteer work, etc., to commit to such projects. Critical to this effort is building partnerships.

In today's world of grant applications and grant funding, those evaluating the many application must make some difficult decisions. To make good decisions, they often rely on a point system or similar method to rank proposals to try to determine which applications are likely to be the best use of the limited funds. Probability of success is difficult to determine, but in wildlife-related projects, a very big factor is the number of organizations contributing to the project with

funds, labor and other in-kind contributions already committed, indicating an interest and a desire for success of the project, that is: Partnerships.

Now, here's the connection with CACHE and SPARKS, ASM, MoB-CI, and the welfare of birds: ASM is paid by MDC and DNR to perform a service of recognized value to the agencies: the development and maintenance of site checklists and related bird occurrence data.

To date, MDC has paid ASM \$50,000. DNR has paid \$12,500 for SPARKS. The total received by ASM so far for the two programs is \$62,500. The costs billed for developing and managing the CACHE program to date: \$13,131.45, and for SPARKS, \$3,038. The total ASM has paid to develop and manage the two is \$16,169.45.

This means that through CACHE and SPARKS, ASM has earned more than \$45,000 above direct, billed costs to use to further our mission as a not-for-profit organization: that is, to preserve and protect birds and other wildlife; for education and appreciation of the natural world; and to support effective wildlife and habitat conservation practices. Through the CACHE and SPARKS programs ASM is earning money to make these things happen. The Letters of Agreement with MDC stipulate that ASM use funds above core costs for the CACHE database management to participate in bird conservation partnership projects.

Of the \$50,000 ASM has earned from MDC, more than \$36,000 is above our cost of running the program. To date, we have committed up to \$35,100 to habitat-related partnerships. These include wetland, prairie, grassland, oak savanna and forest projects. Most of **these funds are still in ASM's account and will remain there until** called for at the completion of the project for which they were committed.

ASM has earned more than \$9,000 from SPARKS above costs. We can use this for any purpose consistent with our mission statement.

A SUMMARY AND CALL FOR YOUR ACTION

ASM is accomplishing exciting things through our CACHE and SPARKS agreements. We are developing really useful bird occurrence data and functional, dynamic site checklists. We are bringing money to the table in meaningful partnerships for bird conservation work. We have additional funds to use to further our mission.

CACHE and SPARKS are underwriting a meaningful presence for **ASM in bird conservation efforts. With the funds we've earned, we** are making a real difference now, and have funds to build for the future.

CACHE and SPARKS must have the support of the members of ASM for us to carry out our portion of the agreements and continue the programs. To be truly successful, CACHE and SPARKS must have more than your nominal support: your participation in the programs is vital.

Do what you love to do: GO BIRDING! Then enter your finds into the CACHE or SPARKS database. If every ASM member entered as few as four trip reports a year, what a difference that would make!

Plan Now to Join the Third and Final Year of the Rusty Blackbird Blitz!

Bill Eddleman, Missouri State Leader

Rusty blackbird populations have fallen steeply, with estimates of an 85-99% population drop over the past 40 years. Although no one knows the cause for this alarming decline, winter habitat loss and degradation are likely candidates. Rusties are getting scarce and patchy in their winter distribution, making it difficult to focus the research and management we need to save the species. Many of you have volunteered to help out with the effort to delineate their winter range over the last two years, in order to assist with **conservation efforts. The 2011 effort is billed as the "Rusty Blackbird Third Time's a Charm Blitz". The Blitz will occur January 29-February 13, 2011.** This is when rusties become easier to find (males sing!) and the population is relatively sedentary. Volunteers will search for Rusty Blackbirds (particularly flocks or concentrations) in any potentially suitable locations or habitats, and record information in a standard way. Later, areas of concentration will be revisited to determine if they are indeed Rusty Blackbird hotspots. The Blitz is coordinated by the National Zoo in cooperation with Cornell Laboratory of Ornithology's and National Audubon Society's e-Bird project. Information is entered through e-Bird. For more information, and the observational protocol for collecting field data, visit:http://nationalzoo.si.edu/scbi/migratorybirds/research/rusty_blackbird/blitz.cfm

Updates will also be posted on MOBIRDS-L.

My Quest for 100 Back Yard Birds

Mark Haas

Here are some details of my quest to see 100 species of birds from my Jackson, Missouri back yard in 2010. After participating in Project FeederWatch and the Great Backyard Bird Count, I had tallied 45 species by March 22. It was at that point I thought a goal of 100 might be attainable. It could require some serious porch sitting, but **hey, I'm retired.**

My suburban back yard is mainly robin habitat, with a scattering of 15-year-old trees and shrubs around the perimeter. So the ground rules I set for myself were: I could include birds perched in **my neighbors' yards (where there are some trees 30+ years), I could** count birds flying overhead, my feet had to be planted somewhere in my house or yard (front or back) when a sighting occurred, and I had to be 100% certain of ID. I kept a checklist of species and the date first observed.

Of those first 45, many of them (34 species) came to eat from my feeders. Most were common winter residents, but I was blessed with daily visits by Pine Warblers, Yellow-rumped Warblers, and Red-breasted Nuthatches. Among the species sighted overhead were the unexpected—Northern Harrier, six Ring-billed Gulls, a line of Canvasbacks and the improbable—Northern Goshawk.

During April and May I tried to spend every spare moment sitting on the front or back porch, with binocs around my neck, and keeping the sun to my back. When the spring migrants were really coming through, I might sit for several of hours at once. May 2nd was my busiest day of the year, with eight species added to the list: Mississippi Kite, Common Nighthawk, and Eastern Meadowlark overhead; Black-and-white Warbler, Yellow Warbler, Tennessee Warbler, Summer Tanager, and Baltimore Oriole in nearby trees.

Sixteen additional species made the list in May, including a Bald Eagle. **Rose-breasted Grosbeak and Swainson's Thrush** stopped to feed on a mulberry tree at the back of the yard. And I have a vivid memory of the Cape May Warbler perched atop the lone pine tree in the yard.

As June wore on, things slowed down, as I expected. On June 30th, my list totaled 81 species. I figured that if I could make it **to 90 by summer's end, I might pick up another 10 during fall migration. So I grabbed the binocs and got back to "work."** Within minutes a Black Vulture soared overhead. Species #82! That was the only time I saw a black vulture all year. Such was the case with many of my sightings.

I maintained my vigil during the summer. Every day, the kites foraged over our neighborhood and the hummingbirds buzzed around the feeders, so there was always some entertainment. On July 28th, while glassing two kites overhead, an American Kestrel passed through my field of view to become #87 on the list. A little luck never hurts. One day while walking out to the mailbox, I heard the rattling call and looked up to see a Belted Kingfisher. That was **the only species to make my list when I didn't have binocs in hand.**

On September 5th, a **Wilson's Warbler landed in the redbud tree** in front, not 20 feet away from me. That made #93, but Kathy and I would soon leave on a 2-week trip to New England. I would **miss some prime migration time. When we returned, I knew I'd need** some serious porch sitting because my calendar for early October was filled with other non-birding commitments. On Sept. 21st, Horned Larks flew over twice and then a Black-throated Green Warbler foraged in the front yard pin oak. The next day I was thrilled to watch a Peregrine Falcon cruise by at tree-top level. Up to #96. A few days later, luck smiled upon me again. A Gray Catbird finally arrived, feasting on the autumn olive berries in back. Then minutes later, an American Pipit landed on the bare ground beneath the pin oak and walked around for a minute. Talk about an improbable #98! One day later, #99 appeared in the form of a Scarlet Tanager. After **a day of fishing, I'm back on the porch on September 29th.** A cold, clear morning. Warblers moving early. First a Pine Warbler—not a **new one. Then another that won't stop long enough for a positive ID.** A third one lands on the lowest branch of the gum tree. A few flicks of the tail confirm my thoughts—a Nashville Warbler, #100!

Sense of urgency gone, I wasn't back in the chair until the second week of October. A Bay-breasted Warbler and American Redstart put me at 102. Then #103 flew over—a **Rock Pigeon, a bird I'd** been waiting all year to see. A few days later, Ruby-crowned Kinglets were followed by Golden-crowned Kinglets to make it #105, which is where I stand at the end of October. My list of 100 included 4 herons, 13 raptors, 7 woodpeckers, 5 swallows, 11 warblers, and one duck—the Canvasbacks. Through it all, I saw some neat behaviors. The 14 species that fed on the mulberries, each in their own way. The grackles stealing worms from the robins. The adult cardinals feeding fledgling cowbirds. Kites snatching dragonflies and eating them on the wing; one time dragonfly crumbs fell near me as a kite finished its meal.

I learned that some birds may have their preferred habitat, but all bets are off during migration. And I confirmed what many folks already know--that if you sit in one spot long enough, you might see almost anything!

Highlights of the Fall Meeting

Bruce Beck

More than 60 ASM members enjoyed the past weekend at Lake of the Ozarks State Park. Close fellowship, good food, informative presentations, new business, and good birding were the order of the weekend. The clear weather on Friday and Saturday was outstanding. It made for wonderful birding. Friday night we were uniquely blessed by a crystal clear night sky and an almost-full moon. What a way to view night migrating birds. And beside the moon was Jupiter, with its beautiful four moons strung out like a diamond necklace to one side.

We saw 93 species on our field trips and at the campgrounds. Not bad for this time of year. Even before the meeting started on Friday afternoon a Say's Phoebe was spotted at the park airport. It was a life bird for many. Other members were impressed to see Black Vultures and the kettles of migrating Broad-winged Hawks. The list will be posted in a separate message.

We were impressed by the presentations of four graduate students from the Avian Ecology Lab at the University of Missouri in Columbia and their advisor professor. They gave outstanding presentations on the (a) nesting ecology of Bell's vireos in Missouri, (b) red-bellied woodpecker dispersal, (c) brown-headed cowbird nest predation, (d) American redstart winter behavior, and (e) the declining number of birds overwintering in the Caribbean. ASM is proud to support their work through scholarships.

Several additional students joined us this year. ASM is energized and enriched by their participation. We hope they continue to participate with us.

At our business session we voted in new officers, board directors, and committee chairs. Bruce Beck has moved up from the office of vice president to president. June Newman is the new vice president/president-elect. Gary Chastain of Lesterville and Phil Wire of Bowling Green are new board directors. Jerry Wade is our new membership chair. Go to the MOBirds website <http://mobirds.org/> for more details.

Edge Wade calls ASM an extended family. We all agree with her. We had members in attendance from all quarters of the state. The only thing missing was more of our friends. We invite you to join us next fall.

The following species were reported at Lake of the Ozarks State Park by participants at the Audubon Society of Missouri fall annual meeting, September 24-26.

Wood Duck	Purple Martin
Mallard	Tree Swallow
Wild Turkey	Northern Rough-winged Swallow
Pied-billed Grebe	Bank Swallow
Double-crested Cormorant	Barn Swallow
Great Blue Heron	Black-capped Chickadee
Black Vulture	Tufted Titmouse
Turkey Vulture	White-breasted Nuthatch
Osprey	Carolina Wren
Bald Eagle	House Wren
Northern Harrier	Sedge Wren
Sharp-shinned Hawk	Marsh Wren
Cooper's Hawk	Golden-crowned Kinglet
Red-shouldered Hawk	Ruby-crowned Kinglet
Broad-winged Hawk	Blue-gray Gnatcatcher
Red-tailed Hawk	Eastern Bluebird
American Kestrel	Swainson's Thrush
Merlin	American Robin
Peregrine Falcon	Gray Catbird
Killdeer	Brown Thrasher
Spotted Sandpiper	European Starling
Ring-billed Gull	Cedar Waxwing
Rock Pigeon	Orange-crowned Warbler
Mourning Dove	Nashville Warbler
Yellow-billed Cuckoo	Northern Parula
Eastern Screech Owl	Black-throated Green Warbler
Barred Owl	Common Yellowthroat
Chimney Swift	Yellow-breasted Chat
Ruby-throated Hummingbird	Eastern Towhee
Belted Kingfisher	Chipping Sparrow
Red-headed Woodpecker	Field Sparrow
Red-bellied Woodpecker	Savannah Sparrow
Yellow-bellied Sapsucker	Lincoln's Sparrow
Downy Woodpecker	Summer Tanager
Hairy Woodpecker	Scarlet Tanager
Northern Flicker	Northern Cardinal
Pileated Woodpecker	Rose-breasted Grosbeak
Eastern Wood-Pewee	Indigo Bunting
Acadian Flycatcher	Red-winged Blackbird
Least Flycatcher	Eastern Meadowlark
Eastern Phoebe	Common Grackle
Say's Phoebe*	American Goldfinch
Eastern Kingbird	House Sparrow
White-eyed Vireo	
Yellow-throated Vireo	
Blue-headed Vireo	
Philadelphia Vireo	
Red-eyed Vireo	
Blue Jay	
American Crow	

Board Minutes, Fall 2010 Meeting—Shari Harden

The Annual Board Meeting of the Audubon Society of Missouri Board of Directors was called to order at 1:04 p.m. on Saturday, September 25, 2010, at Camp Clover Point, Lake Ozark State Park, by President Jim Zellmer.

Roll Call: Roll call was taken by Shari Harden, Secretary. Board members present were Jim Zellmer, Bruce Beck, Terry McNeely, Phil Wire, Larry Lade, JoAnn Eldridge, Pat Leuders, Ruth Simmons, Susan Hazelwood, Gary Chastain, June Newman, Shari Harden, Clare Wheeler. Board members absent were Brad Jacobs, Bill Eddleman, Sue Gustafson, Liza Berger, Laura Gilchrist.

Approval of Minutes: On a motion by Bruce Beck, seconded by Terry McNeely, the minutes of the 2009 Board Meeting were approved as written and unanimously passed.

Acknowledgement of Electronic and other Votes since last Board Meeting: Email and other votes taken during the year were made a part of the record. 1) Trading Post for mobirds.org was approved in an electronic vote in November 2009. 2) Missouri Fire Summit registration fee of \$45.00 was unanimously approved in March, 2010. 3) Laura Gilchrist resigning her position as Secretary after 4 years replaced by Shari Harden was approved for the slate in an electronic vote in June, 2010. 4) \$2,500.00 for the Mingo Basin Restoration Project Phase II was approved in an electronic vote in July, 2010. 5) The donation of items totaling \$75.00 for a Silent Auction Basket for the Missouri Bird Conservation Initiative (MoBCI) Conference was unanimously approved in an electronic vote in July 2010. JoAnn Eldridge made a motion to approve, Bruce Beck seconded. Motion passed.

Treasurer's Report: The 2009 year-end financial report and the 2010 year-to-date financial report were accepted by the Board of Directors. The proposed 2011 budget was discussed. JoAnn Eldridge made a motion to pass the Profit Loss to Date. Bruce Beck seconded. Motion passed. Larry Lade made a motion to approve the Assets to Date, Susan Hazelwood seconded. Motion passed. Susan Hazelwood made a motion to approve the proposed 2011 budget with the addition of \$1200 for the Fall meeting (for a speaker fee if needed). Ruth Simmons seconded. Motion passed. The board discussed the possibility of checking on a tax preparation fee.

Elections and Appointments: A slate of nominees for Board of Directors positions was discussed. The slate of officers with terms expiring in 2013 is the following: Terry McNeely, Gary Chastain, Clare Wheeler, and Phil Wire. Bruce Beck moved, Pat Leuders seconded. Approved. The slate of nominees for Executive Committee positions with terms expiring in 2012 is the following: Bruce Beck, President; June Newman, Vice-President; Pat Lueders, Treasurer; and Shari Harden, Secretary. Larry Lade moved, Terry McNeely seconded. Approved. President Zellmer appointed the following people for another one year term: Patrick Harrison as Webmaster and Web Monitor; for Executive Committee positions with terms expiring in 2012 is the following: Bruce Beck, President; June Newman, Vice-President; Pat Lueders,

Treasurer; and Shari Harden, Secretary. Larry Lade moved, Terry McNeely seconded. Approved. President Zellmer appointed the following people for another one year term: Patrick Harrison as Webmaster and Web Monitor; Mike Thelen as editor for CACHE; Edge Wade as Conservation Partnership Coordinator to CACHE and SPARKS; Susan Hazelwood as the MoBCI Conference Representative for ASM/co-owner for Mobirds-L; David Scheu as Co-owner of Mobirds-L; Bill Eddleman as Editor of *The Bluebird*; JoAnn Eldridge as worship coordinator; and Mike Doyen as Grassland Bird Coordinator. Jerry Wade as membership chair. Table the conservation editor position for now.

Committee Reports:

Scholarship Committee—Paul Bauer may want to change the format from supporting individual students to purchasing supplies and equipment at the University to benefit more students.

Listserve MOBIRDS-L—Susan Hazelwood and David Scheu submitted a report on the MOBIRDS-L list server. Subscription is up 4% and total posts are up 2%. The report includes information on a new subscriber policy that sends posts from new subscribers to the list owners for approval before being distributed to the list. This policy has been implemented to avoid inappropriate posts. Issues concerning unintended signoffs, subject line reminders, and advertising are included in the report. The list owners believe the development of a second list that would only carry rare bird sightings would be divisive and would not encourage communication between birders of all levels. The listserve is available to ASM through the University of Missouri-Columbia to support the service and educational mission.

Website—Patrick Harrison submitted a report about the usage of the website. 1,600 individuals visit the site each month. The pages visited post often include: CACHE checklist, species info and the CACHE and SPARKS data pages. The possibility of online meeting registration and membership were outlined.

Missouri Bird Records Committee (MBRC)—Joe Eades - Records committee. MBRC met July 10, Brad Jacobs and Joe Eades reappointed for 4 years, one position is vacant. Turn in nominations in writing. ASM could begin filing records and photos electronically.

Membership - June Newman reported on the number of members. Discussion about cleaning up the membership roster (removing names of people who have not paid, splitting Mr. and Mrs. into two entities). ASM had 290 **paid members in 2010. The possibility of printing 'membership expires at the end of the year' on cover of *The Bluebird*** to encourage the payment of dues on time was discussed.

Bluebird—Bill Eddleman sent a report on *The Bluebird*. The mix of articles has been good and well received. More article contributions are needed. Another attempt will be made to acquire submissions from the professional ornithological community in Missouri. Feedback from the membership would be appreciated as very little response is received, thus the editor does

not know if the readers are pleased with the content or wanting something else.

Grassland Birds - In Mike Doyen's report, he states that he met with Max Allager, the MDC Grassland Coordinator, and Mike attended the Grassland Bird Coalition annual meeting at Dunn Ranch. ASM and MDC could work together to monitor grassland sites and funds are available to pay for travel expenses.

CACHE/SPARKS report turned in to secretary. The CACHE has entered phase VI and SPARKS has entered phase III. The CACHE project has had 67 sites selected for special emphasis to build checklists. Some areas have been very successful with many reports files, but 6 areas have fewer than 10 trips entered. Of the target areas, more than 20 have excellent checklists, more than 30 are pretty good, but need season-specific trips, and about 15 sites need more visits. The SPARKS data show similar variation. The data entered is already being used to make management decisions. MDC has paid ASM \$50,000. DNR has paid \$12,500 for SPARKS. ASM has received \$62,500. The cost to develop and manage both is \$16,169.45. ASM has earned \$46,330.55 to further our mission to preserve and protect birds and other wildlife, educate, and support conservation practices.

JoAnn Eldridge moved to accept the reports as presented. Larry Lade seconded. Motion passed.

New Business:

Finding an assistant for Webmaster Patrick Harrison—Time constraints for Patrick slow down updates (see below in Old business).

Fall Meeting consideration of expense:—Pay for a speaker or not? Does it make a difference in attendance? Only 1 person less this year. Keep it as is. We should keep it inexpensive.

CACHE funding through MoBCI—We should set up a formal request for proposals in the future. June Newman made the motion for the following donations: \$3000 to Oak Savannah, up to \$2500 to each of the two bird surveying projects, \$5000 to Mingo, \$2000 to Iatan, \$2500 to Ruffed Grouse. Bruce Beck seconded. (Discussion about the USFWS not able to spend any money on bird surveying - they have worked on habitat, but they have no way to monitor the impact. Amend to up to \$2500 for each of the bird surveying projects.) Motion approved. (2 nays)

Partnership with USF&W for Big Muddy NWR—Mr. Watkins is asking if ASM would want to set up partnership similar to CACHE/SPARKS? Could **this lead to the addition of all NWR's in the state? The board supports this** idea. They need to get a proposal to us. Bruce Beck made the motion. Susan Hazelwood seconded. Motion approved.

Select locations for 2012 and 2013 Spring Meetings—Joplin for 2012 (pending approval). St. Joe (pending approval).

Discuss re-printing of 100 year report—Susan Hazelwood offered to scan the report. The electronic version could easily be sent to anyone who wants one without additional costs.

MO River Bird Observatory—Near Marshall, MO (Dana and Ethan) Proposal for backyard banding program at feeders. To get people involved in birding. Develop data entry portal on our website and financial support.

Old Business:

Online Services—registration and membership—Online registration for Fall and Spring meeting and annual membership could decrease amount of time for Patrick, and get new people to sign up online. The board discussed the following issues: Would the money put in -\$2000 for Ann Johnson and Patrick to do it - (Ann would get the money and that is below market price) pay off in increased membership? Do we need to advance the website? Purchase **new software? Should we keep the website in Patrick's language and link to a secure site for anything involving payment?** Patrick will contact Ann Johnson with board support, a timeline, and numbers to develop online membership and Fall and Spring meeting registration options, work up a plan and bring back to board. It would be best to link to another site for payment with more security. (Paypal). Motion by Phil Wire. Terry McNeely seconded. Motion approved.

Allowing vendors to come to Fall Meeting—Open invitation for Jim Rathert to attend and sell products with a percentage of sales to be given to ASM. JoAnn Eldridge made the motion, Larry Lade seconded. Approved.

There being no further items for discussion, a motion to adjourn was made by Larry Lade, seconded by Ruth Simmons. Motion approved. Jim Zellmer adjourned the meeting at 3:36 p.m.

Respectfully submitted,

Shari Harden, Secretary,
The Audubon Society of Missouri

Minutes of the General Meeting, Fall 2010, Camp Clover Point Shari Harden

Jim Zellmer, outgoing President of the Audubon Society of Missouri, welcomed the attendees and called the ASM General Membership Meeting to order at 8:18 p.m. on Saturday, September 25, 2010, at Camp Clover Point, Lake Ozark State Park. Jim thanked Judith Tom and John Faaborg for their presentations on bird behavior and populations in Puerto Rico.

On a motion by Ellen Zellmer, seconded by Susan Hazelwood, the minutes of the 2009 General Membership Meeting were unanimously approved as written.

Jim Zellmer then presented the slate of nominees standing for election to the Board of Directors. The slate of officers with terms expiring in 2013 is the following: Terry McNeely, Gary Chastain, and Clare Wheeler. Paul Bauer made the motion and Ted Wright seconded. Approved. The slate of nominees with terms expiring in 2012 is the following: Bruce Beck, President; June Newman, Vice-President; Pat Lueders, Treasurer; and Shari Harden, Secretary. There were no nominations from the floor. A motion was made by Ted Rights to elect the slate of nominees by acclamation. It was seconded by Ellen Zellmer. The motion carried unanimously. Jim Zellmer then shared the names of those filling appointed positions for one year terms: Patrick Harrison as Webmaster and Web Monitor; Mike Thelen as editor for CACHE; Edge Wade as Conservation Partnership Coordinator to CACHE and SPARKS; Susan Hazelwood as the MoBCI Conference Representative for ASM/co-owner for Mobirds-L; David Scheu as Co-owner of Mobirds-L; Bill Eddleman as Editor of *The Bluebird*; JoAnn Eldridge as worship coordinator; and Mike Doyen as Grassland Bird Coordinator. Phil Wire was appointed to the Board.

Scholarship Report: The Bauers have graciously supported the scholarships for many years. The 2010 recipient is an MU student studying Missouri Greater Prairie Chickens. The Bauers would like to continue to give \$1000 and match up to another \$1000.

New Business:

Jim reported that Patrick Harrison has done a great job with the MObirds website. To continue the services he will team up with Anne Johnson to get on-line membership and meeting registrations.

Vendors at the Fall meeting, such as Jim Rathert, be allowed to come and sell items.

A USFWS manager at Big Muddy approached ASM about partnership similar to CACHE/SPARKS.

Mike Doyen is the liaison for ASM as the Grassland Bird Coordinator. He will work with other agencies to monitor prairies on the west side of the state.

Future Meeting Locations: Spring meeting 2012: Joplin; 2013: St. Joe.

Jim was given a standing ovation for his work as the President of ASM. He was presented with a beautiful carved bluebird.

Joe Eades from the MBRC gave the annual report of the state's top ten birds from 2009. The top 10 birds are as follows: 10) Summer Tanager in winter, 9) Anhinga, 8) Ferruginous Hawk , 7) Brown Pelican, 6) Clark's Grebe, 5) Common Poorwill, 4) Black-throated Sparrow, 1) Mottled Duck, 1) Fork-tailed Flycatcher, and 1) Golden-fronted Woodpecker.

It was moved and seconded that the meeting be adjourned. Motion carried. The meeting ended at 8:55 p.m.

Respectfully submitted,
Shari Harden, Secretary, Audubon Society of Missouri.

SUMMER 2010 SEASONAL REPORT *JOSHUA P. UFFMAN*

Hot, high humidity and wet is how those in the north and central parts described June. In the south it was certainly hot, but rainfall totals were 2-4 inches below the norm. Outside of the Ozarks and the Mississippi Lowlands rainfall totals were 2 inches over the norm and increased to 8 inches as one approached the Iowa border. **Kristi Mayo writes, “All bodies of water full to capacity.” Flooding in north-central Missouri even resulted in Swan Lake National Wildlife Refuge in Chariton County closing when water covered the main levee road. Steve Kinder added a positive note though, “These wet conditions delayed mowing and haying which resulted in good numbers of grassland birds in some areas, including Upland Sandpipers, Sedge Wrens, Grasshopper and Henslow's Sparrows, and Bobolinks.”** In the north, June temperatures were 1 - 3° F warmer than the average, while in the south it was one of the top ten warmest Junes on record at 4 - 5° F above the norm. Few shorebirds were reported lingering into June, but good finds included fledgling Long-eared Owls in the north-central part of the state, Black-throated Green Warblers in the Ozarks and a lingering Black-Headed Grosbeak in the northwest.

Above average temperatures continued through July except in parts of the extreme northwestern and northeastern parts of the state. By the end of July, most of Missouri was also experiencing higher than normal rainfall, making good habitat for returning shorebirds tough to find. But, 5 to 7 inches above the norm in east-central, central and northeast Missouri was not welcomed. For those willing to endure the heat, shorebirds began to return the first week of July. Highlights for July included a second-year Wood Stork at Thompson River Wetlands in Livingston County, a Brown Pelican at Blue Springs Lake, Jackson County, and the most northern nesting Black-necked Stilts at Columbia Bottom Conservation Area, St. Louis County

WHISTLING-DUCKS THROUGH GREBES

In May 1994, a group of 4 Black-bellied Whistling-Ducks at SLNWR represented the first confirmed record for Missouri. Just 16 years later, **their status on the state checklist is listed as “rare transient/summer visi-**

visitor". This summer definitely indicated a trend in their apparent range expansion with 5 reports from various areas of the state. Starting at a small farm pond north of Chillicothe *Livingston*, a lone Black-bellied Whistling-duck, possibly one of the same individuals present at this location last summer, was observed 2 June (landowner, *fide* SK), 2 were with a flock of approximately 30 Canada Geese at Duck Creek CA *Bollinger* 11 June (Bill Brennan), 3 at EBCA 14 June (Tim James, Howard Hinkel), 2-3 in Napoleon *Lafayette* were seen using a wood duck nest box beginning 2 July (Lowell Burns**), and at CBCA 2 were observed 24 July (James Hubbell). Two Fulvous Whistling-Ducks were at FRCA 6 June (JoAnn Garrett; acc). Mallards are "pretty uncommon as summer breeders in our area," writes Larry Herbert. Therefore, a hen with 9 ducklings 5 June and 7 still following mom 30 July in *Jasper* are noteworthy (LH). Two male Blue-winged Teal were at OSCA 4 June and nearby 10 July (CBa, ph.), while three Northern Shovelers were at TRW 14 July through the end of the period (SK). There were two Northern Pintail reports: 4 males near OSCA 10 July (CBa) (acc) and a single male 14 July through the end of the period at TRW (SK*). Possibly a returning fall migrant, a drake Green-winged Teal was at TRW 25 July (SK). A male Ring-necked Duck remained at OSCA throughout the season (CBa), a pair (male & female) was at CBCA 20 June (BR), a 2nd-year male was at Lake Contrary *Buchanan* 16-19 July (JH), and a single was at TRW 16 July (SK). On 14 June a hen Hooded Merganser with 6 young were at EBCA (EW) and 2 in female-plumage were at CBCA 20 June (BR). A female Red-breasted Merganser on 11 July at CBCA was an accidental summer visitor (David and Mary Anne Marjamaa*). A single Ruddy Duck was at TRW on 26 July (JN, *fide* SK). An impressive count was made of 43 Northern Bobwhite near Lockwood *Dade* 3 July (CBu, Lisa Berger, *fide* DR). **Edge Wade wrote, "Central Missouri birders commented all summer that they were seeing and hearing more Northern Bobwhite than they had in several years."** A single Greater Prairie-Chicken was seen in flight at Taberville Prairie CA *St. Clair* 13 June (BF). Continuing from the spring season, a Common Loon remained at OSCA through 10 June (CBa). At EBCA, a single Pied-billed Grebe 26 July (BJ, PMc, AF) and (2) 10 July were the only ones reported (BJ, PMc, BR, JE).

STORKS THROUGH IBIS

A second-year Wood Stork at TRW 15-21 July was the 5th state record for this species since the 1930s (SK, TM; ph.; acc). A Neotropic Cormorant was at Blue Springs Lake *Jackson* 15 July (BF, RS**, Nancy Leo). A flock of 52 American White Pelicans were rather late spring migrants at Mingo NWR – Monopoly Marsh *Wayne* 12 June (CBa). In the St. Louis area, where now expected during the summer season, Bill Rowe reported 6 on 20 June and 2 on 19 July at CBCA, but surprisingly he found none 16 or 19 July at RMBS. In north-central Missouri, at least 50 were at TRW on 11 July, with fewer there by the end of the season, and the 500+ at SLNWR through the end of the season (SK) was the peak count. A Brown Pelican at Blue Springs Lake *Jackson* 13-15 July is the 9th state record (Mike

Hicks, RS; ph.; acc). An American Bittern was at EBCA 10 July (BJ, PMc, BR, JE). Least Bitterns were found in two locations: 1 on 16 July and 3 on 19 July at Lake Contrary *Buchanan* (JH), and 1 on 26 June (BJ, PMc, AF) and 8 on 10 July (BJ, PMc, BR, JE) at EBCA. Also at EBCA, 214 Great Blue Herons were tallied 18 July and 117 Great Egrets were counted there 31 July (CD). At CBCA 20 June, Bill Rowe counted 5 Great Blue Herons, 250 Great Egrets, 8 Snowy Egrets, 28 Cattle Egrets, 78 Little Blue Herons, and 3 Black-crowned Night-Herons. A month later, on 19 July, when the site was much dryer and vegetation was overgrown, he recorded 7 Great Blue Herons, 68 Great Egrets, 11 Snowy Egrets, 6 Cattle Egrets, 28 Little Blue Herons, 2 Black-crowned Night-Herons, and 2 Green Herons. Five Green Herons were also at BCA on 5 July (MT). A single Black-crowned Night-Heron on 13 June (MT) and 3 Yellow-crowned Night-Herons on 29 July (PL) were at Forest Park *St. Louis City*. A single Yellow-crowned Night-Heron on 26 June (BJ, PMc, AF) and 3 on 30 July (Eric Wood) were at EBCA. Adjacent to OSCA, a single White Ibis was observed on 10 July, 4 were found there 13 July, and a new single day high count of 7 came on 24 July (CBa, ph.).

VULTURES THROUGH PHALAROPES

Slightly north of its expected range, a single Black Vulture was observed by Jennifer Reidy at Bennett Spring SP *Laclede* twice during the first two weeks of June. More than 50 Turkey Vultures near the Thompson River *Livingston* 19 July was a rather high count for the time of year (SK, LL). Osprey were well reported, with 3 occupied nests in the arms of Truman Lake south of Clinton *Henry* 5 June (SK, LL), a nest with 2 adults 23 July in *Dade* (Steve Scroggs, CBu, *fide* DR), and a single at Teal Lake in Mexico *Audrain* 29 July (EW). Jeff Cantrell writes regarding Mississippi Kites in the southwest: “**They seem to be expanding their range, all summer they have been present in Jasper at Carl Junction and Webb City and in Newton in southern Joplin, Diamond Grove Prairie CA, and WGCA.**” Additional southwest sightings included 3 in *Greene* (Jim Fossard, *fide* DR), 7 at FRCA 12 June (SK, JN) and 2 over Larry Herbert’s *Jasper* house 8 & 12 July. The highest single-day count was 10 at BKLCA 19 June (MT). Surprisingly, not a single Northern Harrier was reported this summer. Steve Kinder even commented, “**Oddly no Northern Harrier were observed anywhere, in fact they seemed to all have left the area about the time the last of the snow melted in the Spring.**” Nesting **Cooper’s Hawks** were in *Livingston* 3 June (SK) and a single was at WSCA – Blue Grosbeak Trail 19 June (MT). Red-shouldered Hawk nests were located at 3 *Newton* sites: WGCA, near WWCA, and in Joplin (JC). In north-central Missouri, where a rare summer resident, a single Red-shouldered was at Cemetery Lamar *Barton* 6 June (SK) and an imm. Broad-winged Hawk was at Pine Ridge Lake in Salisbury *Chariton* 17 July (EW). Elsewhere, an adult and imm. Broad-winged were observed at WGCA 25 June (JC) and a single in *Laclede* 27 July (CBu, *fide* DR). The only **Swainson’s Hawk** was at Shawnee Trails CA *Barton* 14 June (SK, June Newman). King Rails were found along the

Mississippi River valley. In the southeast, Bill Eddleman observed one standing in the middle of a gravel road, 12 miles south of Senath *Dunklin*, while completing his BBS route on 10 June. Further north, one was at BKLCA – Bittern Basin Unit 19 June (MT), while 3 adults and at least 5 chicks were at CCNWR 9-20 July (AS, Paul and Fran Bauer, Jason Harrison, PL, ph.). Additionally, a juvenile Virginia Rail was photographed at CCNWR *Pike* on 9 July (AS, Paul and Fran Bauer; ph.; acc). Marshbird surveys at EBCA located 3 Virginia Rails, 2 Sora, and 7 Common Moorhens on 26 June and 2 Virginias, 1 Sora, 8 Common Moorhens, and 1 American Coot on 10 July (BJ, AF, PMc). Two Sandhill Cranes at EBCA continued from the spring and remained through the summer season (KA, m. ob.) and 2 others were at CBCA 13-20 June (Lorrie Vit, BR). An American Golden-Plover on 7 June near OSCA, as well as a Semipalmated Plover on 10 June at OSCA, were both very late spring migrants (CBa, ph.). The first 3 returning Semipalmated Plovers were found 16 July at TRW (SK, TM). The peak count of Killdeer came on 21 July near Headwaters Access *Cape Girardeau* (CBa). In *St. Louis*, the furthest northeastern Missouri breeding record for Black-necked Stilts was documented by Al Smith on 22 July when he photographed a pair with two young at CBCA. Many observers had reported 2-4 stilts there up to that point and another stilt was at CCNWR on 25 July (BR, JE). An imm. Spotted Sandpiper was near OSCA on 10 July (CBa), the first returning Solitary Sandpiper was at OSCA on 1 July, while the first Greater Yellowlegs was there on 9 July (CBa). Fourteen Willets were at TRW on 5 July and 4 were there on 11 July (SK). A single Lesser Yellowlegs at OSCA on 10 July was the only report (CBa). A single Upland Sandpiper was on breeding grounds at Hi-Lonesome Prairie CA *Benton* on 11 June (ML). Their southbound migration was first noted 25 July, with several flyovers at TRW (SK) and by the following day, 26 July, one was at OSCA (CBa; ph.). A single Hudsonian Godwit* and two Marbled Godwits were at TRW 5 and 11 July (SK, TM). Two Sanderlings at Horseshoe Lake *Buchanan* on 29 July were early (BF). On 7 June, 31 Least Sandpipers were very late spring migrants at OSCA (CBa; ph.). The first returning Least Sandpipers arrived 1 July, with 6 at TRW (SK) and 3 at OSCA (CBa; ph.). One of the latest of our spring migrating shorebirds, White-rumped Sandpipers, were still at FRCA on 12 June (SK, JN). Chris Barrigar noted the last of the spring migrating Pectoral Sandpipers (16) 7 June at OSCA and the first returning Pecs (3) near Headwaters Access *Cape Girardeau* 16 July. A very early Dunlin* and several Stilt Sandpiper were at TRW 16 July (SK, TM). Returning Short-billed Dowitchers arrived in the north at TRW on 5 July (SK) and in the south near OSCA on 17 July (CBa). An American Woodcock and an early returning **Wilson's Snipe** were at TRW on 1 July (SK).

GULLS THROUGH CUCKOOS

Ring-billed Gulls are rare summer visitors away from the Mississippi River, so 14 at Truman Lake *Benton* on 16 July were unusual (JU). For the second consecutive summer the Army Corps of Engineers at RMBS placed

two barges to attract nesting Least Terns. On 3 June, 8 nests containing a total of 13 eggs were counted on these barges. By 8 July, 46 adults, 19 chicks and 17 nests containing 25 eggs were recorded. However, by 9-10 July all but one of the chicks fell victim to predation by a single Great Blue Heron and by 21 July only a single adult Least Tern remained in the area (*fide* Vincent Giammaria). The first 5 returning Black Terns were at RMBS on 7 July (PL). By 13 July 2 were at OSCA (CBa), 12 on 16 July at TRW (SK), and 6 at Truman Reservoir *Henry* on 21 July (Bill Clark). Twelve **Forster's Terns** were at Truman Reservoir *Benton* on 16 July (JU). At least one White-winged Dove continued in East Prairie *Mississippi* 18 June (AS, ph.). This makes the sixth consecutive summer this species has been present in East Prairie. On 18 July, 78 Mourning Dove were at EBCA (CD). Bill Rowe commented that the Yellow-billed Cuckoo population at CBCA is healthy, with 11 on 20 June. Additionally, 5 were at CCNWR on 25 July (BR, JE). A Black-billed Cuckoo was heard singing on 29 July at Pawnee Prairie CA *Harrison* (SK, Myrna Carlton) and a Greater Roadrunner was in *Laclede* 27 July (CBu, *fide* DR).

OWLS THROUGH WAXWINGS

Barn Owls were well reported across southern Missouri: a pair present for many years was again at Carl Junction Lagoons *Jasper* this summer (LH), a **single at Bois D'Arc CA *Greene*** on 1 June continued from the spring (EW), 2-3 were observed 7 and 16 June at Maintz CA *Cape Girardeau* (PL, AS, Paul Bauer), and a single near Newtonia on Hwy M *Newton* on 18 June (JC). Three fledgling Long-eared Owls last seen in a *Livingston* pine grove on 3 June adds to one of only a few breeding records for this species in Missouri (SK; acc). Edge Wade commented that Chuck-**will's**-widows and Eastern Whip-poor-wills were very scarce in central Missouri. Possibly that was a statewide trend, considering the only Chuck-**will's** **Widow reported was at** the DMCA-Bull Shoals Field Station on 19 July (AK, Dawn Huber) and the only Eastern Whip-poor-will report was a nest with two eggs at Poosey CA *Grundy* 3 June (SK). **Jeff Cantrell said, "Red-headed Woodpeckers stood their ground with the European Starlings at the Neosho Golf Course and WGCA, both *Newton*, and that both fledged young."** Four Downy Woodpeckers were seen at BCA 5 July (MT). Single Olive-sided Flycatchers were at Weston Bend SP *Platte* on 7 June (BF) and a very late individual was at McClure CA *Mercer* on 16 June (EW). Mike Thelen counted 6 Eastern Wood-Pewees and 8 Acadian Flycatchers at BCA 5 July. A single Willow Flycatcher was observed along the WSCA – Blue Grosbeak Trail on 19 June (MT) and a confirmed nesting pair was along Wire Road *Barry* 30 June (JC). Two Western Kingbirds returned to Berkeley *St. Louis* on 28 June (MT) and 2 of the 3 nests located in Bridgeton *St. Louis* were successful by 30 June (AS, ph.). A nesting pair that fledged two young near Creve Coeur Lake *St. Louis* was present through at least 10 July (*fide* PL) and in the northeast Patrick Harrison and family discovered a pair in Moberly *Randolph* on 17 July. Still uncommon in the southwest, one was in *Cedar* on 19 June and a nesting pair with 4 young was in *Greene* on 20 July

(David Blevins, *fide* DR). Larry Herbert reports Scissor-tailed Flycatchers are very common in the Joplin area. He found 3 nests in Joplin *Jasper* in early July and added that another was found in Neosho *Newton*. Outside their expected range: 2 were at EBCA on 3 June (KA), returning for at least the second year in St. Joseph *Buchanan* a female was noted sitting on a nest 5 June (Brent Galliard, Frances Cramer, ph.), a pair returned for the third summer near Lake St. Louis *St. Charles* through 19 June (MT), and 1-2 were present in the southeast at Duck Creek CA *Stoddard/Bollinger* on 8 June and 19 July (Matt Bowyer). Loggerhead Shrikes were reported only from western Missouri. In the northwest, 4 nesting pairs were located in the Skidmore area *Nodaway* during June (Kirby Goslee). Further south, 2 were at Bushwhacker CA *Barton* 20 June (LH) and near Newtonia *Newton* (JC). Nesting in the southwest was confirmed at Capps Creek CA *Newton*, close to Pulaskifield *Barry*, and between Neosho and Joplin *Newton* (JC). Four White-eyed Vireos were at BCA 5 July (MT). In the southwest, nesting **Bell's Vireos** were found at the Nature Conservancy's Cook Meadow *Barton* on 16 June (JC, Cyndi Cogbill) and a single at Diamond Grove Prairie CA *Newton* on 7 July (JC). In central Missouri, one was at Three Creeks CA *Boone* on 4 July (CD) and 4 were at EBCA on 31 July (CD). In the St. Louis area, 1-3 were heard singing 13 and 20 July at CBCA (MT, BR), 4-5 were at WSCA-Blue Grosbeak Trail 19 and 26 June (MT, BR), and 1 was at BCA on 5 July (MT). Two Fish Crows were heard at FRCA on 5 June (SK), 4 at EBCA on 10 and 14 June (KA, EW), they continued at Schell-Osage CA *Vernon/St. Clair* on 14 June (BF), and one was at BKLCA-King's Lake Unit on 19 June (MT). Relatively rare as breeders in the Ozarks, 6 Tree Swallows were observed using nest boxes at Little Indian Creek CA *Washington* 6 June (JU) and at least 200 were preparing to head south from *Linn* 26 July (SK). Observers in the northwest continued to note a drop in Carolina Wren numbers following the harsh winter. The following comments speak for themselves: Jack Hisabeck wrote: "Very hard to find in northwest Missouri, assumed because of the extremely hard winter." Kristi Mayo: "Still didn't find them in usual places like Watkins Mill SP *Clay*, Wallace SP *Clinton*, or Smithville Lake *Clay*." However, she did have 2 singing 20 June and another 24 July, both in Kearney *Clay*. The St. Louis area does not appear to have been affected, with 6 at BCA 5 July (MT). Jeff Cantrell reported **Bewick's Wrens** were present at WGCA and that they successfully nested at a *Newton* farm. At Lake Contrary *Buchanan*, Marsh Wrens were found 16 July (3), 19 July (1), and 24 July (3) (JH). In the St. Louis area, 2 were heard singing at CCNWR on 24 July (PL). At EBCA, 11 were present on 26 June (BJ, PMc, AF), while 15 were there on 10 July (BJ, PMc, BR, JE). A single Sedge Wren in *Laclede* on 28 June was the sole report (Mike Stoakes, Scott Lasert, *fide* DR). A Gray Catbird feeding on suet cakes throughout the summer was a highlight in Steve Kinder's *Livingston* backyard. Rare to uncommon summer residents in southern Missouri, two Cedar Waxwings were at Bushwhacker CA *Barton* on 20 June (LH).

WARBLERS THROUGH OLD WORLD SPARROWS

Prior this year there were 4 accepted summer Black-throated Green Warbler records for Missouri. This summer biologists working on the Missouri Ozark Forest Ecosystem Project (MOFEP) might have more than doubled that number across Peck Ranch *Carter* and Current River CA *Shannon, Reynolds and Carter*. However, at this point it is unclear how many birds were observed and at exactly how many different locations these birds were found. Currently, 2 at Current River CA on 21 & 23 June were accepted by the MBRC (Michael Nicosia**, Megan Blair, Jeremy Rappaport), but clarity is still needed for sightings that span from 11 June to the 21 July (m. ob.). In the southwest, 2 Yellow-throated Warblers were at the DMCA - Bull Shoals Field Station 18 June and 1 on 6 July (AK, Janice Greene), and another was at WWCA on 19 June (LH). Further north and where harder to find, one was singing 5 & 17 July in Sycamores near the creek at Tryst Falls Park *Clay* (KM). Bob Fisher reported at least 2 Pine Warblers continue at Knob Noster SP *Johnson* on 14 June and further south 2 were at WWCA throughout the summer (LH). A singing male Prairie Warbler was north of its expected range at Sugar Creek CA *Adair* from mid-May to 18 June (Peter Kondrashov**, ph.). A single American Redstart was banded at DMCA - Bull Shoals Field Station 20 July (JC, AK, Janice Greene, Dora Huber) and 6 were at MSP on 6 June (JU). Sixteen Worm-eating Warblers and five Ovenbirds were **this summer's high counts on 6 June** at MSP (JU). A record late Northern Waterthrush was seen and heard 11 June at Little Dixie Lake CA *Callaway* (Ryan Douglas**). Three Kentucky Warblers and 11 Common Yellowthroat were at BCA 5 July (MT). A male and female Hooded Warbler were banded at the World Bird Sanctuary *St. Louis* 29 July (PL). A single Yellow-breasted Chat was unusual at the DMCA - Bull Shoals Field Station 22 June (AK, JG) and 4 were at BCA on 5 Jul (MT). Six Eastern Towhees and 10 Field Sparrows were at BCA on 5 July (MT). On 19 June, 4 **Henslow's Sparrows** were at BCA and 2 others at WSCA (PL). At a different BCA location, 5 **July, 2 additional Henslow's were found (MT)**. In the southwest, 4 were at Diamond Grove Prairie CA *Newton* 21 June (JC), and in central Missouri 11 were at Hi-Lonesome Prairie *Benton* on 11 June (ML) and one at Perry Phillips Lake *Boone* 17 July (CD). Brad Jacobs had a White-throated Sparrow* lingering at his *Boone* home through 20 June. Also 20 June, 2 White-crowned Sparrows were very late at Three Creeks CA *Boone* and are the potential 2nd summer record (Ryan Douglas**). Bill Rowe reported the only Rose-breasted Grosbeaks: 1 singing on 20 June at CBCA and 2 singing on 26 June at WSCA – Blue Grosbeak Trail. An imm. male Black-headed Grosbeak continued from the spring season through 11 June 1.5 miles east of Skidmore *Nodaway* (Kirby Goslee, ph.). Blue Grosbeaks were well reported in the St. Louis area with one at WSCA-Blue Grosbeak Trail on 19 June (MT), 3 at BCA on 5 July (MT), and 4 singing at CBCA on 20 June and 5 on 19 July (BR). Mike Thelen counted 34 Indigo Bunting on 5 July at BCA. A pair of Painted Buntings returned for the second year to a Steak N' Shake in Jefferson City *Cole* 1-18 July (Scott Jackson, Tom Crabtree). In the southwest, three locations held

these gems: one singing 2 June in *Jasper* (LH), 2-3 males near Willard *Greene* on 13 June (Jerry and Margie Williams), and a female and 3 males on 30 June along Wire Road *Barry* (JC). Dickcissels were again numerous at CBCA, with at least 75, most singing, 20 June (BR). A single Western Meadowlark was singing 2 June in *Jasper* (LH), another was in *Greene* on 15 June (Mike Stoakes, Scott Laurent, *fide* DR), and one in *Laclede* on 28 June (Mike Stoakes, Scott Laurent, *fide* DR). Ten Great-tailed Grackles were in a pasture north of Fountain Grove CA *Linn* on 26 July (SK). An adult with a single begging young, possibly the first nesting record for the area, was observed at Swan Lake NWR *Chariton* on 27 July (SK). And, **wrapping up this summer's report are** Orchard Orioles from four locales: 2 at Bushwhacker CA *Barton* on 20 June, 6 in *Cedar* on 23 June (David Blevins, *fide* DR), a female feeding two begging Brown-headed Cowbirds along Wire Road *Barry* on 30 June (JC), and at CBCA an impressive count of 36 males and females on 20 June, while only 7 were there on 19 July (BR).

Observers

Kathleen Anderson (KA), Chris Barrigar (CBa), Charley Burwick (CBu), Jeff Cantrell (JC), Joe Eades (JE), Bob Fisher (BF), Andy Forbes (AF), Larry Herbert (LH), Jack Hilsabeck (JH), Brad Jacobs (BJ), Andrew Kinslow (AK), Steve Kinder (SK), Larry Lade (LL), Pat Lueders (PL), Marge Lumpe (ML), Kristi Mayo (KM), Terry McNeely (TM), Paul McKenzie, (PMc), June Newman (JN), Dean Rising (DR), Bill Rowe (BR), Al Smith (AS), Ruth Simmons (RS), Mike Thelen (MT), Joshua Uffman (JU), Edge Wade (EW).

Key

- * Documentation needed for MBRC review
- ** Documentation received by MBRC for review
- acc. Accepted by MBRC

Abbreviations

BBS-Breeding Bird Survey
CA-Conservation Area
imm.-immature
m. ob.-multiple observers
ph.-photographed
SP-State Park

Location Abbreviations (counties are in italics)

BCA-August A. Busch Conservation Area, *St. Charles*
BKLCA-B. K. Leach Memorial Conservation Area, *Lincoln*
CBCA-Columbia Bottom Conservation Area, *St. Louis*

CCNWR-Clarence Cannon National Wildlife Refuge, *Pike*
DMCA-Drury-Mincy CA *Taney*
EBCA-Eagle Bluffs Conservation Area, *Boone*
FRCA-Four Rivers Conservation Area, *Bates/Vernon*
MSP-Meramec State Park, *Franklin*
OSCA-Otter Slough Conservation Area, *Stoddard*
RMBS-Riverlands Migratory Bird Sanctuary, *St. Charles*
SLNWR-Swan Lake National Wildlife Refuge, *Chariton*
TRW-Thompson River Wetlands, *Livingston*
WGCA-Wildcat Glades Conservation and Audubon Center *Newton*
WSCA-Weldon Spring Conservation Area *St. Charles*
WWCA-Walter Woods Conservation Area *Newton*

A BIRDERS' GUIDE TO MISSOURI PUBLIC LANDS

Edge Wade and others

SHAWNEE TRAIL CONSERVATION AREA by Lawrence Herbert & Edge Wade

3,635 acres Barton Co. DeLorme 50, E-1; MDC owned; for information call: 417-629-3423

Directions: From the junction of US 71 and US 160 in Lamar, go west on US 160 for 14 miles to Rt. M (east of Mindenmines), then one mile south on M to the northeast boundary. To access the area beginning on the west side, from US 160 in Mindenmines, turn south on gravel road SW 160 Lane and go one half-mile to the area.

When to Visit/Species to Expect: Winter birding can be especially rewarding. The shrubby vegetation and the hedgerows offer quite a bit of cover for a variety of wildlife, including Northern Bobwhite, a variety of raptors, and winter sparrows. Northern Harriers are very common. Short-eared Owl, Merlin and Prairie Falcon are winter residents. Look for them in the area three miles south and one mile west of the junction of US 160 and Rt. M. Historically, a Greater Prairie-Chicken lek (booming ground) in the eastern **part was a center of activity in early spring. Upland Sandpiper and Bell's Vireo** are regular summer residents in the eastern portion of the area.

Features of interest to birders: 17 parking lots (and in some cases the short roads leading to them) provide easy access to the variety of habitats available for birds. **There are no designated hiking trails, but the hiking isn't difficult** except in the strip mined areas. Cropland and non-prairie grassland make up about 90% of the area. There are 50 acres of native prairie, 120 of old field, 98 of forest and woodland. Lakes and ponds total nearly 100 acres, and wetlands about 30. Pin Oak Lake is 14 acres. There are several ponds and strip pits. Waterfowl, shorebirds and waders may take advantage of these, so many are worth checking in the proper season. Nine rainfall dependent marshes (about 26 acres) are managed for waterfowl.

Toilets: 1 privy at Pin Oak Lake

Camping: Primitive camping is allowed in designated areas at Pin Oak Lake.

Hazards/Limitations: Dog field trials and hunt tests may be in progress. There is rugged terrain in the old strip mined areas in the western portion that may be treacherous, especially in wet conditions.

Nearby Birding Sites: Prairie State Park, Mon-Shon Prairie CA, Davis Memorial SF, Redwing Prairie CA, Bushwhacker Lake CA.

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SCRIVNER ROAD CONSERVATION AREA

919 acres Cole Co. DeLorme 37, H-10; MDC owned; for information call 573-884-6861

Directions: Take Rt. C southwest from Jefferson City toward Russellville, Turn left on Route AA just east of Russellville, then left on Scrivner Road. Turn left again on Scott Road and continue 1 mile. A northwest parking area is accessed from Claywell Rd., a left turn off Scrivner Rd. shortly after leaving Rt. AA. There is a short walk to Claywell Pond. Another access point is east of Scott Rd. [note: these directions follow the actual road signage and are inconsistent with the MDC map for the area] From Scrivner Rd. east of Scott Rd., turn left onto Dawson Rd. Stay on Dawson all the way to a parking lot (bear left at junction with Gully Rd., then right at a T-intersection, then left where the road ahead becomes Clibourn.

When to Visit/Species to Expect: This area has a good variety of habitats that offer good birding opportunities any time of year. Warblers and vireos can be plentiful here in spring and fall migration. Flycatchers are present and fairly easy to find in season. Woodpeckers are plentiful. **Don't forget to** look up to catch a full array of raptors, especially in fall and winter. The possibilities of fall and winter sparrows have not been fully tested. The 24 acres of wetland could produce some surprises.

Features of interest to birders: Moreau Creek Trail (multi-use horses/hiking) meanders through the area, with many loops allowing exploration of shorter portions of the 8.50 miles. Nine-acre Winegar Lake, 2-acre Claywell Pond, and South Moreau Creek attract a good variety of waterfowl. The extensive trail system leads through forest and old fields, inviting exploration. Five parking lots offer a variety of jumping off pints for short walks or long treks.

Toilets: 1 privy at the shooting range

Camping: Primitive, only

Hazards/Limitations: The shooting range is very active.

Nearby Birding Sites: Stringtown Bridge Access, Saline Valley CA, Honey Creek Access.

MAPLE LEAF LAKE CONSERVATION AREA

826 acres Lafayette Co. DeLorme 35, A-8; MDC owned; for information call 816-228-3766

Directions: From westbound I-70, take Exit #49 (MO 13), then go about 3 miles west on South I-70 Outer Access Road (a.k.a. Old Hwy. 40). From eastbound I-70, take Exit #45 (Rt. H) and go east about a mile on South I-70 Outer Access Road (a.k.a. Old Hwy. 40).

When to Visit/Species to Expect: Cold weather months can be especially productive. **Snow and Ross's Geese join the Canadas to feed in the area in winter.** Ducks may be also present until freeze-up. Loggerhead Shrikes have been found here in winter. **Sparrows are plentiful; Harris's has been seen.** The many dead trees attract woodpeckers.

Features of interest to birders: 140-acre impoundment shaped is like a maple leaf, so there is a lot of shoreline. At the east and west ends are silt basins with shallow water and dead standing trees; small ponds are throughout the area. More than 500 acres are old field habitat; only 30 acres each in forest and non-prairie grassland.

A parking lot on South I-70 Outer Access Road (a.k.a. Old Hwy. 40) provides an overview of the area.

The central area has fishing jetties and platforms that give good angles into the lake for viewing birds on the water.

A 4.5 mile interior access trail leads to several vantage points around the lake.

A 9-acre marsh below the dam may be reached by the interior access trail. The shortest walk to it is from the parking lot on the east side of the lake. This lot is reached by taking Chihuahua Rd. south from Old Hwy. 40 to a right turn (west) onto Hazel Dell Rd. to the parking lot. The trail goes southwest from the lot to the marsh. The marsh may be viewed from the dam (also reached by this stretch of the trail).

Toilets: 2 privies in central area

Camping: Primitive youth group only (by special use permit)

Hazards/Limitations: Entire area is closed to general public through the first Saturday of dove season for youth dove hunt.

Nearby Birding Sites: Confederate Memorial SHS, Lake Venita (Odessa), Pape (Edwin A) Lake (Concordia), Perry (R & M) Mem. CA

CLIFTY CREEK CONSERVATION (AND NATURAL) AREA

486 acres Maries Co. DeLorme 46, F-3; Part (286 acres) owned by MDC, part (the 200 -acre Natural Area) leased from the L-A-D Foundation; for information call 573-884-6861

Directions: From Vienna, go south on MO 28 beyond Big Bend to Rt. W. From Dixon (about 6 miles), go north on MO 28 to Rt. W. Go east on Rt. W to its end (road becomes Maries CR 511). **The area's one parking lot is on the left.**

When to Visit/Species to Expect: Anytime. Nesting birds include swallows, nightjars, Ovenbirds and Kentucky Warblers, and woodpeckers.

Features of interest to birders: A 2.5 mile loop trail is reached a tenth of a mile from the parking lot. Turn right onto the 1 mile southern route to the 40-foot natural arch, or left onto the northern 1.4 mile route to the arch. The trail leads through dense oak-hickory and bottomland forest, limestone and sandstone glades and along cliffs.

Toilets: None

Camping: A small primitive site at the parking lot; walk-in, backpack camping is permitted

Hazards/Limitations: Rugged terrain (trail rated moderately difficult).

Nearby Birding Sites: Bell Chute Access, Spring Gap CA, Rinquelin Trail Lake CA, Dixon Towersite

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MOUNT HULDA TOWERSITE

40 acres Benton Co. DeLorme 44, A-3; MDC owned; for information call 660-530-5500

Directions: From Sedalia, go 12 miles south on US 65, then east 11.5 miles on MO 52 to Rt. W. Go 6 miles south on Rt. W. From Lincoln, take Rt. H southeast to Edmonson, then go east on Rt. W. The site is on the east side of Rt. W.

When to Visit/Species to Expect: Spring and early summer. Nesting Pine Warblers, flycatchers, and tanagers can be expected.

Features of interest to birders: Now a radio tower site, the fire tower was donated to the Cimmaron National Grassland in western Kansas. The immediate vicinity of the tower has pines. Oak-hickory forest surrounds it.

Toilets: None

Toilets: None

Camping: None

Hazards/Limitations: None noted

Nearby Birding Sites: Big Buffalo Creek CA, Lost Valley Fish Hatchery, Harry S Truman SP.

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HAZEL HILL LAKE

502 acres Johnson Co. DeLorme 35, C-8; MDC owned; for information call 660-530-5500

Directions: From Warrensburg, go 5 miles north on Hwy. 13, then about 3 miles west on Rt. OO. The main parking lot, boat ramp and privy are off NW 575, a right turn off Rt. OO. This is on the south side of the lake. A second lot, on the northeast corner of the area, is reached by continuing east on NW 575, then going north on NW 201. To reach the third lot, stay on Rt. OO, going north beyond the junction with NW 575. The lake cannot be seen from this lot.

When to Visit/Species to Expect: Anytime. In summer, swallows often perch on the snags; flycatchers frequent the shoreline trees. Look for Belted Kingfishers. Check the lake fall through early spring for waterfowl, and the surrounding area for a good mix of sparrows. A Common Loon was seen here in June, 2009.

Features of interest to birders: Although there is no designated trail, a path from the main parking area goes through a wooded area along a creek where passerines may be found. Upland species are found near the lots away from the 72-acre lake. Two small ponds are east of the lake, accessible from the lot on NW 201.

Toilets: 1 privy at the main parking lot

Camping: None

Hazards/Limitations: Fishing and boating activity can be heavy in summer.

Nearby Birding Sites: Holden City Lake, Knob Noster SP, Perry (Ralph and Martha) Mem. CA, Maple Leaf Lake CA.

Survey of Riparian Bird Species Along the Buffalo National River, Arkansas May/June 2006

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Abstract: We conducted canoe-based bird surveys 23 May – 3 June 2006 for 17 species along 96.1 river km of the Buffalo National River, in northern Arkansas. American Redstart (*Setophaga rutilla*) and Northern Parula (*Parula americana*) were the most abundant riparian-inhabiting species recorded, while Hooded Warbler (*Wilsonia citrina*) numbers (ave. 1.8 birds/river km) were the highest for any river that we have surveyed. Cerulean Warblers (*Dendroica cerulea*) were found in low frequency in the middle part of the Buffalo River (ave. 0.1 birds/river km), but the lower section had numbers similar to the high densities found along eastern Missouri Ozark rivers (ave. 2.1 birds/river km). As such, the lower section of the Buffalo National River contains one of the largest Cerulean Warbler populations west of the Mississippi River.

Given the logistics associated with accessing riparian habitat, North American bird species and populations that inhabit these environments are poorly sampled with respect to their regional abundance (Robbins 1989, Peterjohn 1994, Fletcher and Hutto 2006). Most road-based USGS Breeding Bird Surveys (hereafter BBS) sample only a small proportion of available riparian habitat. For example, species like the Cerulean Warbler (*Dendroica cerulea*), that has a relatively large population in riparian habitat in the Arkansas and Missouri Ozarks (Robbins and Easterla 1992, Jacobs and Wilson 1997, Robbins et al. 1998, Sauer et al. 2008), are infrequently recorded on the BBS Ozark-Ouachita Plateau region routes. This warbler was recorded on only 4 of 43 Ozark BBS routes, with an average 0.12 birds on those four routes during the 2003-2007 period (Sauer et al. 2008). We conducted canoe-based surveys along the Buffalo National River, northern Arkansas during May-June 2006 to assess 17 riparian-inhabiting species.

Study Site and Methods

We employed the same canoe-based survey methodology that we used from 1992 through 2005 to survey 15 –19 species of riparian inhabiting bird species across 16 Missouri rivers systems (760 river km; Robbins et al. 1998, .

Robbins et al. 2010). From 23 May – 3 June 2006, we surveyed 96.1 river km of the Buffalo National River. The following river sections were surveyed:

Ozark Access (36°03.90'N, 93°09.53'W) to Hasty Access (36°00.54'N, 93°04.93'W); 14.4 river km; 23 May 2006. Temperature: start 69 °F; finish 75 °F. Finished at 09:45.

Hasty Access (36°00.54'N, 93°04.93'W) to Mt. Hersey Access (36°00.53'N, 92°57.18'W); 18.0 river km; 24 May 2006. Temperature: start 65 °F; finish 85 °F. Finished at 10:05.

Mt. Hersey Access (36°00.53'N, 92°57.18'W) to Woolum Access (35°58.21'N, 92°53.20'W); 14.1 river km, 25 May 2006. Temperature: start 63 °F; finish 84 °F. Finished at 08:57.

Baker Ford Access (35°58.84'N, 92°48.81'W) to Gilbert (35°59.11'N, 92°42.91'W); 15.7 river km; 26 May 2006. Temperature: start 74 °F; finish 83 °F. Finished at 09:15.

Maumee North Access (36°02.11'N, 92°37.70'W) to highway 14 Access (36°04.03'N, 92°34.73'W); 15.7 river km; 2 June 2006. Temperature: start 66 °F; finish 75 °F. Repeat survey: 4 June 2006. Temperature: start 61 °F; finish 75 °F. Finished at 09:27 and 09:17, 2 and 4 June surveys, respectively.

Highway 14 Access (36°04.03'N, 92°34.73'W) to Rush Access (36°07.42'N, 92°32.93'W); 14.6 river km; 3 June 2006. Temperature: start 62 °F; finish 77 °F. Finished at 09:05.

These sections were chosen based on floatability and access. As a result of low water levels during 2006, it was impossible to efficiently survey areas above the Ozark Access and because of time constraints we were unable to survey the lowermost 39 km of the river. Each survey route was subdivided into three subsections to permit analysis of patterns within each route. All surveys were initiated at 05:00 (CST) with ending times varying because of river distance covered and water flow rate; however, all censuses were completed by ca. 10:00 (CST) when singing rates were still high (e.g., Robbins et al. 2009). Surveys were conducted to coincide with maximum singing rates of territorial males and to minimize inflation of numbers from late migrants or fledged young. Surveys were conducted under BBS weather protocol. We avoided conducting surveys during high human activity on the river, i.e., none were done during the Memorial Day holiday. Robbins was the principal recorder, whereas Benz concentrated on river navigation and maintaining a consistent speed. In the vicinity of access points, Nyári and Papeš monitored Cerulean Warbler and Acadian Flycatcher (*Empidonax vireescens*) song rates.

Each adult individual heard and/or observed was tallied for 17 target species (Table 1). With the exception of the night-heron, kingfisher, phoebe, swallow, and waterthrush, greater than 95 % of each species' tally was of calling/singing individuals that are presumed to be territorial males. For the Acadian Flycatcher and most warbler species, virtually every individual

detected was based on vocalizations. Based on measurements (using a laser Range Finder) from the canoe-based recorder to singing individuals, we estimate that >90% of the individuals recorded were within 100 m on either side of the river. However, detection distances varied as a result of topography and vegetation density. For example, steep slopes that abutted rivers curtailed hearing individuals at typical distances and in some areas, where fields bordered the river, singing individuals were detected at distances greater than 250 m.

In an attempt to estimate the number of individuals detected during surveys, we repeated the survey of the same Maumee North section, subdividing that section into three subsections (Table 1 includes totals for each survey, i.e., 2 and 4 June, not for the subsections). Using Cerulean Warbler as a test example, we recorded the location of each singing male by taking coordinates using a Global Positioning System Unit (Garmin GPS 12 Unit; Map Datum WGS 84; position accuracy 1-5 meters). In ArcGIS 8.3 (ESRI 1999-2002) we created a 100-m radius buffer around each male Cerulean Warbler male GPS location as an approximation to individual territory size. We chose the 100-m radius based on a combination of male territory size and error associated with how GPS readings of male locations were obtained. Average male Cerulean Warbler territory size along the Current River, Missouri was 0.9 ± 0.1 ha with a maximum width by length of $112 (\pm 18) \times 87 (\pm 33)$ m ($n = 20$ males that were monitored for a minimum of four consecutive hrs, 05:00–09:00; Robbins et al. 2009). By comparing GPS locations between the two repeat surveys, where non-overlapping 100-m radii buffers were treated as unique individuals, we estimated the number of individuals present by employing the nonparametric estimator developed by Chao (1984). For more details see Robbins et al. (2010). Although the 100-m radius buffer is larger than our mean territory measurements of densely packed Cerulean Warblers, GPS readings of singing males were taken from the river (ca. midpoint of the river, river width ranged from ca. 30 to 90 m), some singing birds were as much as 100-m from the canoe-based observer, **and the position of the male's singing post in relation to the territory as a whole was unknown.** Even with these caveats, we recognize that a 100-m radius will underestimate the number of males present when they are densely packed.

Results and Discussion

Of the 17 species that we accessed, American Redstart (*Setophaga rutilla*) and Northern Parula (*Parula americana*) were the most abundant riparian-inhabiting species along the Buffalo River (Table 1). Hooded Warblers (*Wilsonia citrina*) were recorded in higher numbers (ave. 1.8 birds/river km) than any river that we have surveyed. Cerulean Warbler was found in low frequency (ave. 0.1/km) in the middle part of the river, but the lower section had higher numbers (2.1 birds/river km) comparable to high numbers recorded along eastern Missouri Ozark rivers (Robbins et al. 1998, unpubl. data). **Results for other riparian species are listed in Table 1. No Swainson's Warblers (*Limnothlypis swainsonii*), Yellow Warblers (*Dendroica petechia*),**

Table 1. Number of individuals (number/river km) for species recorded by section on the Buffalo National River. The Maumee North section was surveyed twice, 2 and 4 June, hence two columns with the same name. No individuals were recorded for three species, thus they are excluded from the table (see text). Because of recent and upcoming changes in scientific names, as opposed to the more stable English names, we refer the reader to **the American Ornithologists' Union's** *Check-list for North American birds* at the following website: <http://www.aou.org/checklist/north/>

Species	Ozark	Hasty	Mt. Hersey	Baker Ford	Maumee North 1	Maumee North 2	Highway 14
Yellow-crowned Night Heron	0(0)	2(0.1)	1(0)	2(0.1)	0(0)	0(0)	0(0)
Red-shouldered Hawk	2(0.1)	2(0.1)	1(0.0)	1(0.0)	0(0)	0(0)	2(0.1)
Yellow-billed Cuckoo	15(1.0)	24(1.3)	15(1.0)	24(1.5)	17(1.0)	16(1.0)	21(1.4)
Belted Kingfisher	6(0.4)	6(0.3)	4(0.2)	6(0.3)	11(0.7)	11(0.7)	14(0.9)
Acadian Flycatcher	30(2.0)	28(1.5)	9(0.6)	33(2.1)	12(0.7)	17(1.0)	17(1.1)
Eastern Phoebe	32(2.2)	26(1.4)	14(0.9)	21(1.3)	9(0.5)	9(0.5)	14(0.9)
Rough-winged Swallow	22(1.5)	26(1.4)	10(0.7)	42(2.6)	25(1.5)	26(1.6)	50(3.4)
Northern Parula	55(3.8)	79(4.3)	49(3.4)	46(2.9)	77(4.9)	69(4.3)	49(3.3)
Yellow-throated Warbler	21(1.4)	20(1.1)	11(0.7)	7(0.4)	5(0.3)	5(0.3)	6(0.4)
Cerulean Warbler	4(0.2)	3(0.1)	0(0)	4(0.2)	37(2.3)	37(2.3)	32(2.1)
American Redstart	79(5.4)	99(5.5)	67(4.7)	41(2.6)	101(6.4)	94(5.9)	71(4.8)
Prothonotary Warbler	5(0.3)	1(0.0)	1(0.0)	11(0.7)	2(0.1)	3(0.1)	0(0)
Louisiana Waterthrush	33(2.2)	62(3.4)	34(2.4)	35(2.2)	38(2.4)	46(2.9)	33(2.2)
Hooded Warbler	27(1.8)	47(2.6)	27(1.9)	6(0.3)	32(2.0)	33(2.1)	34(2.3)

or Warbling Vireos (*Vireo gilvus*) were recorded, species that we have recorded on several Missouri Ozark rivers.

It is well understood that an unknown proportion of individuals are not detected on any particular survey as a result of various factors, e.g., birds present but not singing during the survey, vegetation structure, distance from the observer (Ralph et al. 1995). In an attempt to address this issue, we used Cerulean Warbler as a test case as an indication of the number of birds detected on our surveys. As demonstrated from our Buffalo River data, simply repeating surveys of the same river section and comparing absolute totals/subsection (simple tallies of males encountered, without using any estimators) can produce misleading results. We recorded the same number of Cerulean Warblers/subsection ($n = 3$ subsections with 37 total males; Table 1) on both surveys of the Maumee North stretch. Based on that absolute count, one might conclude that each male was recorded on both surveys, when, in fact, based on a comparison of GPS recordings between the two repeat surveys and using the Chao estimator (1984), we believe that a minimum of 17 males (9 uniques first day, 8 second day) were missed during repeated surveys (Table 1 in Robbins et al. 2010). Thus, this estimator suggests that between 72 – 74% of the Cerulean Warblers were detected on our Buffalo River surveys.

Fundamental to estimating bird abundance is having an estimate of what percentage of the birds being surveyed are actually detectable at the time of a survey (Diefenbach et al. 2007). When using aural clues, such as song, it is essential to have an estimate of the birds that may be singing during the survey period. During the same time frame (late May – early June) that we conducted river surveys, we monitored the singing rate of Cerulean Warblers along the Current River, Missouri and Buffalo River. During 4 continuous hrs (subdivided in 5-min periods; $n = 48$) of monitoring of each male, we documented that on average males were silent for $32.7 \pm 21.5\%$ of the time (Robbins et al. 2009). Thus, based solely on that figure it is likely that we missed about a third of all territorial Cerulean males that were present but not singing during our surveys.

Although we recorded a total of 80 singing Ceruleans, we suspect that we missed a minimum of 26 (based on the Chao estimator) to 33% (based on song rate data) of the males present. Therefore, we estimate that there was a minimum of 100 territorial males present within ca. 100 m of each bank of the Buffalo River sections that we inventoried. Based on habitat (Google Earth images) and observations by Gary Graves (pers. comm.) in 2007, we presume the lower 39 km may have the highest density of Cerulean Warblers along the Buffalo National River. This warbler has received considerable attention during the past two decades as a result of significant declines over much of its historical North American breeding distribution (Robbins et al. 1992, Hamel 2000), thus the Buffalo River is one of the most important breeding areas for the species west of the Mississippi River.

Despite the presence of appropriate cane (*Arundinaria* spp.) habitat, we did **not record Swainson's Warbler**. Using broadcast recordings, Bednarz et al. (2005) recorded 16 individuals in 2000 and 2001 along the entire length (226.6 km) of the Buffalo National River, from Steel Creek to the confluence of the White River. The "majority" of the birds that they encountered were found between Gilbert and the confluence. We did not survey the Gilbert to North Maumee section (18.6 km), nor the lowermost 39 river km; Rush Access to the confluence. Mirroring our negative results along highway 14 to Rush section (14.6 km), Gary Graves (pers. comm.), who continually broadcast Swainson's recordings for 8.25 hrs along this same section on 11 May 2007, also failed to record a single individual. Graves also surveyed the Rush Access to the White River confluence 26-28 June 2007 and using continuous song broadcast elicited response from only a single warbler. One probable explanation for why 16 birds were recorded in 2000 and 2001 vs. only a single individual during the 2006 and 2007 surveys may be related to flooding that scoured riparian understory, including cane, in the springs of 2006 and 2007. Although there was flooding in 2000, it did not occur until late May, perhaps after the Bednarz et al. (2005) surveys.

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First Nesting of Black-necked Stilt (*Himantopus mexicanus*) away from the Lower Mississippi River in Missouri

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On 17 June 2010, as a result of heavy rains in the upper Missouri River basin, a levee in Union Township south of Craig, Holt County, Missouri was breached resulting in ca. 40,000 acres (16,000 hectares), primarily farmland, being flooded. The inundated area extended south to the west side of the dike along the drainage canal that is adjacent to the western border of Bob Brown Conservation Area (hereafter CA), ca. 8 km west of Forest City, Holt County, Missouri. The flooding created numerous small islands throughout much of this area.

At ca. 0845 (CDT) on 6 August 2010, while surveying shorebirds in flooded fields ca. 8 km west of Forest City, I noted an adult male and female Black-necked Stilt (*Himantopus mexicanus*). The vocalizing female flew towards me and landed nearby in shallow water. A few minutes later I was surprised to see three young foraging along the mud/water interface. Two of the young were similar in size and larger (estimated to be ca. 30 % larger) than the third individual (Fig. 1). The young had dark irides, blackish bills, and dull orangish-yellow tarsi and toes. Ventrally they were white with a light gray dorsum that had darker markings. The dark markings on the back appeared to be edged with brownish-buff, and a blackish line extended from the base of the neck up to the back of the crown. Based on size and plumage the birds likely had hatched at least three weeks earlier.

Adult and young behavior coupled with the size and plumage of the young suggested that the nest site was either on the same relatively bare, elevated **strip of mud mixed with sand that the young were foraging on (39°59.4'N, 95°17.1'W)** or one of the nearby temporary islands. The incubation period for stilts in California ranges from 21-30 days, with a median of 25 days. Fledglings depart the nest from 1-24 hours after the last chick hatches, and they begin molting into juvenal plumage ca. three weeks later (Robinson et al. 1999). Based on these nesting parameters, size and plumage stage of the young, and the likelihood that nest construction did not commence until flood waters started receding, I suspect eggs were not laid until late June.

The first documented Missouri nesting was during June 1990 in the Mississippi River Lowlands of the southeastern corner of the state (Jacobs 1991). Although the species continued to dramatically increase in numbers in the rice fields of that region, it was not until 2008 that the species was found breeding to the north. Along the Mississippi River floodplain in Perry County, Joe Eades observed a pair with two chicks on 4 July. During the

same summer, as many as 27 were present in mid-June at Columbia Bottom CA, St. Louis County, at the confluence of the Missouri and Mississippi rivers. Displays and a nest were located, but the area was flooded in late June and apparently no young fledged (m.obs.; Uffman 2008). Breeding was successful in 2010 at this site when 4 young were seen in late summer by Andy Tappmeyer (fide J. Uffman). One can only speculate whether the Holt County breeders used the Mississippi and Missouri Rivers as a conduit for expansion or if this was the result of an overshoot of birds from the nearest breeding colony, ca. 350 km southwest, at Quivira National Wildlife Refuge, Stafford County, and Cheyenne Bottoms, Barton County, Kansas (Thompson and Ely 1989).

The opportunistic breeding of Black-necked Stilts on bare mud/sand islands in a sea of flooded, cultivated fields underscores what has been lost with the channelization and containment of the Missouri River. The Holt County nesting site was at a former oxbow lake before it was converted to agricultural fields years ago (see Google Earth). The reduction or complete elimination of sandbars and the natural formation of oxbow lakes has precipitated the listing of the interior population of the Least Tern (*Sternula antillarum*) and the Piping Plover (*Charadrius melodus*), both of which once bred in this region, as Federally Endangered (United States Fish and Wildlife Service 1985a, 1985b).

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