



The Voice for Illinois Forests

Acting on issues that impact rural and community forests and promoting forestry in Illinois

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Message from the President

By Mike McMahan



What a difference a year can make! Last year at this time I was writing to you as the new President of the IFA. Looking back at my column I talked about how our situation reminded me of some good advice my mom gave me about dealing with too many irons in the fire.

It seemed there was so much that we wanted and needed to do - and so little time.

Fast forward a year later, and I find myself humbled and honored to be re-elected to serve as President for a second year. I'm thankful to have earned the confidence of those who nominated and voted for me, and pledge to continue an approach that I think has helped the IFA turn a corner toward a brighter future.

There may always be too many things that we want and need to do, but this past year we made deliberate progress by carefully selecting which "irons" would help us the most. We started with a plan that was flexible enough to allow board members to choose what role fits them the best. If we can get a volunteer to take just one iron out of the fire, that's progress.

This year we saw what kind of difference an active committee can make, and having an Executive Director to help facilitate committees and do the kind of day-to-day work that propels us forward on each of our five goals has been a game changer for the IFA. Stephanie Brown is capable of handling just about every iron in that fire, but there is only so much time in the day. She has been especially good at focusing attention on what needs to happen sooner than later in order to position the IFA for long term success. Our investment in her services has been a wise one.

We started the year with a deficit budget. Instead of artificially padding the income line with dues and other income that was not assured, we consciously chose to invest in our game-changing strategy and put everyone's feet to the fire to close the gap. Thanks to a lot of determination and hard work, some well-placed partnerships, and responsive members like you, we were able to push the car up over the crest of the hill. We're ending 2015 with a very encouraging increase in member numbers and a modest budget surplus that we can continue to invest for success. We will remember our 10th year as a turning point for the IFA.

There are still 49 irons in the fire, but we're getting better at seeing which ones need the most attention so that we can get more members and volunteers engaged and committed to working alongside us to promote forest management in Illinois, to show people what forestry is and why it's important, and to be a collective voice that influences programs and policies that help landowners grow healthy and productive forests. I'd like to think Mom would be proud.

Merry Christmas from our family to yours. See you in 2016!

Mike McMahan

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A Growing Organization

by Dave Gillespie, IFA Secretary



The Illinois Forestry Association (IFA) continues to move forward with an impressive increase in new and renewing

memberships, with the total number rising 67% over the past six months!

The increase is largely thanks to the efforts of the IFA Membership Committee contacting former members and encouraging them to renew, *and* the Illinois Department of Natural Resources, Division of Forest Resources sending out the biennial Forestry Development Act (FDA) certification letters.

The IFA's Membership Committee mailed letters and a survey to lapsed members in August. The response was outstanding, with many also returning the survey to tell us about why they lapsed (most forgot) and what they appreciated most about the IFA. I'm pleased our newsletter topped the list.

Meanwhile, every two years the FDA law requires the Division of Forest Resources to contact Illinois forest landowners who have IDNR-approved Forest Stewardship Plans in order to certify they are still following their plans and maintaining program eligibility. The packet included an invitation from the IFA, resulting in a 250+ member increase. That number is still rising each time I check the IFA's Post Office box for the mail. Currently, we have more active members than at any time in the ten year history of the association, as it should be.

Big thank yous go to the IFA Membership Committee and to the IDNR Division of Forest Resources staff. **We especially want to thank all of you who got one of these mailings and responded by joining or renewing your membership.**

In addition to being IFA Secretary, I also lead our Legislative/Policy Committee. That can be a frustrating job sometimes, but having a growing membership behind us makes all the difference and gives me hope that "the Voice of Illinois Forests" will be heard, loud and clear.

Board Moves to Simplify Membership Levels

*by Carol Bryant
IFA Membership Committee Chair*



As Dave pointed out, it has been a good year for the IFA Membership Committee. I want to thank my fellow committee members and the IFA members who

have renewed their memberships and/or completed the survey. It is helping us learn how we can serve you better.

Another thing we've done this past year is take a close look at member categories. After a thorough review that included accounting and maintenance concerns, we recommended a streamlined list of member categories to the board.

Effective January 1, 2016, the list of membership renewal options will include Basic with e-mail (\$25), Basic with US Mail (\$35), Supporting (\$50), Sustaining (\$100), Business (\$50), Student (\$10), 3-year Basic with email (\$70), Life (\$500), and Supporting Life (\$750).

We narrowed the list from 26 to a more manageable and less confusing set of 9 member categories. Several being removed have long been available, but no one ever joined in those categories. More noticeable will be the elimination of most multi-year discounted rates. Current members already occupying multi-year levels will remain there until it is time to renew.

The board stopped short of removing all multi-year discounts by including a single 3-year basic email rate of \$70. It's only a \$5 savings, but provides a no-hassle solution for those who would prefer to renew for an extended period. The business rate has been cut in half to \$50 a year to encourage more people working in the forestry field to join us.

Those members who would like to go ahead and renew for a multi-year period at the currently discounted rate should go ahead and do so online or by mail before December 31. Your renewal date will be extended for that period of time, accordingly.

Behind the Scenes

with Stephanie Brown, Executive Director



This issue features expanded coverage of recent news and events, so I'll use my column to talk about a few things happening behind the scenes.

Our Board gathered for a Planning Retreat last week. We revisited the [Strategic Plan](#), and committees began to chart out activity for the coming year. The full group discussed our message - why we exist, what we do, and how we do it - to pave the way for the Marketing Committee to develop a new IFA brochure and other tools that will get our message out there to more people.

Along those lines, the [IFA website](#) is in the beginning stages of a much needed makeover. Your patience will be appreciated as we work through 178 pages of content - some of which are temporarily hidden from view. Our goals include bringing the site current - from its basic look and feel to its accessibility on mobile devices. We'll be revising or removing outdated content, adding new material, and tweaking the overall structure for easier navigation.

We are very concerned about the possible closure of the Mason State Tree Nursery, among other things impacted by the state budget situation. A draft position statement is currently under review and revision, with a final version and talking points expected by the end of the month. We'll be sharing more information so that willing members can more easily make legislative contacts.

Another item affected by the state budget is the highly anticipated electronic newsletter for Forestry Development Act (FDA) participants. Funding for Phase 2 of the project - the design, production, and sharing of the newsletter - is on hold, so we are working on an interim solution to satisfy expectations for an offering yet this winter, without foresaking the funding support tentatively promised by the Forestry Development Council.

We're working out the details of a new partnership with The Morton Arboretum

Special Thanks...

Supporting Life Member

Richard Dugas, Jr.

Life Members

Rodney Becker

John Bertsche

Thomas Beyers

Valroy & Barbara Binsbacher

Jim & Tami Blevins

Carol Bryant

Daniel & Bonita Budde

Perry Bushue

Bryan Cox

Tom & Nancy Desulis

Walt & Bernadette Emery

Edward & Debra Eppy

J. B. Gates

Jeffrey Giertz Family

Ray Herman

Eric Herman

Bill & Sue Hubbard

David Hughes

Thomas Huiner

Raymond Karleskind

Kenneth Kubacki

Kent & Kathy Lawrence

Mike Long

Craig & Michelle Luebke

Fran Mirro

Madhavan Nayar

Larry Pagel, Sr.

Frank Paschen

Kathryn Stanley Podwall

Ken & Marcia Polhamus

Tony Pragovich Family

Dan Schmoker

James St. Peter

Gary E. Stevenson

Your steadfast commitment to the future of the IFA is appreciated!

that will extend free garden admission to our card-carrying members. Look for more details in the Spring Issue about what will and won't be covered, and how you can obtain an IFA member ID card for your next visit to this amazing place.

If you have friends or relatives who would benefit from IFA membership, let them know that multi-year discounts end December 31st. It's a great time to [renew](#) or [join](#) for the first time.

Merry Christmas, everyone!

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Woods, Wildlife, and Wildflowers -- IFA Hosts 10th Annual Meeting

by Stephanie Brown

The Illinois Forestry Association hosted its 10th Annual Meeting on September 25th at the Ballard Nature Center. Over 50 IFA members attended, some joining at the door. Many participated in one of two pre-tours offered that morning, and then enjoyed lunch together.

Kurt Bobsin served as emcee for the afternoon program. Our four invited speakers did a very nice job presenting their topics to the audience. It was great to see Mike Reichenbach, a former Illinoian and IDNR staffer, now an Associate Extension Professor in MN. He talked about landscape scale restoration, relating projects in MN to opportunities we have here in IL. Tom Micetich, IDNR Deer Project Manager, offered some interesting insights into deer populations and the competing factors that influence hunting regulations in IL. John Phelps shared some of his extensive knowledge about wood. A splinter, really, since there is so much to learn about this fascinating subject. Finally, John Marlin shared his experience and expertise with propagating woodland plants.

After another delicious meal, superbly catered by Deb's, the business meeting got underway. There was some controversy over whether to accept the published agenda vs. one that was brought by a member as an alternative, and whether to vote on each bylaws change individually or consider them all together. Both efforts to alter/extend the proceedings met with little support. The original agenda was approved, and the proposed bylaws changes passed in a single motion, with 5 opposing votes.

Kurt Bobsin presented the nominating committee report. All of the candidates presented were elected by acclamation. Several Regional Directors will continue for an additional term.

Carol Bryant, Membership Committee Chair, was honored with the Special IFA Achievement Award for Exceptional Service and Dedication. Susan Romano was recognized for her faithful and competent service as Treasurer.

Michael Novak, this year's Bob Sloan Scholarship recipient was recognized, but he was unable to attend.



Optional Pre-Tours...



On the left: Craig Willenborg hosted a Pre-Tour at Heartland Heartwoods north of Effingham



Above: Pre-Tour #2 - Tree and Plant ID led by Dan Schmoker, assisted by several other knowledgeable participants



Photos by John Phelps

Elected to Serve...



Board Member Tom Desulis Steps Up as IFA's New Treasurer

Mike McMahan, President, and John Edgington, Vice-President, will continue in their respective roles for an additional year. Tom Desulis was elected Treasurer, replacing Susan Romano, and Joe FitzSimmons joined the Board as a Region 1 Director. Several other board members were re-elected to serve an additional term.



Welcome Joe FitzSimmons IFA's Newest Board Member



Kreke Family Hosts Successful 2015 Tree Farm Field Day

The Illinois Tree Farm Committee continued its annual tradition of showcasing our state's award-winning Tree Farms with another well-planned and well-attended event at Tony and Jill Kreke's place near Effingham. Here are just a few of the highlights...

Photos by Stephanie Brown & Rose Newcomb



Oaktober Celebrations a Success in Illinois

by Melissa Custic, Chicago Region Trees Initiative, The Morton Arboretum



Oak Awareness Month in the Shawnee National Forest

This past summer, Governor Rauner signed a proclamation supported by 42 organizations declaring October 2015 "OAKtober- Oak Awareness Month." Illinois' native oak woodlands have been in decline due to lost intensifying pressure from multiple stressors. OAKtober was an opportunity to bring this decline to the attention of Illinois residents and to let them know why they should care. On a larger scale, the benefit of an oak awareness month is in the progress we can make conserving and restoring our oak populations.

So, was OAKtober successful? The answer is a resounding, "yes" followed by an, "I can't wait to do even better next year." There were 77 OAKtober events registered through the Chicago Region Trees Initiative (<http://chicagorti.org/oaktober-events>). These events were comprised of native tree sales, stewardship events, educational hikes, tree planting, educational events, acorn round ups, and celebrations. As much as possible, we're tracking metrics to identify the impact of OAKtober to our region.

The numbers are still rolling in, but so far we've recorded that OAKtober events saw more than 2700 oak and companion trees planted or sold and more than 1600 volunteers engaged! Publicity for OAKtober came from 24 articles, including a full OAKtober-themed Illinois Forestry Association [newsletter](#), 115 tweets, and 20 Facebook posts. That means that even if folks were unable to attend an OAKtober event, the challenges facing our native oaks are becoming more visible and more people will be aware of the benefits of planting oaks on their own property. If you would like to contribute information from your events (even if they were unregistered) please fill out this brief survey: <http://goo.gl/forms/BWW5djnD6P>.

The support for OAKtober from organizations across the state is a testament to the value of oaks and their companion species. Now is our chance to have an even greater impact for 2016. The Chicago Region Trees Initiative will be sending a 2016 OAKtober proclamation to the Governor's office in early December. We are seeking letters

"The support for OAKtober from organizations across the state is a testament to the value of oaks and their companion species. Now is our chance to have an even greater impact for 2016."

of support from any organization (read: land owners and managers, municipal bodies, conservation non-profits, schools, commercial organizations, research institutions, etc.) that supports oak recovery in Illinois. You can visit our website to find a letter of support template, a copy of the 2016 OAKtober proclamation, and to see a list of the supporters of the 2015 OAKtober proclamation (<http://chicagorti.org/resources/oaktober-oak-awareness-month>). If you'd like to join the effort, email your signed letter of support to Melissa at MCustic@mortonarb.org.



IFA Observes First-Ever Oak Awareness Month

by Stephanie Brown

They had us at OAKtober. That's how easy it was to recognize the opportunity that Oak Awareness Month would bring to the Illinois Forestry Association.

In addition to creating a [Special Edition](#) of our newsletter that could reach many people electronically, we planned two key events that we hoped would ripple out in reach and strategic value to the IFA.

First, we took the lead on planning a workshop at Trail of Tears State Forest, where cutting edge forest management strategies are underway. The Oak Woodlands & Forests Fire Consortium and the National Wild Turkey Federation provided funding and filled key speaking roles. IDNR District Foresters Ben Snyder and David Allen, and Natural Heritage Biologist Mark Guetersloh, along with SIU's Charles Ruffner, also contributed to the well-received program.



Catching Fire: Oak Restoration in Illinois

Fifty people attended the morning program and afternoon field tour on October 16th at Trail of Tears State Forest near Jonesboro.



IAA's Fall Conference was especially well-timed this year, coinciding with Oak Awareness Month. It gave us a chance to network with potential members and build new relationships while promoting OAKtober.

The history of partnership between the IFA and the IL Arborist Association dates back to the years we shared a lobbyist. In this latest chapter, we have become reacquainted through joint participation on the Forestry Development Council's Urban Forestry Committee. IAA offered us complimentary booth space, while the IFA set up a first-ever, rural-urban interface session as a way to enhance the conference offerings for arborists, many of whom also assist private landowners.

Illinois Arborist Association Fall Conference at Tinley Park "Oak Forest Restoration along the Rural-Urban Interface"



Clockwise from top left: IFA booth; Demonstration Tree - focal point in the exhibit hall; Our speakers Dr. Jeff Hoover and Dr. Dan Dey; IFA's Oak Forest Restoration session.

State Budget Impasse Impacts Forestry on Multiple Fronts

by Stephanie Brown

Illinois forestry interests have long been accustomed to the struggle for sufficient funds to protect and manage our forest resources. It's no surprise that several things we hold dear are dependent on the passage of a favorable state budget. Here's a brief rundown on how the budget impasse has affected, and in some cases threatened essential facilities, funding sources, and jobs that matter to forest conservation in Illinois.

Mason State Tree Nursery

The only thing preventing the untimely closure of our last remaining tree nursery has been the injunction on previously announced layoffs associated with the facility. Ironically, millions stand to be lost - seedlings already in the ground, seeds in cold storage, cooperative arrangements with other states, and a significant income source to reduce the IDNR Division of Forest Resources' dependence on the General Revenue Fund. We are not alone in this concern, as many understand the value of what could be lost. In addition to bare-root tree seedlings, the nursery produces wildlife shrubs, warm-season grasses, and pollinator plants.

Illinois Forestry Development Fund

While landowners harvesting timber continue to pay the 4% fee that goes into the Forestry Development Fund, without a state budget there is no authorization to spend these monies as intended. That means no cost-sharing for practices included in FDA forest management plans, and no funding for the IL Forestry Development Council - charged with overseeing the fund and promoting forestry in Illinois through its now-furloughed Director position and small project fund. The IFA was able to secure \$8,778 of these dollars in FY2015, which not only helped us make ends meet in a tough budget year, but enabled us to complete two worthwhile projects and begin a third one that is now in limbo. The IFA adamantly opposes sweeping the fund for non-intended uses.

Forestry Council Seeks to Expand Available Forestry Cost-Share Funds

by Bill Gradle

With the state FDA Fund more or less in limbo, the Illinois Forestry Development Council is doing what it can to secure program funds that share the cost of forest management with private landowners. The Regional Conservation Partnership Program (RCPP) administered by the USDA Natural Resources Conservation Service is one such opportunity.

The Council recently submitted a proposal requesting \$2 million dollars in dedicated EQIP (Environmental Quality Incentive Program, or "E-quip") cost-share funds over a 5-year period. If awarded, the project will target 37 IL counties in four areas (see map) that include 1.1 million acres - roughly half of the oak-hickory forests remaining in Illinois.

The Oak-Hickory forest type has been reduced by 16% since 1962, and the trend is expected continue if oaks remain underrepresented in the younger age classes. Fire suppression, impacts of non-native invasive plants, and a lack of applied management has hampered efforts to restore the best mix of forest cover in the oak-hickory ecosystem.

The proposed project addresses the need for oak restoration by providing for a dedicated pool of federal cost-share funds directed toward forest management. It has been difficult for forestry practices to compete for regular EQIP funds, since so many dollars are reserved for livestock and other types of conservation practices. Currently, the

Soil & Water Conservation Districts

As previously reported, the budget situation has dealt a crushing blow to SWCDs, many of which have been instrumental in promoting forestry at the county level. Moreover, they provide essential support to another key partner - NRCS. Districts, some already forced to lay off their staff, remain hopeful that funds will be restored when the



RCPP Project Target Areas

four targeted areas contain \$4 million dollars in standing requests for forestry-related EQIP practices that could move forward with this dedicated funding. Applications already in the system would likely be the first to receive consideration.

Chances for funding seem good, given the significance of the oak problem and the level of matching support that was put forward by partners in the proposal. In addition to the \$400K/year of state FDA cost-sharing pledged, the US Forest Service matched over \$280K/year in complementary work that will take place on federal land adjacent to the targeted private lands. Together, matching contributions total well over the 50% required by the proposal guidelines.

Announcement of awards is anticipated sometime in January.

budget finally passes. But, there is a cost beyond the cuts - the uncertainty that sends a good employee searching for another job, the vacancy that leads to consolidation. It's beyond frustrating. As the Voice for Illinois Forests, we've got our hands full. Everyone seems to be in a wait and see mode, afraid to stir the pot. We are doing everything we can to restore forests and Forestry in Illinois.

State Forester Update

by Tom Wilson



Mr. Kurt Bobsin, a veteran Division of Forest Resources (DFR) forester and supervisor, retired on November 30, 2015. Kurt has been instrumental to the services and responsibilities of the DFR and IDNR since the 1980s.

Kurt's vacancy will be on the priority hire list but the future of filling needed DNR positions remains unknown at this time.

In the same light, the division's Mason Nursery where a small nursery staff remains in place and working endures an unknown future for the nursery facility and program.

The Illinois wildland fire crew was dispatched to western USA this last August and feedback heard from the west was that the Illinois crew was excellent.

Back at home our District Foresters are working hard to deliver the basis services within their districts.

There is no new information or direction concerning the State's budget. All options for forestry division funding solutions are actively being discussed internally and externally. Any significant actions or solutions will be shared, if and when they become available.



Five. That's how many days Kurt Bobsin had left until retirement when he attended his last IFA Board meeting in official IDNR capacity. Mike McMahan presented Kurt with a card and thanked him for his many contributions to the IFA.



Chris Evans is the new co-leader of Illinois' Extension Forestry program

Expansion of University of Illinois' Extension Forestry Program leads to new position at the Dixon Springs Agricultural Center

Chris Evans has recently joined the faculty and staff in the Department of Natural Resources and Environmental Sciences (NRES) in the College of Agricultural, Consumer, and Environmental Sciences at the University of Illinois. In his new role as an Extension Forestry and Research Specialist, Evans will co-lead the University's Extension Forestry program. Chris will be based out of the NRES Extension Forestry Office at the Dixon Springs Agricultural Center in southeastern Illinois.

Chris is not an unfamiliar face to Forestry in Illinois or to the Illinois Forestry Association. He has lived and worked in southern Illinois for over eight years and is a long-time member of IFA and regularly has assisted with programs and contributes to the newsletter.

"I am excited about continuing the great forestry research and outreach tradition at Dixon Springs," said Chris. "This is an opportunity to work with the forestry community, including the Illinois Forestry Association, to advance forest and forest management throughout the state. I want to not only address the major issues

facing forestry in Illinois, such as the lack of oak regeneration and the expansion of invasive species, but I also want to increase landowners' knowledge of the services and benefits they can get from their forests." Some of the first programs that Chris wants to establish at Dixon Springs are workshops on maple syrup production and the use of prescribed fire as a management tool.

Chris brings to the Extension Forestry program expertise in forest health, invasive species management, restoration practices, prescribed fire, and agroforestry. He received a B.S. in wildlife biology from Murray State University and received an M.S. in forest biology from Iowa State University. Prior to his appointment at U of I, Chris worked as a natural resource and invasive species specialist at University of Georgia's Warnell School of Forest Resources. He also served as coordinator of the River to River Cooperative Weed Management Area in southern Illinois, and most recently as the coordinator of the Illinois Wildlife Action Plan's Invasive Species Campaign.

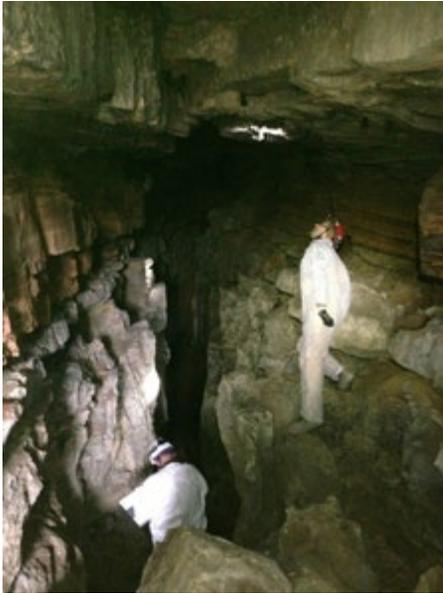


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Illinois Bats Face Perilous Hibernation this Winter

By Tracy Boutelle Fidler



Biologists inspect bats for White Nose Syndrome
Photo by Steve Taylor, Illinois Natural History Survey

Researchers fear that thousands of bats in Illinois face a perilous hibernation this winter after the recent discovery that additional counties are home to the fungus that causes white-nose syndrome.

"We are definitely seeing die offs similar to some of the places out east," says Steve Taylor who leads bat surveys for the Illinois Natural History Survey at the University of Illinois. "The populations are really decimated."

Once infected, a colony of bats can be completely wiped out in two years, according to U.S. Fish & Wildlife Service's national plan to manage this threat to America's bats. That's what happened in Albany, New York, where the disease was first discovered. In nearby Indiana, which documented its first occurrence in 2011, the state's Department of Natural Resources reports bat numbers are down between 27 and 90 percent, depending on the species.

White-nose syndrome was first discovered in Illinois in 2013. It is found in Adams, Carroll, Hardin, Jackson, Pike, LaSalle, Monroe, Pope, Saline and Union counties.

The disease has killed about 6 million bats and spread to 26 U.S. states and five Canadian provinces, according to WhiteNoseSyndrome.org, the website used by the Service and other agencies to jointly share information about the disease.

"There is no method for stopping the spread," says Tim Carter, a bat scientist at Ball State (and Southern Illinois University alum) whose research is at the forefront of efforts to save bats. "This disease is going to spread slowly but surely. We can only hope to slow it down enough to find a cure."

Taylor, however, is less than optimistic.

"We haven't solved breast cancer or even athlete's foot, which is still around, so how are we going to deal with white nose?" he asks.

From Europe to America

Pseudogymnoascus destructans, the fungus that causes white-nose syndrome, is believed to have originated in Europe. The culprit for its movement here? Us, according to scientists working at London's Royal Veterinary College who examined the fungus' molecular structure to ascertain its origin.

The disease takes its name from the physical appearance of infected bats: They have white noses. The white fungus is capable of breaking down collagen, the glue that holds tissue together. It first forms as lesions, then spreads throughout a bat's body, eventually resulting in its death. Since the fungus predominately is found in caves, the disease affects bats that hibernate, including the federally-endangered Indiana bat.



Why care about bats?

Bats are gluttons when it comes to insects. Consider, a single colony of 150 brown bats can eat a whopping 1.3 million insects in one year alone.

"Bats are saving us big bucks by gobbling up insects that eat or damage our crops," says Paul Cryan, a scientist with the U.S. Geological Survey. His research with Southern Illinois University wildlife ecologist Justin Boyles ranks bats' economic value to agriculture at between \$3.7 billion and \$53 billion a year.

About 1 million bats have died from white-nose syndrome so far, meaning we now have 1,455 tons of insects not being eaten every year. That's enough insects to fill 161 dump trucks.

Managing Forests for Bats

Forest landowners and managers can support bat and wildlife conservation by leaving alone standing dead trees, often called snag habitat by natural resource professionals. Many different kinds of bats like to roost during the summer months in dead trees. U.S. Fish & Wildlife Service's "Forest Management Practices for Conserving Indiana Bats" offers these additional tips for bat conservation:

- Maintain at least 60 percent canopy closure after timber harvest within forested stands.
- Retain standing snags, except where they pose a human safety hazard.
- Do not harvest shagbark hickory trees (*Carya ovata*) unless the density of shagbark hickory exceeds 16 trees per acre.
- Maintain high value roost trees and at least three trees per acre greater than 20" dbh.
- Do not cut trees or use prescribed fire between April 1 and November 15.

Continued on the next page...

Featured Articles

Search for a cure

There have been some great strides towards a cure, just this year. University of California, Santa Cruz researchers reported in April they discovered a bacterium, which occurs naturally on some bats, slowed the fungi's spread on fruit in the lab. Now, they are testing the bacteria on bats with white-nose syndrome to see whether it helps them.

And in May, a different bacterium, this one found in soil and used as a flavoring in food, cured some bats. U.S. Forest Service and Georgia State University researchers released those bats back into the wild. They are tracking the bats to see how they respond to treatment.

Scientists have learned a lot in the last nine years about this disease. When white nose first appeared, natural resource professionals were baffled about what was causing bats to die. Theories abounded. Knowing what causes the disease and how it affects bats has allowed the scientific community to hone its research.

Ball State scientist Tim Carter is testing a treatment this fall in Wisconsin. Still, he cautions scientists are a long way from having a way to treat millions of bats who are spread across the eastern United States. That's because of the challenges in developing and testing a cure, which he likens to efforts to finding a cure for cancer because of the difficulty of taking a technique from the lab into the real world.

"It's really complex to wrap your head around," agreed Rich Geboy, who helps U.S. Fish & Wildlife Service coordinate its white-nose syndrome efforts. Geboy says bats can move the fungus, but so can people. And, even if you cure a bat, the fungus will persist in the caves, which are super delicate systems, he said.

If scientists find a cure, they're not sure what to do about the fungi, which can persist in caves even without bats presence. This depressing finding was uncovered by Daniel Raudabaugh, a graduate student at University of Illinois working with Andrew Miller.

Even if cured, bats could be re-infected with this fungi every winter. Raudabaugh says a treatment "buys time, but how much is it going to cost every fall? Treat every bat, every year for, what, ever?"

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Photos by Steve Taylor, University of Illinois, Illinois Natural History Survey

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Starting from Scratch

Editor's Note: Welcome to our new series, inspired by a recent letter from a long-time member. She called us out for catering to landowners who already have good timber, while neglecting those with poorer quality land in need of help to get there. That got us thinking. There are probably many landowners "starting from scratch." Maybe you just acquired some land and don't know where to start, or you've got an old field you'd like to plant to trees, or you own some property that seems like wasteland in need of rehabilitation. There are many possible scenarios. Since it would be difficult to cover all of this "ground" in a single article, we decided to make it a series. We'll feature a different situation or perspective in each issue. Learn what you can, and consider the added step of seeking advice from local professionals to best address your unique situation. A great place to start is with your local USDA Natural Resources Conservation Service (NRCS) office. SB



Where Has Your Land Been?

by Rick Street, NRCS District Conservationist

In order for the USDA Natural Resources Conservation Service (NRCS) to help you with your land, we need to find out where your land has been. In other words, knowing what caused your land to become what it is today is the starting point for addressing problems and making improvements in the future.

Has the land been neglected? Has it been disturbed by coal mining, oil or gas production, row crop production, livestock grazing, or improper timber harvesting? Are invasive plants present, and are they being controlled? Is your neighbor managing their land in a way that affects yours? These are some of the questions that come to mind when a landowner describes a poor piece of ground that they'd like to restore.

One of the first things I consider is the soil type, which can help determine what will grow best on the site. If what's growing there now appears stunted, or plants are present that indicate poor fertility, I might recommend soil testing to learn what amendments are needed to grow the species you prefer. If the soil type is not suitable for what you have in mind, we can talk about alternatives.

Forest landowners typically have a more complex situation than folks with open land. On abandoned pasture or old crop fields, a forest will usually establish itself naturally from "pioneer" species, often called the "first succession." Pioneers are generally the least desirable species, but the first to colonize previously

disrupted or damaged ecosystems. They serve a purpose by stabilizing the soil and improving soil conditions until another succession of plants move in and take over, and so on, over many years. It's no wonder that woodland owners sometimes feel discouraged, because it's hard to get immediate gratification from something that takes 25 or 50 years to change on its own. That's where management can make a difference.

There are things you can do right now to intervene in the natural progression of succession, if you are willing to take the necessary steps. You'll need a plan, and there will probably be some hard work involved that you will either do yourself or hire out. That work might involve thinning out the less desirable trees, removing invasive weeds, having a prescribed burn, or tree planting.

I encourage you to take the time to consider where your land has been, and don't hesitate to ask for help. Most NRCS employees appreciate a chance to get out in the field to help people with their land, and our service is free. We might even be able to share the cost of some management practices in your plan. NRCS Technical Service Providers (TSPs) are also available to help (for a fee) when NRCS employees are unavailable. No matter who is doing the assessment, evaluating the site condition and how it got that way is always the first step.

Tune in next time for more advice about "Starting from Scratch."

Find Your Local Office

Click on the map below, or follow this link to an interactive map with contact information for local NRCS offices.

<http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/il/home/?cid=stelprdb1117095>



BE ON THE LOOKOUT FOR BUR OAK BLIGHT

by Fredric Miller, Ph.D. Professor of Horticulture, Joliet Junior College, Joliet, Illinois, fmiller@jjc.edu, and IDNR Forest Health Specialist

If you have bur oaks on your property, now is a good time to take a look at your trees and keep an eye out for bur oak blight (BOB). Bur oak blight is a serious leaf disease of bur oak (*Quercus macrocarpa*) and has been showing up throughout the Midwest since the 1990's. Early on, BOB was thought to be just another common leafspot fungus caused by *Tubakia dryina*, but researchers at Iowa State University discovered BOB is caused by a new species of *Tubakia*.

BOB is found only on bur oaks with severe symptoms occurring on *Q. macrocarpa* var. *oliviformis* which produces small acorns. This disease is common on mature trees on upland sites and in remnants of savannahs. Forest and bottomland bur oaks appear to be less affected. In Illinois, infected trees have been found in Lake, DuPage, and Grundy counties, so far.

Foliar symptoms associated with BOB usually appear in late July and August on the underside of leaves with purple-brown lesions along the mid vein and major lateral veins. Chlorotic (yellow) and necrotic wedge-shaped areas appear on dead and dying leaves. The canopy takes on a scorched appearance and may resemble oak wilt.



Brown veins and wedge shaped lesions form on leaf



Brownish lesions develop on veins on the underside of leaf

Over the course of the summer, black fruiting structures appear on the leaf veins and produce spores spread by rain drop splash. While not very visible to the naked eye, they can be seen using a 10X hand lens. Later in the season, fungal fruiting bodies appear on the leaf petioles and matures spores can be seen the following spring. **One of the unique features of BOB is the infected leaves remain on the tree during the winter compared to healthy trees that shed their leaves.** The disease gets progressively worse over time usually starting in the lower branches and moving upward. Adjacent trees may become infected by spores moving via rain. One positive is not all bur oaks are equally susceptible. There appears to be differences in resistance from tree to tree.

Management of BOB is tough. Over time individual trees may die and/or be attacked by secondary invaders such as two-lined chestnut borer (TLCB) and/or *Armillaria* root rot. Keeping the tree as healthy as possible can help fight off these lethal secondary invaders. Preliminary research with injections of the fungicide propiconazole (Alamo formulation) has shown promise, but further study is needed. While fungicidal treatments are not practical for forest plantings, there may be value in treating individual high value landscape bur oak trees.

If you suspect your tree has BOB, collect branch twigs containing a healthy and symptomatic leaves including some leaf petioles. Place the samples in dry paper toweling (no plastic bags) and submit to the [University of Illinois Plant Clinic](http://www.uiuc.edu/PlantClinic/) or [The Morton Arboretum Plant Clinic](http://www.mortonarb.org/trees-plants/tree-and-plant-advice/plant-clinic).

History of Conservation in Illinois

by Dave Gillespie, IFA Secretary

(Installment # 14)

This account of the history of conservation in Illinois was written by Joseph P. Schavilje in 1941. This installment begins where the thirteenth installment ended.

J. A. Laphan of Milwaukee, Wisconsin made journeys into Illinois as early as 1836, and published a catalog of the plants of Illinois about twenty years later. Dr. George Engelmann of St. Louis, after examining collections made by Mr. Robert Kennicott, Mr. Emil Claussen and others exhibited at the State Fair in Chicago in 1835 said, "It seems that there are 70 species in Illinois that attain the height and dignity of forest trees, including 12 or 13 species of oak. The rich bottomlands along the margins of the Mississippi, the Ohio and the Wabash afford specimens of the noblest and most gigantic trees of the great valley of the west." (Miller, 1925)

A local poet of Kane County, who lived in Illinois during this period, is reported to have sung as follows: (Davidson and Stuve, 1884)

'The timber here is very good
The forest dense of sturdy wood;
The maple tree its sweets affords
And walnut it is sawn to boards;
The giant oak the axman hails
Its massive trunk is torn to rails,
And game is plenty in the State
Which makes the hunter's chances
great -
The prairie wolf infests the land,
And the wild cats all bristling stand'

(To be continued in the next issue of "The IFA Newsletter").

University of Illinois Plant Clinic
<http://web.extension.illinois.edu/plantclinic/>

Morton Arboretum Plant Clinic
<http://www.mortonarb.org/trees-plants/tree-and-plant-advice/plant-clinic>



A couple of months ago, my wife and I took a short vacation to some battlefields in Tennessee and Mississippi. Our route took us south on U.S. 51, through Cairo, IL and then through the western tip of Kentucky into Tennessee. One of the things that I noticed is the exotic plant from Japan called *kudzu* is getting awful close to Illinois. Further, it is getting to be a real menace in Kentucky/Tennessee, although people in those states may offer a different opinion. I noticed several patches along the highway; some as small as going up a single tree or telephone pole, and others covering much more territory. I would estimate the largest patch to cover somewhat more than a quarter acre. All of the patches which I saw were vertical (that is covering the tops of trees, fences or utility poles) as well as horizontal. I first noticed this some 10-15 miles south of

Wickliffe, KY, just across the Ohio River from Cairo, IL

Some kudzu has also been found in Illinois, but I believe that so far it has been eradicated. However, as these larger infestations come closer to the Ohio River, I worry that it will be much more difficult to keep the pesky plant under control here. Failure to take strong action will mean the rapid demise of a good woodlot, not to mention spreading the seeds to others in the area. We are used to finding poison ivy, Virginia creeper and wild grape vines in our woods. All of these are considered bad for the individual trees which they are climbing. Kudzu, however, doesn't stop with covering just one tree. The vine will reach over to nearby trees and eventually cover the whole woodlot. As a result, the entire woodlot will die from lack of sunlight.

I will confess to making a major error in our OAKtober issue. Working from memory, I called the disease killing Coastal Oaks in California and Oregon Oak Wilt.

It should be **SOD** for **sudden oak death**. The disease is caused by the pathogen *Phytophthora ramorum*, which also infects several other plants, particularly potted plants such as Rhododendron. Because of this it is advisable to buy plants only from a nursery or store that handles stock which has passed inspection. The Illinois Department of Agriculture has 17 inspectors covering the entire state. Unfortunately, if one of these inspectors leaves, the Department cannot hire someone else to take their place. This is due to the lack of a budget. We have 17 people manning a thin line to keep exotic diseases from infecting our forests, crops and landscape and the only way that we are keeping them on the job is by court order. The same goes for our state foresters, conservation police officers and others who protect and help us enhance our forests. I would hope that the citizens of Illinois would start insisting that our political leaders start doing their job and end this charade. Unfortunately, it may be a long time before the situation changes.

CUTTING EDGE

Lightweight Chainsaw

by Dr. Susan Romano

ONE DAY I decided to buy a chainsaw. A timber stand improvement project was on the agenda for the next few weeks, and I had only a vague idea of how to run a chainsaw, let alone buy one. The most reliable source in the area sold Stihl, repaired saws, located at a small sawmill south of town. I stopped by the sawmill and explained my situation to Lyle, who recognized that my 115 pound frame meant that I needed a lightweight professional saw that would fit me and the job ahead. He recommended a Stihl 021 with a 14" bar, small, professional chainsaw. Why the 14" bar? Lyle explained that the bar length was important for saw balance to reduce fatigue.

That was in 1994, and new "cutting-edge" technologies have improved lightweight saws useful for TSI, pruning, and removing smaller trees. Let's take



a look at two of the latest lightweight Stihl saws: the Stihl MS 150 C-E ultra-lightweight, and the MS 241 C-M lightweight professional grade.

Stihl MS 150 C-E

This saw has a powerhead weight of only 6.1 pounds, and a recommended bar length of 12". The engine power is 1.34 bhp. Only a quick pull is needed to start the saw, using Easy2Start technologies that compensate for the engine compression. The MS 150 C-E is recommended for arborists and tree farmers, and is listed in the Farm and Ranch Saw category.

Stihl MS 241 C-M

Lightweight, but a more powerful professional saw, the Stihl MS 241 C-M has a powerhead weight of 9.9 pounds, similar to my 1994 Stihl 021. Over twice as powerful as the MS 150 C-E with an engine power of 3.1 bhp, this machine improves time and reduces effort for both small and larger tree farm jobs. This saw has Stihl M-Tronic technology, an engine management system that uses a microprocessor, a small computer inside the engine that continuously optimizes engine function based on fuel quality, temperature, altitude, and filter condition.

If you need a saw for a long day in the woods, consider these or other lightweight tools with modern technologies for improved maneuverability and reduced fatigue. And as always, be safe.

Products and other innovations featured in the Cutting Edge are not necessarily endorsed or recommended by the author or the Illinois Forestry Association.



2016 Invasive Pest Awareness Workshops will Focus on Early Detection and Response

University of Illinois Extension has announced the dates for the 2016 Illinois First Detector Invasive Pest Workshops covering important landscape and nursery pests, diseases, and invasive plants. Workshops will be offered at eight locations in Illinois beginning in January 2016.

Early detection and response is key in managing invasive pests. The Illinois First Detector Workshops, now in their fourth year, are aimed at improving first detector training and invasive species awareness. The workshops will cover new topics on current and emerging invasive plants, pathogens, and insects, along with updates on previous workshop topics.

As in previous years, these in-depth training sessions will cover material that includes: identification/detection; cycle/biology; hosts; sampling; management; commonly confused lookalikes; and regulation.

Specific course topics will include:

- Your role as a first detector
- Illinois Exotic Weed Act
- Jumping worms
- Boxwood blight/Thousand Cankers Disease update
- Insect forest invaders

Those attending will take part in hands-on activities, which will allow attendees to examine these pests and diseases in more detail.

The target audience includes certified arborists, tree care professionals, Master Gardeners, Master Naturalists, forestry and natural resource professionals, conservationists, and others with an interest in invasive species.

Featured Invasive:

Wintercreeper (*Eunonymus fortunei*)

by Chris Evans

With winter upon us and the leaves of our deciduous trees fallen, this is the perfect time of year to highlight one of the few truly evergreen invasive species we have in Illinois.



Wintercreeper (*Eunonymus fortunei*) is an invasive woody vine species that can be found scattered across the state.

While this species can be spread via birds moving the seeds, infestations

often result from historic plantings that have grown out of control. This evergreen vine species can both form dense mats along the ground and climb high into trees. Forest understory plants and tree seedlings succumb to the dense mat and the climbing growth can girdle and shade trees.

Continuing Education Units (CEUs) will be available for IAA Certified Arborists, Continuing Forestry Education Credits, Master Gardeners, and Master Naturalists.

Workshops will be held:

- | | |
|-----------------------|--------------|
| • Jan. 28 Waterloo | 618-939-3434 |
| • Feb. 2 Joliet | 815-727-9296 |
| • Feb. 3 Champaign | 217-333-7672 |
| • Feb. 9 Effingham | 217-247-7773 |
| • Feb. 17 Grayslake | 847-223-8627 |
| • Feb. 18 Freeport | 815-235-4125 |
| • Feb. 23 Quincy | 217-322-3381 |
| • Feb. 24 Springfield | 217-782-4617 |

Those interested in attending should contact the host locations above for registration. A \$40 non-refundable registration fee covers instruction, on-site lunch, and training materials. Space is limited.

When looking for this species in winter, look for woody vines with green stems.

The leaves are opposite, very thick and waxy, and can be dark green to purple in color. The flowers are small, whitish, and inconspicuous and the fruit are rough capsules that split open to reveal pink-red berries. Wintercreeper can grow in very low sunlight environments but needs



adequate light to flower and set fruit. Because of this, usually only the vines that are climbing into the trees have flowers and fruit.

Keep an eye out for this species when walking through the woods in winter. Small vines can be hand pulled fairly easily but larger vines or well-established infestations will likely take chemical treatments to eradicate.



This program and materials are based upon work supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under Agreement No. 2014-70006-22557 and coordinated by Kelly Estes, state survey coordinator, IL CAPS Program at the Illinois Natural History Survey, Prairie Research Institute, and Diane Plewa, Plant Clinic diagnostician and outreach coordinator, Department of Crop Sciences. Additional support for this program will be provided by Christopher Evans, the Illinois Wildlife Action Plan - invasive species campaign coordinator, Illinois Department of Natural Resources, and Scott Schirmer, plant and pesticide specialist supervisor, Illinois Department of Agriculture.



Featured Tree: Bur Oak

(*Quercus Macrocarpa*)

Description

Native trees with a broad, rounded crown, sometimes shrubby; branches and branchlets with corky-winged projections; bark light gray, thick, rough, furrowed into scaly plates and vertical flattened ridges. Leaves deciduous, alternate, obovate, shaped like a fiddle, tapering to a wedge-shaped base, dark green above, gray-green below, turning yellow or brown in fall. Male and female flowers are borne in separate catkins on the same tree (the species monoecious) on the current year's branchlets. Acorns maturing in the first year, with a deep, thick, fringed cup covering 1/2 to 3/4 of the acorn, the scales knobby, long-pointed with narrow free tips. The common name (bur) is in reference to the cap-covered acorn.

Adaptation

Bur oak grows in a range of habitats and moisture regimes - from prairies to valley floors and upland woods. It is a pioneer or early seral species at prairie margins, but bur oak savannas have declined due to grazing and fire suppression. It grows quickly on moist, rich bottomlands but is relatively intolerant of flooding during the growing season. At the north and west ends of its range, where bur oak occurs on rocky bluffs with thin soil and where repeated fire also may be common, it commonly grows as small trees or thickets of low shrubs. Young plants grow well in full sun to partial sun.

Flowering occurs from April through June, just after leaves develop, while fruiting occurs from August to November.

Uses

Bur oak wood is used for cabinetry, barrels, hardwood flooring, and fence posts. Main sources of trees for timber are Iowa and Illinois bottomlands. The wood is sometimes marketed as white oak.

Native Americans made a bark decoction with astringent properties used to treat diarrhea, wounds and sores, hemorrhoids, poison oak, and insect bites. The large, sweet acorns have been eaten boiled and raw.

The acorns are eaten by many birds and mammals, including squirrels, rabbits, ground squirrels, mice, deer, wood ducks, and blue jays. They are dispersed by rodents and blue jays, which frequently cache the acorns for later use. The foliage is eaten by deer and cattle. Red-tailed hawks, screech owls, fox squirrels, and flying squirrels nest in large trees of bur oak.



Bur oak is tolerant of city smoke and other air pollutants and of soils that are compacted, sandy, and/or of high pH. It is commonly planted as a shade tree in many urban areas of the United States. The trees become large and are suited for lawns and other open areas, including golf courses, parks, large islands, and fields. They also are useful in rehabilitation of degraded sites and have been widely planted in shelterbelts because of their drought tolerance. A deep tap root system penetrates to lowered water tables during the dry periods.

Establishment

Minimum seed-bearing age is 35, with optimum seed production occurring between 75-150 years, and trees are known to produce seed up to 400 years. Abundant acorns are produced every 2-3 years, with light crops in the intervals. Most natural seed germination occurs during the fall (directly after maturation) and unless germination is rapid, few seeds survive predation by insects, small birds, and mammals. Litter-covered acorns appear to be more vulnerable to rodents, insects, and fungus.

The taproot of young bur oaks rapidly penetrates into the soil, sometimes growing more than one meter deep in the first growing season. This early root development, along with high water-use efficiency, may explain why bur oak can pioneer on droughty sites and can successfully establish itself in competition with prairie shrubs and grasses. The trees are slow-growing but long-lived and may reach ages approaching 1000 years.

Management

Bur oak bark is thick and fire-resistant and larger trees often survive fire. Grass fires often kill only seedlings and young trees, but even seedlings may survive unless fires occur at short intervals or with enough intensity of heat. Top-killed smaller trees (or those mechanically damaged) sprout vigorously from the stump or root crown after fire. In areas of frequent fire and strong herbivore browsing, the underground portions may be much older and more extensive than the continually resprouting aerial portions. Where fire suppression is prevalent, bur oak communities may be replaced by more shade-tolerant maple-basswood forests.

Prepared by Guy Nesom, BONAP, North Carolina Botanical Garden, University of North Carolina, Chapel Hill, NC.

Species Coordinator: Lincoln Moore, USDA, NRCS, National Plant Data Center, Baton Rouge, LA.

For more information about this and other plants, please contact your local NRCS field office, and visit the PLANTS <<http://plants.usda.gov>> and Plant Materials Program Web sites <<http://Plant-Materials.nrcs.usda.gov>>.

Tax Tips for Forest Landowners for the 2015 Tax Year

Federal income tax laws can influence a private woodland owner's financial decisions about land management. Yet, special favorable tax provisions on timber that are intended to encourage private forest management and stewardship are commonly unknown. To help woodland owners in filing their 2015 tax returns, the Forest Service releases an annual publication outlining the federal income tax laws on timber. Not intended as a substitute for legal or accounting advice, the following document is current as of September 30, 2015.

[Download the 2-page PDF prepared by Dr. Linda Wang, National Timber Tax Specialist, USDA Forest Service](#)

Did You Know?

For many centuries, abnormal outgrowths of oak tissue, known as "galls," were used as the main ingredient in the preparation of manuscript ink. In fact, iron-gall ink was the primary writing ink used from 12th through the 19th centuries in the Western world. Popular with artists, architects and mapmakers, iron-gall ink is found in abundance in paper-based collections at the Library of Congress - including the [U.S. Constitution](#).



Tri-State Forestry Conference Planned for March 12th

Designed specifically for landowners in the Midwest, the next Tri-State Forestry Conference will be held Saturday, March 12, 2016, at Sinsinawa Mound Center near Dubuque, IA.

Conference topics range from traditional forest management techniques, timber taxes, game and non-game wildlife management to soils and soil erosion. Non-timber forest products such as maple syrup production, raising ginseng and mushrooms are also presented.

Concurrent sessions provide participants with the knowledge and skills to manage woodlands using good stewardship principles.

[Visit the Conference website to see past programs and watch for 2016 information/registration](#)

Word Search -- "Birds around the Feeder"

AMERICAN GOLDFINCH
 BLACK-CAPPED CHICKADEE
 BLUE JAY
 BROWN-HEADED COWBIRD
 CAROLINA CHICKADEE
 CEDAR WAXWING
 COMMON GRACKLE
 DARK-EYED JUNCO
 DOWNY WOODPECKER
 EASTERN TOWHEE
 HAIRY WOODPECKER
 HOUSE FINCH
 HOUSE WREN
 MOURNING DOVE
 NORTHERN CARDINAL
 RED-BELLIED WOODPECKER
 RED-WINGED BLACKBIRD
 ROSE-BREASTED GROSBEAK
 TUFTED TITMOUSE
 WHITE-BREASTED NUTHATCH
 WHITE-THROATED SPARROW

I O E L K C A R G N O M M O C P Y D Q A Y K L T
 B A J A R X N O R T H E R N C A R D I N A L B E
 X T Q J S E S S C D E Q U D M I B N B H J M A L
 K T H C P T D E W N D U V K B O P F O C E R H M
 W B U O E M E B T C C Q J K I J Y U C N U I C C
 B R R F K E T R E Y H O C W A Y S B H I L I T R
 F B E O T L D E N L F A D B Q E J S M F B D A C
 D F S K W E K A H T L T L K W X G Y C D N O H P
 Q A C A C N D S K B O I Y R R T R K H L F W T Q
 X Y X X K E H T D C S W E B Z O H J I O B N U P
 L J Q A W N P E I A I N H D K L U K V G P Y N F
 U F C T D G G D A T L H A E W Q A M W N M W D O
 A E D G F N A G O D M M C N E O Q F P A E O E R
 H E I W I I B R C O E O J A V G O I I C F O T P
 D N X W X W L O I Q W D U N N K G D S I C D S K
 F B D N D X H S J D Y Y C S J I V B P R P P A H
 Q E C C E A G B P T A N R O E P L R O E E E E J
 R M D R B W Y E K G R J N I W A H O W M C C R E
 R M A S D R B A V I Q X R S A B W J R A Z K B W
 Q Q P B L A C K C A P P E D C H I C K A D E E E
 Q I V S H D P O C N U J D E Y E K R A D C R T R
 P Y E G S E K N H R M O U R N I N G D O V E I V
 X M I M I C K H T L Q C Y H O U S E F I N C H C
 F A K W H I T E T H R O A T E D S P A R R O W C