



The Voice for Illinois Forests

To act on issues that impact rural and community forests and to promote forestry in Illinois

****IFA Officers****

President

Stephanie Brown
sbrown63@shawneelink.net

Vice President

Bill Gradle
sallygradle@comcast.net

Secretary

Dave Gillespie
dandgisp@aol.com

Treasurer

Susan Romano
old_farmstead@yahoo.com

Immediate Past

President

John Gunter
jegunter40@frontier.com

****Inside this Issue****

President Message	1
Executive Director's Report	2
Secretary Comments	2
Legislative Report	2
IFA Annual Conference	3
Tiny Acorns, Mighty Oaks	5
Dangers in the Forest	8
Stand Density	10
Event Listing	11

...and more!

IFA Web site

www.ilforestry.org

Message from the President

Stephanie Brown



True to Our Roots – Positioned for Growth

Welcome to the latest issue of our quarterly newsletter! Summer is winding down, and so is my term as IFA President. It has been a busy year. I'd like to thank my fellow board members for their service, and I look forward to continuing as Immediate Past President in the coming year.

Soon you will be receiving a packet in the mail containing some proposed changes to our bylaws. Among them – a revised mission statement and the addition of a vision statement for IFA. These new statements were by-products of a facilitated strategic planning process that we went through as a Board. Also included among the changes is the addition of our Stated Purpose as a preamble to the bylaws.

The Stated Purpose comes from our original Articles of Incorporation. It cannot be changed through bylaws revision, so it will become the introduction and thereby help future IFA Boards stay true to our roots and the legal requirements we must follow as a tax-exempt charitable organization. As the IFA continues to evolve, mission/vision statements may be refined periodically, but the Stated Purpose is the bedrock from which we cannot stray.

It reads: "The IFA is an independent, non-profit, non-partisan group organized for the purposes of providing a statewide voice for common interests in Illinois forestry; to act as a clearinghouse of information on important issues related to rural and community forests and forestry in Illinois; connect people to available technical and forestry management training; facilitate a cohesiveness among local forestry groups and their activities to make a greater impact on forestry programs in Illinois."

Our revised Mission Statement is consistent with the stated purpose, but simplified for use in conveying who we are in more conversational terms: "The mission of the Illinois Forestry Association is to help people improve Illinois trees and forests." This general statement should help those who are less familiar with "forestry" better understand our charitable mission.

The proposed mission statement acknowledges how much of our work is focused on people rather than the more impersonal "acting on issues" and "promoting forestry." When talking in forestry circles, the current mission makes sense, but for entry-level landowners, legislators, people who are not as connected to the land – We help people improve trees and forests is a great way to begin a conversation about joining or supporting IFA. It positions us for growth through expanded public relations and member recruitment efforts.

We do need to grow this organization. The vision statement proposed as a bylaws addition describes what we want IFA to be in the future: The vision of the Illinois Forestry Association is to be a highly effective, "go to" community of well-informed property owners who are managing their trees and forests and are influential with their peers and government. Staying true to our roots, while casting a broad net for members and supporters – we can achieve this vision. In many ways we already have.

Take a look at the packet when it arrives – you have an opportunity to vote on the approval of the changes. Please consider coming to our Annual Meeting September 20-21 – it is going to be an outstanding program in a beautiful area of the state!

Thanks for your membership in IFA. It has been an honor to serve as President this past year.

Executive Director, Mary Murphy



Just Look at the Trees in My Backyard

The first tree we planted in our backyard was a curly willow of an indiscriminate age.

This willow was just a decorative stick stuck in a vase full of flowers in 2002. As the flowers began to wilt and lose color, the stick began to grow roots. Soon, the stick was moved from the vase of water to a small pot and over the years as the pots became larger to accommodate the growing willow, we eventually planted the tree in the ground at our new home in 2005. Now, in 2013, 11 years after our encounter with the growing decorative stick, we have a 30 foot tall beautiful curly willow in the back yard – dubbed “The Wedding Willow”. We know that it is 11 years old in this life, but how old was it in its previous life?

Associations are somewhat like the stick that renewed itself into another strong tree. The Illinois Forestry Association was born from the idea of a person, who shared the idea with another person and from there it grew in strength and stature. From 2005 to 2012, IFA’s membership numbered over 700 separate individuals. The Board of Directors and all of the officers were all volunteers – they have collectively grown new life from an idea into a strong and growing association.

Now, in 2013, IFA has added staff, an executive director. They have active committees and active regional groups who are your friends and neighbors. IFA is growing still, branching out to be inclusive to all who have an interest in forested lands. We are looking for more participants and feel that we have planted more ideas for more membership growth.

What we have now is an impressive electronic system of communicating with members through a web-site and email and we still communicate through

the postal system. Where we are going is just as impressive as IFA is working on a Facebook account, considering an 800 toll free number, and is in the process of implementing a system for meeting and encouraging all of our membership to participate in all that we offer from field trips to leadership opportunities.

As the IFA matures we believe we can anticipate a living, working organization that will continue to grow and to spread new branches to meet the challenges of forest ownership.

Secretary Comments

by Dave Gillespie

We are coming to “that time of year” I really enjoy – the IFA’s Annual Meeting/Conference. I specifically like this event because I get to see old friends I’ve known for years, and I get to meet IFA members whose name I have seen only on a membership form or letter, typed their name into the member database or looked up their name on the member database to renew their membership or to check their membership status. It’s always nice to put a face with a name.

This year’s conference will be one of the best. The Region 1 Directors need to be commended for putting together an informative agenda and a list of speakers who are well known for their knowledge and experience. The theme of the conference is “Here Comes the Sun” which deals with the forestry practices that open the forest canopy to encourage the growth of important species of forest trees. The dinner speaker will be William Luppold, an economist with the U.S. Forest Service, who will speak on how Illinois hardwood fit into timber market, both nationally and the import/export market.

The conference will be held on Friday and Saturday, September 20th and 21st at the Illinois Valley Community College near Oglesby and Starved Rock State Park. Go to the IFA website, www.ilforestry.org and click on Events to read more about the details of the conference and to register to attend. I look forward to visiting with you.

Legislative Report

by Dave Gillespie

The Legislative/Policy Committee continues to work on resolving the problem with the 4 percent timber harvest fee collected under the Illinois Forestry Development Act (IFDA), and the use of those funds by the IL Department of Natural Resources (IDNR). The IFDA says the funds are to be used for a cost share program to help implement forestry practices by the forest landowners in Illinois, and to fund the Illinois Forestry Development Council. Currently some of these funds are being used by the IDNR for administrative costs, and only a limited cost share program is in force. The cost share program is only open to those forest landowners who have paid their 4 percent harvest fee, and the funding for the Council’s funding has been limited to \$20,000 by the Bureau of the Budget. It is the IFA’s position that these funds should be used as the IFDA intended.

The Committee is working with the Illinois Legislature to amend the IFDA to restrict the amount of the 4 percent harvest fee that can be used for administrative costs, and to set up a method to account for the expenditure of these funds. We are also working with the IDNR to resolve this matter. Hopefully, this issue can be resolved to the satisfaction of everyone involved.

The Committee would like to welcome Bill Gradle as a new member. Bill, retired State Conservationist with the NRCS, brings knowledge of the Federal Farm Bill to the Committee in order to work with federal legislators on the new Farm Bill.

Do you have a passion for trees and forestry?

Are you interested in serving on a regional committee?

Contact an IFA officer today to find out how you can help!

IFA Annual Conference

The Illinois Forestry Association is hosting a two-day conference on the importance of giving your trees room to grow. The conference will be held in the area around Starved Rock State Park with conference speakers at Illinois Valley Community College on Friday and Saturday, September 20-21.

This year's theme "Here Comes the Sun" examines methods and benefits of opening space in your forest stand, with field trips and conference speakers. Friday afternoon, there will be field trips to examine how forest stands have responded to timber stand improvement (TSI) and a timber harvest, and discussing when to apply crop tree release or TSI or thinning. Friday evening, we will gather for dinner and discuss timber export and import markets. Saturday morning will be the IFA Annual Business Meeting, followed by speakers both before and after lunch.

Meeting Schedule

Friday Afternoon Schedule

1:00pm Field Trip to Camp Stanley - examine after-effects of older harvest and previous TSI focus on benefits of opening the canopy, wildlife, regeneration, understory, crop tree growth

3:00pm Field Trip to Starved Rock State Park - discussion with park's wildlife biologist, wildlife, diversity, invasive effects, forest floor, fauna

Friday Evening Schedule

6:00pm Dinner at Illinois Valley Community College

7:00pm "Where Does Our Timber Go?" discussion of timber export and import markets, transportation and uses of our Illinois hardwoods
Presenter: Dr. William Luppold, Research Economist, Forest Service

continued on page 4

The LaSalle County Convention & Visitors Bureau has information on local lodging and events at www.enjoylasallecounty.com.

Note that this same weekend, "Vintage Illinois" will be held in Matthiessen State Park nearby, which will be twelve hours of outdoor wine tasting from 11 am to 6 pm on Saturday and 12 pm to 5 pm on Sunday. Cost is \$20 per person; \$5 for designated drivers. Our meeting will end at 4 pm on Saturday. You can learn more and buy tickets www.vintageillinois.com. While they are calling it a festival, it's not clear whether there will be any music. However, some lodging establishments are filling up fast. "Vintage Illinois" is not associated in any way with our conference.

IFA Annual Conference registration fees

Event Session	#People	Members	Non-Members	Total Fees
Friday Field Trips	_____	Free	Free	_____
Friday Dinner	_____	\$20	\$25	_____
Saturday Conference	_____	\$20	\$25	_____
The Whole Enchilada (all of the above)	_____	\$35	\$45	_____
Total Due				_____

Please indicate the number of people attending for each event or for all events (the Whole Enchilada), (circle) the applicable rate, your total fee for each event and total due. Then mail a check made out to the "Illinois Forestry Association" to:

Richard Pouzar, 2303 West Cording Road, Galena, Illinois 61036

Check must arrive before Friday, September 13, 2013. Registrations received after September 13th may be charged an additional \$5 or \$10 at the door.

IFA Technical Advisors

Kurt Bobsin
IDNR -Forestry Regions III-IV
217-935-6860 (office)
kurt.bobsin@illinois.gov

Jay Hayek
University of Illinois
217-244-0534 (office)
jhayek@illinois.edu

Wade Conn
State Forester, USDA-NRCS
217-353-6647 (office)
wade.conn@il.usda.gov

Paul Deizman
IDNR
217-782-3376 (office)
paul.deizman@illinois.gov

John Groninger
Southern Illinois University
groninge@siu.edu

Stan Sipp
Forestry Info. Spec. - NRCS
skipp@uiuc.edu

Dan Schmoker
IDNR-Div. Forestry (retired)
schmoker3@aol.com

Friday Evening Speaker

William Luppold, Ph.D., serves as research economist for the USDA Forest Service in the Northern Research Station's Department of Forest Inventory and Analysis. Since 1982, he has co-authored 75 papers on hardwood trends and markets, most recently -

- "Factors Influencing Changes in U.S. Hardwood Log and Lumber Exports from 1990 to 2011" published in 2013
- "Changes in U.S. Hardwood Lumber Exports, 1990 to 2008", published in 2011
- "An Analysis of Declines in Hardwood Lumber Price Over the Past 40 Years", published in 2010.

Saturday Schedule

8:30am IFA Annual Business Meeting

10:00am Break

10:30am "Giving Your Tree Room To Grow":
a discussion of intermediate forest stand treatments, such as TSI, crop tree release, thinning, and when to apply them

Presenter: John Edgington, Silviculturist, U of I, retired

11:45am Lunch

12:45pm "Considerations Before You Open the Canopy":
dealing with invasives and regeneration seed sources

Presenter: Jeff Harris, IDNR District Forester

1:45pm "Wildlife Benefits from Opening the Canopy":
discussing food, cover, structure, diversity

Presenter: Stacy Lindemann, Wildlife Biologist, NWTf

2:45pm Break

3:00pm "Financial Benefits of Managed Forests:

how tree growth is improved by opening the canopy"

Presenter: John Gunter, Dean Emeritus of Forest Resources, Mississippi State University

4:00pm Adjourn

Saturday's schedule will also accommodate a silent auction and door prizes.

Election of Board Members

Election of officers and directors of the Illinois Forestry Association will be held at our Annual Business Meeting of Saturday morning, September 21, 2013, at Illinois Valley Community College, starting at 8:30 am. The following individuals have been nominated for the positions indicated. All current IFA members in good standing are allowed to cast their ballot at that time. Results of this election will be announced in the November edition of this newsletter and posted on our website soon after the election.

Vice president

Dick Little

Dick and his wife Karen live in the country between Springfield and Pleasant Plains. They have four sons, two of which have forest land under Forest Management. Dick and three of his sons are veterans. Dick has a BS and MS in Forestry from Southern Illinois University at Carbondale and is a graduate of the US Army War College. After receiving his commission in the Army he served as a forester for the US Army. He retired from both the Division of Forest Resources, IL Department of Natural Resources after 34 years of service with the State and from his Army active duty and National Guard service after 31 years.

He was very active in the IL Forestry Development Council (IFDC) and the development and implementation of the IL Forestry Development Act during his service with the State. After retirement, he has served part time as the Council Liaison for the IFDC for 7 1/2 years and worked part time for the IL Conservation Foundation. He also served as the Treasurer for the IL Forestry Association. Dick currently serves on the Trust Board and finance committee for the Chicago Wilderness Coalition.

Region 1 (Northern Illinois)

Alan Wolfgang

Alan Wolfgang currently lives in Hinsdale, a western suburb of Chicago, with his wife Bettina. He and Bettina have a 20 year old daughter who is a junior in college and a 15 year old daughter who is a sophomore in high school. They have two dogs, play tennis and like to go on motorcycle rides.

Alan's passion for nature started as a kid growing up in Independence, MO next to a seven acre woods where he built tree houses. His grandmother lived on a 100 acre farm in southern Missouri and he spent a lot of time there too. About 17 years ago, Alan bought 35 acres outside of Galena, IL so that he could own a piece of nature to be used as his personal retreat. He worked with a consultant to develop a forestry management program and prairie restoration plan for the property. That process is still under way and has proven to be a learning process. Alan has a degree in journalism from the University of Missouri and is Senior Vice President for Parade Magazine.

Todd Stone

Todd Stone hails from Davis Junction, a town south of Rockford in Ogle County. He hopes to contribute to IFA by serving as a Region 1 Director

Region 2 (West Central Illinois)

Carol Bryant

Carol is a landowner, has served one term as an IFA region 2 Director and would like to serve another term. Her passion is ecology and is fascinated by the interactions between the soil, the plants and the animals that inhabit the forest. Learning and sharing information is especially important to her as a landowner and neighbor. She accomplishes this, in part, by hosting field days on her Tree Farm in Macoupin County. She gets great pleasure in this and is already looking forward to another twig ID workshop to be held next year.

Carol is a hands-on gal and practices what she preaches when it comes to managing her forest. Currently she is

continued on page 5

thinning 8 acres of woodland to remove or deaden stunted, undesirable trees. It is expected to stimulate growth on the more preferred species such as oak, hickory, black cherry and walnut.

Additional light created under the tree canopy will also create opportunities for the developing seedlings that are the next forest and some of the flowering tree species in the understory such as flowering dogwood, redbud and wild plum. Carol says, "I am ready to continue help IFA further by continuing to serve as a Region Director".

Jim Hynes

Jim has completed a term as an IFA Director in region 2 and would like to serve a second term. He and his wife Susan reside on 40 acres west of Salisbury in Sangamon County. They have instituted a modest reforestation project including 33 acres. Jim's forest management plan is focused on improving old pasture by clearing hedge, locust and other undesirable species. Substantial headway has been made in the last several years. The beginning of the end is in sight with controlling vines, bush honeysuckle and garlic mustard. Jim is proud of the progress he and his wife have made and there has been a profound change in the look of the property under their stewardship.

Through his affiliation with IFA, Jim has been able to participate in the EQIP program, attain Tree Farm certification and extend his network of forest landowners. Jim states, "I have learned a great deal and will continue to grow in and share my experiences as I serve the Illinois forestry community as a Director for the IFA".

Edward Eppy

Edward is a landowner who owns wooded properties in Woodford and Tazewell counties. As a member of the National Wild Turkey Federation, his management priorities focus on restoring oak on his properties for turkey, timber, and other wildlife. He is a life member of the Illinois Forestry Association and is interested in adding his voice to the forestry cause in the state. As an IFA Director, he intends to

share his experience and ideas about forestry while learning more about managing, protecting and utilizing Illinois important forest resources.

Region 4 (Southern Illinois)

John Dickson

John is a southern Illinois boy who returned to his Makanda home woodland in 2001 after 30 + years as an entrepreneur and forester. He now stays busy as a consulting forester, saw mill operator and township assessor. He does custom sawing and is in the process of restoring an old stone house using home cut timber framing and log trusses. John considers himself an old dirt forester who is concerned that we too often forget the practices that worked in the past in favor of what is currently trending or seems to be the new hot concept. "As foresters we are fortunate if we live long enough to see our successes and learn from our mistakes". John will bring experience and perspective from a long career in forestry enterprises that he hopes will benefit the IFA membership as a region 4 Director.

Jim Kirkland

Jim Kirkland has completed a term as a Director in region 4 and is seeking to continue on with another term. In 2010, he joined the University of Illinois, Illinois Forest Resource Center (IFRC) located in southern IL. He is a graduate of Southern Illinois University & Southeastern Illinois College (SIC) with a degree in Forest Management & Forest Technology. Jim previously held a teaching position at SIC, was involved in the pulp & sawmill business as a plantation manager, logger and log buyer. He has also worked with the Forest Service engineering department in Southeast Alaska. Prior to joining the University of Illinois at the IFRC, he was assisting private landowners in forest planning, implementing their plans and working as an independent forestry consultant.

Roger Smith

Roger has completed a term as Region 4 Director. He is an arborist and owns his own tree care business in Benton. He hopes to continue his involvement by serving another term on the Board of Directors.

From Tiny Acorns, Mighty Oaks Grow

by Stan Sipp, Forestry Information Specialist, USDA NRCS

You have learned from the article **Oaks in Illinois** that there are two groups of oak – White Oaks that have rounded tips on their leaf lobes and Red Oaks with sharp pointed tips with a small bristle on the tip of the leaf lobes. You have also learned that white oaks pollinate in the spring and the acorns fully mature in the fall of the same year; red oaks pollinate about the same time in the spring but the acorns take two years to mature.

Much of the following material is excerpted from Agriculture Handbook 727, The Woody Plant Seed Manual which can be accessed on line at www.nsl.fs.fed.us/nsl_wpsm.html. To access the information for oaks, select the genus **Quercus**. Additional information on oak species is available in Agriculture Handbook 654, Silvics of North America, Volume 2 which can be accessed on line at www.na.fs.fed.us/spfo/pubs/silvics_manual/table_of_contents.htm; or, search for "Silvics of North America".

Acorns of both groups change in color from green to yellow, brown or black when mature. The color depends on the species of oak. Depending on species, the acorns begin to fall from the trees in late August and usually are finished dropping by early December. Acorns should be collected as soon as they drop from the parent tree; rodents (squirrels, chipmunks and mice), birds (blue jays, woodpeckers and wild turkeys) and deer forage heavily on acorns when they are available.

The acorns from these two groups of oaks have very different characteristics when they germinate and grow. The white oaks (White, Chinquapin, Post, Chestnut, Bur, Swamp White, Swamp Chestnut and Overcup) immediately germinate and begin to grow when they fall from their parent trees. Some species of white oaks will initiate root growth upon falling, but delay development of the above ground shoot until the following spring. On the other hand, red oaks (Northern Red, Black, Scarlet, Northern Pin, Southern Red, Blackjack,

continued on page 6

Shingle, Pin, Shumard, Cherrybark, Willow and Nuttall) require a period of cold temperature known as stratification to allow the seed to break dormancy and begin to grow. Usually, red oak acorns that are planted in the fall as soon as they have fallen will naturally stratify over the winter and germinate the following spring.

The Woody Plant Seed Manual recommends “floating” acorns as soon after they are collected as is feasible, on the day of collection if possible. Acorns that sink are usually in good condition (sound) and are likely candidates for successful planting; floaters are more likely to be damaged in some way and are less likely to germinate and grow.

If the acorns have been on dry soil for some time, they recommend that the lot be floated overnight; this allows sound seeds to absorb water and become heavy enough to sink. Floating also increases the moisture content of the acorns so that they are less likely to be damaged by excessive desiccation (drying) which reduces seed viability.

Acorns can be stored under rather strict conditions. Because acorns require high minimum moisture to survive, storage may be difficult. If the moisture content of the acorns drops below this rather high minimum (25-30% for white oaks; 15-20% for red oaks), the seeds die.

Storage of white oaks under optimum moisture conditions at 34 to 38 degrees Fahrenheit is not recommended for more than six months; the acorns are likely to begin growing under these conditions but can still be planted. Red oaks stored under the same conditions can survive up to three years; some may begin to grow in storage. As long as moisture requirements are met, storage of red oak acorns usually serves as a stratification treatment. Avoid allowing stored acorns to freeze; temperatures lower than about 15 degrees Fahrenheit are usually lethal.

Planting acorns in the fall is probably best most years in Illinois; fall seeding avoids complications associated with storage. The Woody Plant Seed Manual suggests planting in rows 8 to 12 inches apart covering the acorns with ¼ to 1 inch of firmed soil; their suggestion is to

cover the acorns at least as deep as the average diameter of the acorn. If you plant your acorns in containers, select the deepest containers that you can find because of oak’s tendency to develop taproots. The Woody Plant Seed Manual also recommend mulching with sawdust, ground corncobs, burlap, straw or similar materials; hardwood bark mulch, leaf litter or pine straw should also be good.

Some mulches, such as straw or leaf litter, might need to be covered with netting or hardware cloth to prevent winds from blowing the material off and exposing the seeds. Metal hardware cloth would also discourage squirrels, birds and deer from digging up the acorns; however, it would have to be removed from the beds in the spring before the seedlings emerge through the mesh. The Woody Plant Seed Manual suggests that straw and hay mulches be removed in the spring after the potential for frost damage is past.

Unless you are planning to produce large numbers of seedlings, spacing the seeds so that you can root prune, weed and otherwise work around each seedling will probably be most convenient. Because oaks have a tendency to develop a taproot, you will probably want to cut about 4-6 inches beneath each seedling planted in beds with a sharp spade or shovel to sever the taproot and encourage lateral root growth by early to mid-summer.

Don’t underestimate the understory!

by Wade Conn, State Forester, USDA NRCS, Illinois

Being an **engaged** IFA member, you attended one or many of the exciting webinars or local events IFA offers and just recently you ran across a really amazing video on your IFA website about the forest understory. <http://www.ilforestry.org/Default.aspx?pagelid=1035671&mode=MessageList&eid=1008423> (If not, now would be a good time!)

After watching “The Understory Story” several times, you have become so intrigued by the message and you are eager to learn more about having a healthy forest understory. Turning to Google, you find a litany of useful, semi-useful, non-useful and downright weird hits. You easily narrow that list down to a couple hundred thousand.

Of course, after you get through the “Wikipedia” report and you read all about tropical climates and spider monkeys, you possibly come across some familiar deciduous examples of the east and south. What you will quickly realize is that all the sources and examples you have read up to now basically describe the understory as an assortment of plant life throughout many structural layers growing beneath a forest canopy.

So what is a healthy understory for Illinois forestland? Well, I hate to say it, but the answer starts with “It depends!” A healthy understory depends upon your goals, the site, the latitude, age and successional stage of the forest, species composition, and various other indicators that professional forest managers use to make a determination of a healthy forest understory and appropriate management recommendations.

So now that this begins to look as broad as your first “Google” search, we will focus on one aspect which is both useful and interesting, species diversity. Species diversity is one of the most desirable components of a healthy understory. A large majority of Illinois forests have grown on land that was once cleared for farming or heavily grazed over the last hundred years. With the added onslaught of invasive species and the lack of good forest management, these forests often lack the full complement of plant species that was once afforded to them. Canopy trees such as oaks, hickories and walnuts are important to have developed and growing in the understory in order to replace overstory trees following management objectives, but many species of shrubs and herbaceous

continued on page 7

Understory continued

plants that will never make a board are just as important for the biological and ecological processes they support. A short list of common understory plants found in Illinois include:

Small Trees:

dogwood (many species), Ohio buckeye, Eastern redbud, downy serviceberry, spicebush, sassafras, pawpaw, musclewood

Small Shrubs:

coralberry, gooseberry, elderberry, blackberry

Wildflowers and Forbes:

mayapple, spring beauty, Virginia bluebells, Dutchmen's breeches, wild geranium, phlox, false nettle, cutleaf coneflower

Grasses:

Virginia wild rye, common wood-reed

The diversity shown in symbiotic relationships between species and their communities of biological organisms (Large & Small – Delicious & Disgusting) are what make a forest community different from a tree plantation. A diverse and healthy Illinois forest and understory support 75 percent of our native wildlife and provide the forest an ability to sustain itself ecologically while sustainably providing for society's needs.

Illinois, with abundant "average" rainfall, spreading latitudes, productive soils and unique landforms is uniquely positioned to allow for an extensive list of understory species. Onsite evaluations often done by foresters, biologists and of course you, can result in a better understanding of the existing conditions, potential improvements through management, and additional species your site could support to best meet your goals and the forest's potential.

With a common name and an internet connection you are able to learn a great deal of information about the species you find and those you desire to one day discover! Your USDA Natural Resources Conservation Service maintains an extensive online database designed to provide you standardized information about vascular plants, mosses, liverworts, hornworts and lichens of the U.S. and its territories. "Plant Fact Sheets" and "Plant Guides" found within a specific species search will provide consistent detail on uses, descriptions, adaptation and distribution, establishment, management and potential pest problems. To learn more, visit the USDA-NRCS PLANTS Database <http://plants.usda.gov/java>



Ohio buckeye and Virginia bluebells
Photo by: Porter Conn (Age 9)

"The History of Conservation in Illinois"

(Installment # 5)

By: Dave Gillespie, Secretary

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

Illinois Under the Territorial Government of the United States, 1784 – 1818

In 1785, Congress passed the Land ordinance of 1785, establishing the township survey system, and in 1787, the famous "Northwest Ordinance" was adopted. One important clause of the ordinance was for the encouragement of education. (Ill. Blue Book, 1903)

Government under this ordinance was set up by Governor St. Clair, but it was not until 1790 that the Illinois country was organized as St. Clair County, and received a regular local government. (Ill. Blue Book, 1903). After the tide of European immigration had forced back the red men of America from the Atlantic slopes, they found their best hunting grounds in the magnificent forests and grass plains beyond the Alleghenies, north of the Ohio and east of the Mississippi. When this empire region was thrown open to settlement by the white, the red men determined not to give back farther. They resolved to wage a war of extermination for the retention of this vast rich domain. Many severe Indian wars occurred throughout the region during 1783 to 1795. (Davidson and Stuve, 1884).

As early as 1794, Andre Michaux, a distinguished botanist of France visited Illinois in search of plants which were to be sent home to enrich the gardens and pleasure ground of his own beautiful country. In 1803, there was published in Paris his "Flora-Boreali-Americana", written in Latin by Richard from the plants which Michaux had collected America. A number of plants are set down as having been found in "regione Illinoensis". (Miller, 1925)

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

Opinions & Commentary Walnuts & Acorns

by Lee M. Rife



Recently *FarmWeek* featured an interview with two former colleagues of mine, who also happen to be good friends, concerning the plight of farmland conservation in putting together a five year farm bill (Federal). Rich Nichols is the Executive Director of the Association of Illinois Soil and Water Conservation Districts and Steve Chard is over the Bureau of Soil and Water (at least that is what it used to be called), Illinois Department of Agriculture. Both are consummate professionals when it comes to conserving our soil and water resources. Both view their work, not as merely a job, but as a calling, and both were very concerned about cut backs on funding for various conservation projects throughout Illinois and the nation. So am I. As a landowner, I rely on the cost-share programs of the various Soil and Water Conservation Districts (SWCD) to make it possible to establish and maintain good conservation practices such as grass waterways, tree planting, water sources for livestock and irrigation, etc.

We keep hearing about the "dead zone" in the Gulf of Mexico, supposedly caused by fertilizer runoff in the Midwest. Much land has been put back into grass and trees along the various tributaries of the Illinois River as well as along the river itself. Do our Congress people, all of a sudden, decide that these efforts should no longer be a joint responsibility of the Citizens of the United States, but rather an unfunded mandate to be paid for by landowners within the watershed of the Illinois River? Let me say that my land is not within that particular watershed. It is, however, highly erodible. I do not want to see my soil go down Cypress Creek, to the Cache River and thus to the Mississippi, nor does my tenant wish to see his fertilizer and seed go with it. I want to carry out the practices called for in my forestry plan. Without EQIP, I am afraid that these practices would be prohibitively expensive.

I can still remember, as a kid, seeing fields in Southern Illinois which were abandoned due to erosion. One was across the road from our house and had gullies deep enough to hide a car or tractor. Grandfather bought that farm, paid for it from timber harvested in the creek bottom, and managed to have the gullies bulldozed in. It took us several years to get it in good production, but somehow we managed. Is this what some people want to go back to? Even with today's commodity prices, I doubt if any farmer or landowner could afford to carry out many of the recommended practices for soil and water conservation on their own.

In my last column I said that I was a conservationist, and I support strong conservation measures. Unfortunately however, I am afraid that we have not made our case for soil and water conservation. The "horse may already be out of the barn", but I think that we still need to let those who have the power to fund the Nature Resources Conservation Service's EQIP, and other soil/water management programs know that these programs are vital to a strong agriculture and thus to a strong United States. Unfortunately, the way the children are fighting, we have a very big task ahead.

Dangers in the Forest and Field

by James Appleby, Entomologist,
University of Illinois

There are dangers in Illinois for forest workers as well as hikers. Mosquitos, ticks, and chiggers can cause problems. Mosquitoes and ticks serve as important vectors of human diseases. In Illinois mosquitos are important vectors of encephalitis and West Nile viruses. The most important diseases transmitted by ticks in Illinois are Lyme disease and Rocky Mountain spotted fever but anaplasmosis and ehrlichiosis have also been reported.

Dangers in Forest continued

Ticks, after hatching, will usually feed on such hosts as white-footed and deer mice, and voles, and then later feed on larger hosts such as birds, raccoons, opossums, coyotes, deer, and humans. The developmental stages of all ticks are blood feeders. The adult stage after



Fig. 1-Adult female deer tick (lf) and one engorged (rt) with penny as a size reference.

engorged with blood can be as large as the tip of one's little finger (Fig. 1).

Chiggers are tiny mites that are not blood

feeders but feed on the cell contents in the upper skin layers. In most humans the feeding causes skin bumps similar to mosquito bites that itch for several days. In Illinois, chiggers are not known



Fig. 2-Adult female (lf) and adult male (rt) deer ticks.

to be vectors of human diseases.

The black-legged tick, sometimes called deer tick (Fig. 2)

and the American dog tick (Fig. 3), can vector the bacterium that can result in Lyme disease in humans,



Fig. 3-Adult female (lf) and adult male (rt) dog ticks.

dogs, cattle, and horses. In a 2008 survey, the deer tick was found as far south in Illinois as Monroe and Lawrence Counties, but probably should be considered statewide.

continued on page 9

Dangers in Forest continued

In 2011, 194 cases of Lyme disease were reported in Illinois. Human symptoms are flu-like such as fever, headache, fatigue and sometimes, although not always, a red bull's-eye rash at the site of the tick bite. If not treated severe joint pain, arthritis, and neurological damage can result. Be sure to seek medical attention if symptoms appear.

The lone star tick (Fig. 4) is the main vector for the virus that causes Rocky



Fig. 4-Adult female (lf) and adult male(rt) lone star ticks.

Mountain spotted fever, but the American dog tick can also act as a vector.

This tick has been found

statewide. The adult female tick has the characteristic white spot on its back. Human symptoms include a high fever lasting several weeks, severe headache, fatigue, deep muscle pain, chills and rash. In some cases death can result.

The American dog tick is by far the most common tick and is found statewide. During the warmer seasons of the year when walking in fields and forests it is rare not to encounter this tick. This tick can transmit Rocky Mountain spotted fever and sometimes Lyme disease.



Fig. 5-Pants in socks

There are preventative measures to avoid tick bites. Be sure to wear long pants and tuck the pant ends into the socks (Fig. 5). Before going into the forest and/or field be sure to apply a spray containing DEET or permethrin over the socks. Use an additional band of the spray on the pants on the upper area of each thigh

and then a spray band around the collar area of the shirt. These measures will also prevent chigger bites. Make certain to follow label directions.

When returning from work, search all areas of the body for any feeding tick. If a feeding tick is found use a pair of tweezers to grasp the tick nearest to the skin and gently pull upward for a short period of time. Eventually the tick will tire and release its mouth parts. Do not use alcohol or other agents before using the tweezers as this may cause the tick to regurgitate into the skin, and do not grasp the tick's body and pull as the same will result.

Usually a tick has to feed for at least four hours before disease transmission will take place. But the sooner a tick can be removed the better. After tick removal use an antiseptic over the bite area. If possible preserve the tick specimen in rubbing alcohol or place in a plastic bag and freeze it as identification might be important. If after a feeding tick is removed and symptoms, as previously mentioned, later develop be sure to seek medical attention.

The Culex mosquito, sometimes called house mosquito found statewide, is by far the most common mosquito. It is a small mosquito and not very aggressive and bites most often in the evening and night hours. It is the mosquito that takes its time before biting and the one that you hear often at night buzzing around your face. Although not aggressive, the Culex mosquito is the main vector of West Nile virus. In 2012, Illinois had 399 cases of the virus with 21 deaths. Be sure to use spray repellent before venturing into the forest or field. If symptoms such as severe headaches, high fever, confusion, irritability, tremors, stupor or coma develop be sure to seek medical attention.

The Asian tiger mosquito is larger than the house mosquito, is very aggressive and bites during daylight hours. It is found statewide and can be recognized by its dark head and wings and black and white leg markings. It can vector the viruses causing encephalitis and West Nile.

Forest Thinning Is Very Important

by Tom Vorac

The goal of thinning is to keep the forest at maximum growth, prevent stress, eliminate weed species, and eliminate genetically inferior, diseased and poorly formed trees. When should thinning occur? It is most beneficial to start thinning when the forest is young and be repeated when necessary. Thinning will keep the forest healthy, growing rapidly, improve genetics and assure the regeneration of the preferred species. Thinning has been shown to improve timber production by as much as 50 percent.

When the forest reaches its peak growth rate and becomes overcrowded it is under stress and susceptible to damaging agents such as disease, insects and drought. When the forest is under stress due to overcrowding the forest will normally over adjust, resulting in negative growth rates before resuming the normal pattern of growth. When the forest goes through these cycles the results of what remains in the forest is no longer under the landowner's control. Proper thinning increases the probability of achieving a desired result and maximizing rates of return.

An older forest may have to wait until the weeding and cleaning phase has been performed. The goal of weeding and cleaning is eliminating the undesirable seed source.

It is important to weed and clean the forest well in advance of a harvest. Depending on the tree species, the shape and size of the harvest is another important factor.

Join us at the IFA Annual Conference (see article in this newsletter) and see firsthand what is described above. We have invited university experts as well as IDNR and NWTF professionals to provide

continued on page 10

you a short course. They will cover crop tree release, timber stand improvement, and thinning - when each apply, how they differ, how to do each, and both the wildlife benefits and the long term economic benefits you can expect. The location is easy to find near the intersection of Interstates 39 and 80.

By the way, the author of the Stocking Charts article in this edition is John Edgington who will be speaking at our Conference and discussing these topics on Friday in the field.

Stand Density and Stocking Charts

by John Edgington, Silviculturist, University of Illinois, retired

In the last IFA newsletter, a method of determining basal area using your calibrated thumb was described. Determining basal area is a first step in figuring out how crowded your trees are. The degree of crowding is the stand density. To determine how crowded the trees are in a forest stand, the number of trees/acre needs to be known along with the basal area/acre.

There are several ways to determine the number of trees per acre, but two methods can be done at the same time a basal area count is made.

One method is to run a tape or pre-measured rope out 26 feet 4 inches from the plot center (the radius of 1/20th acre plot) and walk around the plot counting all of the trees intercepted by the tape. You will need to average the results from all plots as you did when you determined the average basal area count. The average number of trees for all plots must then be multiplied by 20 to get the average number of trees/acre.

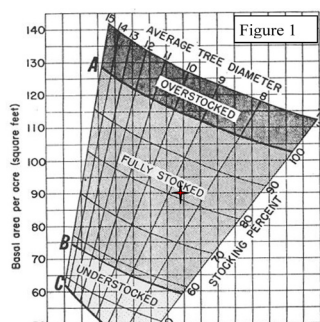
The second method is to measure the dbh of the trees counted during the basal area count and use a BAF 10 trees/acre conversion table for each diameter (Table 1). Each diameter represents a number of trees/acre. Note the conversion factors are rounded to the nearest whole tree. For example,

DIA (inches)	BAF 10 (T/A)
1	1,834
2	459
3	204
4	115
5	73
6	51
7	37
8	29
9	23
10	18
11	15
12	13
13	11
14	9
15	8
16	7
17	6
18	6
19	5
20	5
21	4
22	4
23	4
24	3
25	3
26	3
27	3
28 - 35	2
36 +	1

Table 1

Table 1: Number of trees per acre (T/A) by diameter (DBH) in inches using BAF 10.

Now that we have the basal area/acre and the number of trees/acre, we can make some sense of the degree of crowding in a forest stand by using a stocking chart (Figure 1) developed for the upland central hardwoods². Stocking charts use measures of stand density to determine a stand's current utilization of a site compared to a desirable stand density for best growth and management. If we plot the two variables on a stocking chart we can determine our current forest stand's condition. For example, using a basal area of 90 ft²/acre and 220 trees/acre, let's plot the point on the stocking chart. The right side of the chart is labeled stocking percent. Our plotted point falls between the 80% and 90% stocking



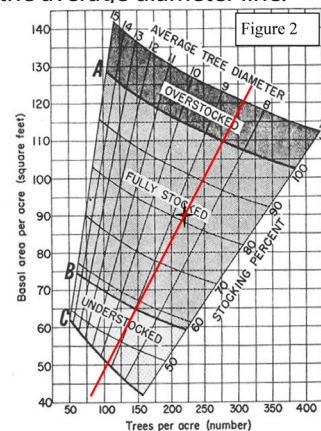
lines. By interpolation, the point is 82%, meaning this example stand is 82% stocked.

Across the top of the chart labeled average tree diameter (from 7 to 15 inches) is the quadratic mean diameter (QMD). Although generally equal or larger than the average diameter of all of the trees, the QMD is the diameter of the tree with the average basal area.

The plotted point falls between the 9 inch and 8 inch diameter lines. In order to determine the QMD, use a ruler to draw a line parallel to the smaller average diameter line (8 inch line) through the entire chart. It will now look like the chart in Figure 2. The QMD is where the drawn line crosses the average diameter line.

Here, the QMD is 8.6 inches.

Before going further, take another look at the stocking chart. There are three lines across the chart - A, B, and



C. The A-line is the 100% stocking level. Any forest stand above 100% stocking is too crowded (overstocked). In this condition, too many trees are competing for essential resources resulting in slower growth rates and increased mortality.

The area of the chart between the A-line and B-line represents a fully stocked stand condition from 58% to 100% stocking levels. Presumably, all trees in a fully stocked stand have all the resources they need to grow and similar species are equally productive across similar sites. The B-line represents the lower end of a fully stocked stand sometimes called the lower management zone while the A-line represents the upper end of a fully stocked stand or upper management zone. A stocking level closest to the B-line is the stocking level where trees with proper spacing grow most vigorously. Certainly, as basal area

increases with diameter growth or as stem numbers increase via reproduction, a stand increases in stocking level over the years. Even as stands approach 100% stocking (A-line), growth rates begin to slow and mortality increases.

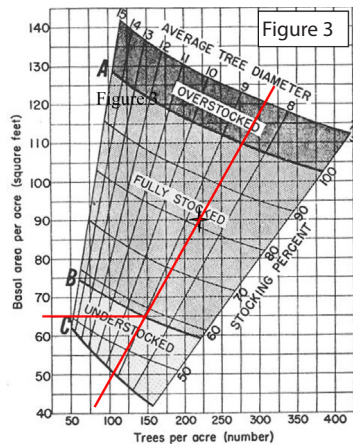
Let's assume this stand is ready to be thinned. What would be the target basal area to achieve by thinning? Look at the basal area along the Y axis where the first drawn line crosses the B-line in Figure 3. The point of juncture is target basal area of 65 ft²/acre. (Drawing a horizontal line from the B-line intersection to the basal area per acre axis may help).

Subtracting the target basal area from the total basal area tells us how much we can safely remove in a thinning (90 – 65 = 25) to achieve a 58% stocking level. The 25 ft²/acre removed should be concentrated on undesirable species and poor quality desirable species.

Removing more than 25 ft² of basal area/acre would place the stand in an understocked condition and likely will increase the time to recover growth and quality. The area between the C-line and the B-line represent stands that are in an understocked condition. If left to grow, they will likely reach full site utilization within 10 years on moderate sites (less time on good sites, more time on poor sites). The C-line is often useful in predicting how much time will be needed before the trees efficiently occupy an area. Any stand that has a basal area stocking level below the C-line is most likely beyond saving without a waste of time and growing space. Such stands may benefit from extensive site preparation followed by a tree planting program.

In summary, several points to remember about stand density and stocking level:

- The key to getting good data from your forest stand is to take enough sample plots to be representative of the stand.
- Using basal area/acre and trees/acre from an inventory and applied to an appropriate stocking chart will help guide you in making decisions about



controlling stand density through improvement cuts, thinning, and regeneration.

- Determining which trees to remove requires evaluating the individual trees during the inventory by separating them into acceptable growing stock (desirable species of good form and free of defects) and unacceptable growing stock (undesirable species, any tree with poor form or quality). In other words, judging which trees you are willing to leave as crop trees based on their future potential if left in the stand. This evaluation requires experience and is often best left to a professional forester.

$$^1 T/A = BAF/.005454 \times D^2$$

Where T/A = Trees/Acre Conversion Factor; BAF = basal area factor; and D = dbh class

² This method is adapted from USDA Forest Service Agriculture Handbook 355 Even-aged Silviculture for Upland Central Hardwoods by B.A. Roach and S.F. Gingrich.

Regional Directors

Region 1

Tom Vorac
Geneseo, IL
(309) 944-3678
tom_vorac@live.com

Dick Pouzar
Galena, IL
815-777-8157
pouzar@yahoo.com

Region 2

Carol Bryant
Mt. Olive, IL
618-444-3864
cabryant2@gmail.com

Jake Hendee
Springfield, IL
(913) 547-2541
jhendee@lc.edu

Jim Hynes
Pleasant Plains, IL
217-502-4528
hynesfarm@gmail.com

Dan Schmoker
Springfield, IL 62443
217-529-0061 – Home
schmoker3@aol.com

Region 3

John Edgington
Mansfield, IL
(217) 489-9075
johnedg@illinois.edu

Anthony Kreke
Effingham, IL
(217) 536-5601
tonynjill@frontiernet.net

Stan Sipp
Mansfield, IL
217-489-9003
sksipp@uiuc.edu

Bob Wagoner
Charleston, IL
(217) 345-6628
rwagoner@consolidated.net

Region 4

Jim Kirkland
Stonefort, IL
618-695-3383
1984kirk@gmail.com

Mike McMahan
Vienna, IL
(618) 977-3415
mcmahan3465@hotmail.com

Roger Smith
Benton, IL
(618) 927-2057
smithtreefarmllc@hotmail.com

Illinois Forestry Association

A non-profit, tax-exempt
organization under
IRS 501(c)3

Illinois Forestry Association
P.O. 224
Chatham, IL 62629-0224



IFA - To act on issues that impact rural and community forests and to promote forestry in Illinois

Upcoming Events

You can find more information on our website, www.ilforestry.org/Events

August

8/20 - Sangamon County: Forest Health Workshop, \$35, (630) 719-2468

8/21 - Jefferson County: Forest Health Workshop, \$35, (630) 719-2468

September

9/5 - Champaign County: Polyculture Fall Field Day, free

9/6 - DuPage County: Forest Health Workshop, \$55, (630) 719-2468

9/6-7 - Pike County: Illinois Walnut Council Fall Field Days, \$25, (217) 529-0061

9/14 - Union County: Invasive Plant & Forest Management Field Day, free, (618) 998-5920

9/20-21 - LaSalle County: IFA Annual Conference, \$35, (815) 777-8157

9/27 - Henry County: Forest Health Workshop, \$25, (630) 719-2468

October

10/5 - Crawford County: Illinois Tree Farm Annual Meeting, \$10, (217) 345-6628

10/15-17 - Jo Daviess County: Forest Soils Workshop, \$80 (no contact number)

November

11/11 - Piatt County: Illinois Walnut Council Forestry Field Day, free