

An Arborist takes
care of a tree for life.



OUT ON A LIMB

WINTER 2017, VOLUME 37, ISSUE 4



So what is Instructor Phillip Kelley doing? See story on page 2 for the answer.

A SPECIAL OR UNIQUE TREE CHRISTMAS TREE

By: Jim Keepers, NAA Newsletter Coordinator

This quarter's tree selection being featured fits the description of "A Special or Unique Tree." The tree in question is *Abies concolor* "Pyramidalis" or columnar White Fir or Colorado White Fir, normally called the Concolor Fir in our area.

This cultivar of Concolor Fir is native to the mountains of western North America. Twelve years ago, I bought five of these trees and only one has survived. It is not the normal Concolor Fir we see used as an ornamental tree in our landscapes or for a Christmas tree. I am saddened when I see a standard Concolor tree being used as a Christmas tree because it is such

a graceful tree that I feel belongs in the landscape. If you are looking for a stately Concolor for your customer's landscape, I would stay away from this cultivar. If you want to have a specimen tree standing out in your customer's landscape causing excitement, this tree is one for you.

This White Fir is one of the narrowest of the Firs. Its growth is upright of 'Fastgate.' It is a fast-strong columnar tree with branches and twigs ascending at an angle. I have included a photo of this tree when it was only a few years old and one taken recently. The tree has survived all snow and ice storms dished out by Mother Nature. The new foliage is bluish green and grows an average of eight inches annually. All the foliage on this Fir and all other Firs have the same characteristic – very soft needles. Unlike the other evergreens it is soft to the touch. This tree loves to grow in Zone 3 and will survive temperatures of -30 to -45 degrees Fahrenheit. The question becomes, will they survive during our hot, humid and sometimes dry months? That might be the reason only one of my original five columnar White Firs have survived. I will never know because I gave all the trees the same tender loving care.

continued on page 4...



Columnar Concolor just after planting 12 years ago.



Columnar Concolor 12 years after planting.



New needles growing upright at the end of the tree's branch.

A QUARTERLY UPDATE OF THE NEBRASKA ARBORISTS ASSOCIATION

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SUBMIT ARTICLES:

If you have anything you'd like to submit for inclusion in the Quarterly Update, please contact Jim Keepers at jlkeepers45@gmail.com or (402) 332-0715 or (402) 618-8837.

Submission deadlines for the NAA
2018 quarterly newsletters:

1st Quarter - February 23, 2018

*Photo contributions throughout
courtesy of Jim Keepers.*

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FROM THE PRESIDENT

By Lon Nutter, NAA President

As 2017 comes to a close, my hope is that everyone has had a safe and productive year. With the holidays approaching, take some time for yourselves and your families. We all deserve it.

As the year comes to an end, so does my service as President of the Nebraska Arborists Association (NAA). It has been an honor and privilege for me to serve this association. The relationships I have formed, the people I have met, and the experience I have had will all have a lasting effect on me in our industry. I have been extremely fortunate to have this opportunity. Going forward, the NAA will be in great hands with President-Elect Kevin Popken moving to the President position in January.

Our industry has seen many advancements in recent years regarding technique, equipment, and safety procedures. As these facets of our industry change, the NAA does their best to provide appropriate programming and training to keep our members up to date. The fall of 2017 was a very busy time with NAA events. I had the opportunity to attend several of these events and have been extremely impressed with the level of programming offered. If you note improvements that could be made in programming, please do not hesitate to contact the association office or a board member with ideas. This association is driven by its members and what your needs are is important to us.

I hope to see you all at the 2018 Nebraska GREAT PLAINS Conference taking place January 23-24 at the Hotel RL in Omaha.

Thank you, and keep 'em safe!!

ADVANCED ARBORIST TRAINING

By: Jim Keepers, NAA
Newsletter Coordinator



Phillip Kelley and Tim Crowl and Crowl crew members inspect a climber's saddle.



Phillip Kelley discusses the proper fitting of a bucket harness during a very cold Nebraska day.

NAA took steps to increase member education by offering two advanced classes in November. The first class, Aerial Rescue, was funded by a grant from TCIA's Arborist Safety Training Institute and was attended by twelve people. The second class, Aerial Lift, was sponsored by the association and had twenty-three attendees. Both workshops were held at the Carol Joy Holling Center in Ashland, Nebraska. Special thanks go out to NAA

UPCOMING EVENTS

2018 NAA Membership Renewals Due
Please renew by December 20, 2017, to be included in directory.

NAA Certification Exam
January 22, 2018 - 1:00 – 4:00 p.m.
Hotel RL, 3321 South 72nd St., Omaha, NE

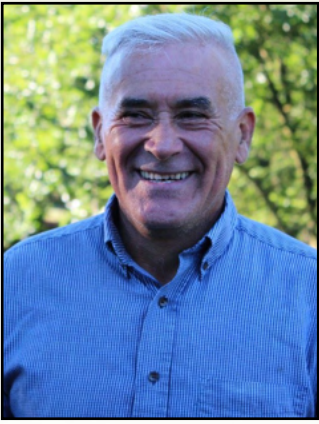
2018 Nebraska GREAT PLAINS Conference
January 23-24, 2018 - 8:00 a.m. – 4:00 p.m.
Hotel RL, 3321 South 72nd St., Omaha, NE

2018 Winter Tree ID
Friday, March 2, 2018
VFW Hall & Wayne Park - Waverly, NE

President Lon Nutter for making arrangements for Asplundh to provide a bucket truck for the classes. The instructor for both classes was Phillip Kelley, Operations Manager/Lead Instructor for North American Training Solutions. I stopped at both classes for a short period of time to take photos and was very impressed with Phillip Kelley's subject matter knowledge and his instructional ability during both classes. In addition to classroom instruction, time was spent outside demonstrating aerial rescue and aerial lift operations. The association is going the extra mile to offer members the most up-to-date arborist training.

ARBORIST SPOTLIGHT

By: Jim Keepers, NAA Newsletter Coordinator



Over the past few years I have had the opportunity to meet some very interesting individuals striving to become Nebraska Certified Arborists. As another year ends, I want to feature one of these individuals in my quarterly Arborist Spotlight article.

The individual being featured this quarter is Rafael Estrada. Rafael is the owner and operator of Tree Landscape Cleaning Restoration LLC located in Papillion, Nebraska. Rafael started his business in May of 2005. His diverse business offers general, residential and commercial property maintenance including: lawn mowing, tree removal/pruning, pesticide application, snow removal and general maintenance upkeep. He also designs and builds residential landscape projects including decks, patios, retaining walls, and storage sheds. In addition, he also estimates, plans, and constructs residential driveways to meet the City of Omaha code. He doesn't have a large crew and performs a number of these jobs himself.

Rafael has been married to Angelica Moncada for 28 years. He is the father of two daughters and a son. One daughter is married and a mother, and the other daughter is a college graduate in International Linguistics. His son is a Civil Engineer. He is very proud of his family.

Rafael was born in Mexico and grew up on a farm. As he matured to a young adult he developed an interest in recycling and taking care of Mother Nature. The following is a quote from Rafael referencing Mother Nature, "I like to see trees, flowers and animals in nature - it is 'free to see' and we should enjoy and maintain it for future generations." The reason he strived to become a Certified Nebraska Arborist is because his customers were asking him to do tree work. Obtaining certification was not an easy task for him as some of our arborist terms and procedures were in English, not his native language. He mastered them and became a Certified Nebraska Arborist in 2016.

Rafael left Mexico in 1997 and established residence in Papillion in 1998. I asked him why he decided to move to the United States, and he replied, "Since I was a young child I wanted to come to the United States. As I got older I still wanted adventure and found new opportunities for myself and my family in the U.S." After coming to the United States, he became a commercial over-the-road truck driver in August 1998 and continued to drive until May of 2005 when he started his own business. He liked to drive through Pennsylvania, North Carolina, South Carolina, Kentucky and West Virginia for the view. He also enjoyed driving in Nevada because of the Grand Canyon views. In 1997, he became a general automotive mechanic and technician and worked in this position for over a year while still driving a commercial truck in his free time.



He has continued his educational pursuits, and in September of 2013 he graduated from the State of Nebraska, Department of Education with his High School Diploma. He also attended three years of college for accounting. He continued educational classes for federal and state tax preparation along with business classes at the Juan Diego Center. He has been able to fit in additional arborist and turf/ornamental classes along with training on lead-based paint removal. Rafael never misses a chance to increase his education base and increase his talents.

Rafael has volunteered as a tax preparer for the Omaha EITC Coalition Team and for the Latino Center of the Midlands. He is certified yearly through the IRS for the Omaha EITC Coalition. He has volunteered at the Latino Center in South Omaha for years. To top off all his training and education, he has managed to be a Red Cross Blood donor giving blood two times a year for the past eight years. I don't know how he has any spare time but he enjoys being with his family and listening to music at home or studying various subjects.

Rafael Estrada is a unique individual/arborist and an asset to the NAA. Rafael has told me he is willing and able to help our association in any way he can. I recommend our association take him up on his offer!

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NAA OFFICE CHRISTMAS AND NEW YEAR'S HOURS

The NAA Office will be closed on December 22 and 25 for the Christmas

holiday and January 1 for New Years. We wish you all a wonderful holiday season with family and friends!

I have included a short paragraph written by Rafael in this quarter's newsletter about the Omaha Latino Center because Rafael has spent numerous volunteer hours at the center.

I am proud to know Rafael and appreciate the opportunity to feature him in the closing Arborist Spotlight Article for 2017. When you see him at the Nebraska GREAT PLAINS Conference, please take the time to congratulate him on becoming a Certified Nebraska Arborist. Great job, Rafael!



Cone scales starting to disintegrate with

continued from page 1...

One of the features I like about this tree is the type of cones it produces. The cones are formed upright on the very top of the tree. The cones are greenish to purple and then turn pale brown when they ripen. The cones have scales and winged seeds are released as the cones disintegrate in six months after pollinating. The disintegration of the cone is very unique. It starts at the top of the cone and then moves down to the bottom. At the end of this process, you only have a center stem of the cone left and this will stay on the tree for a long time. The photos show how the tree's cones disintegrate.



Newly formed cones at the top of the tree..



Cone scales in the process of disintegrating with the cone stem still in place.

I believe I have hit upon all the good and bad points while discussing this unusual tree. It is now up to you to decide if you want to have this columnar White Fir/Concolor Fir in either your or your customer's landscape. If you want a show stopper, I would recommend this "Special or Unique Tree."



Contrast between the new and old needles.

DO YOU REMEMBER?

By: Jim Keepers, NAA Newsletter Coordinator

Do you remember what you were doing twenty years ago on October 25-26, 1997? I remember sitting in my bedroom hearing some strange cracking noises in the night and then waking up to see snow covering all the trees that had not shed their fall leaves. Trees were laying down all over my neighborhood. It was a frightening sight going outside and seeing the damage. I also remember spending hours and hours cutting up trees in my customers' yards and dragging them to the street for city pickup. I also remember the storm-damaged disposal sites opened for homeowners to drop off their tree debris. Tons of wood was ground into woodchips after this storm.



The storm killed five people in Nebraska and Iowa and 300,000 homes and business in both states were without power for at least eleven days. Neighbors were running extension cords across the street to their neighbors because one side of the street had power and the other didn't. The Omaha World Herald estimated the damages in both states exceeded \$50 million dollars.

During the two-day storm, wind gusts reached 55 mph so snow drifting was a problem. The snowfall varied by locations. Fremont received 12 inches and 9 to 14 inches was recorded in Omaha and western Sarpy County.

Our local trees received the biggest damage. In addition to storm damage, our trees continued to suffer because of the damaging pruning done by inexperienced trimmers who came in and did a quick and dirty job pruning trees. The Bradford Pear suffered the most damage. This tree was rated as one of the best trees to plant before the storm and now it is listed as one of the worst trees to plant because of its branching structure. According to the Omaha World Herald, in Omaha three percent of park and street trees were lost, and 30 to 35 percent of the half-million public and private trees needed pruning.

The Omaha World Herald and the Nebraska Environmental Trust stepped in to help by establishing the Branching Out tree planting program. The World Herald provided \$1 million and the Nebraska Environmental Trust provided another \$630,000 towards planting new trees. The World Herald also published a great Branching Out publication for the public listing recommended trees and the proper tree planting procedures and care.

Omaha and the rest of Nebraska is again faced with another major tree disaster started by Mother Nature. It is not a winter storm or summer tornados but one caused by a beetle – Emerald Ash Bore (EAB). Again, Nebraska cities throughout the state will lose thousands and thousands of ash trees over a fifteen-year period. Just like we did after the October 1997 snowstorm, both public and private companies and individuals can step forward and start fighting this new insect storm and make a concerted effort in planting a more diverse pallet of trees in both our public



Photos from the Omaha World Herald

parks, street areas and private landscapes. As certified arborists, you have a major role to play in the care and removal of ash trees and the planting of new trees able to survive in our changing Nebraska climate. Let's get out there and start fighting this new destructive storm!



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THE CHALLENGE OF WINTER TREE WORK

By: Jim Keepers, NAA Newsletter Coordinator



Is your company prepared to work this winter when faced with ice, snow and wind along with temperatures below freezing? This is an important challenge for any arborist company no matter how small or large they may be. Weather conditions can cause unusual changes requiring arborists to drive and work more safely. If your trucks and chippers are outside, a lot more time must be spent cleaning them off and getting ready for the difficult road conditions.

Wind and ice cause electrical wires to be a major safety factor. Make sure the electric company is called to turn off the power before any work is done around downed power lines. The arborist companies must decide if it is safe enough to work during a snow emergency. It might be better to wait until the storm is over. Make sure to inform your clients to take photos of the tree damage for their insurance company, but tell them also to be safe when they go outside.



No matter the size of your company, a telephone recall system is a must. Do your crews know to be on standby when a storm is predicted? Warm weather clothing is another key factor during winter working conditions. Because of winter clothing crew members work at a different pace than during the summer. Tasks may take longer to complete. Does your crew have the tools to remove the snow when they arrive at the site? This is another consideration when doing winter arborist work.

If your crews have the proper winter clothing/footwear, their tools are in proper working condition and your vehicles are set for winter driving, they should be able to work in any winter conditions. Remember: safety first!

NOMINEES BALLOT

This ballot has been prepared so that as members you may vote on the slate of officers as prepared by the Nominating Committee in accordance with the bylaws. In compliance with Articles VII, VIII, and IX of the bylaws, the Nominating Committee has prepared a slate to be submitted to the membership. In further concurrence with the bylaws and as defined by Roberts Rules of Order, the slate lists one candidate per position. In an effort to allow individuals to review candidate information, below is information about the individual on the ballot. In order to move forward with the business of the association, it is imperative that you return your ballot by the time specified. Without your vote and active engagement in the business of the association, we will not be able to have an association to promote our profession. **Ballots need to be returned by January 15th.**

Board candidates will be introduced on at the start of the 2018 Nebraska GREAT PLAINS Conference NAA Business Meeting. All members listed in this notice of annual meeting are eligible candidates, and have agreed to have their names placed on the ballot. The membership will vote on candidates prior to the conference. The NAA Board will have an opening to elect one person to serve a three-year term as a Director. Individuals elected will officially begin his/her term on January 25, 2018.



JENNIFER MORRIS is running for the position of Director. Jennifer received her forestry degree from Iowa State University in 2008. Since that time, she worked for several organizations – the USFS in Idaho marking timber, a County Conservation Organization in Iowa performing natural resource management and tree care companies in Omaha as a spray tech and certified Arborist. She now works for the Nebraska Forest Service at the UNL Campus in Lincoln as a Forest Health Specialist while also completing her masters in Entomology. She is NAA and ISA Certified and is Tree Risk Assessment Qualified. Jennifer is very passionate about tree care and helping others learn about trees. Throughout the year, in her spare time, she helps to manage her parent’s apple orchard in Iowa, gathers morel mushrooms, hunts pheasants and tries to find time to fish and travel.

CLIP HERE



2018 SLATE OF NOMINEES BALLOT

YOUR VOTE MATTERS! PROXY BALLOTS MUST BE RETURNED BY 01/15/18.

- I accept the 2018 Slate
- I do not accept the 2018 Slate
- I abstain from voting

Director..... Jennifer Morris NAME Required

Please return your ballot by January 15, 2018 to the NAA office by mail or fax to (402) 761-2224.

ROPE REPLACEMENT

Criteria for Rope Replacement

ANSI Z133 Safety Requirements for Arboriculture Operations states: "Arborists shall inspect climbing lines, work lines, lanyards and other climbing equipment for damage, cuts, abrasion and/or deterioration before each use and shall remove them from service if signs of excessive wear or damage are found."

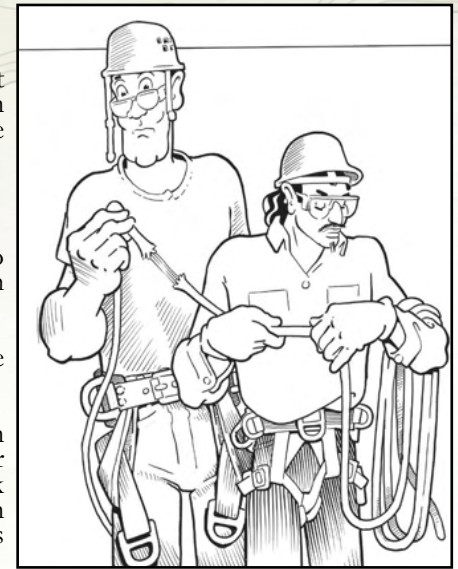
TOP ROPE WEAKNESSES INCLUDE:

Wear - The greatest stress on ropes is at the ends: knots, attachments, and dropping wood onto the ends will repeatedly stress the rope and wear it down. Switch the ends of the rope with each use.

Exposure - Dirt, sunlight and water can cause internal wear and damage, plus degrade the rope fibers.

Bends & Knots - A bent line is a weakened line. When a rope is bent, the rope fibers on the outside of the bend are under tension and the fibers on the inside of the bend are under compression. The rope will only function on fibers under tension. The fibers do not work under compression. At that point the system is weakened and the rope could fail. Knots can reduce rope strength significantly, sometimes up to 50 percent, at the knot. As the ratio gets smaller, the rope is weakened more.

These weaknesses show themselves in a variety of ways. To keep an eye on rope weaknesses, workers can complete visual inspections and feel the rope for imperfections.



Inspect all ropes daily-before and during each use – visually and by hand. Remove them from service if signs of excessive wear or damage are found.

LOOK FOR:

Cuts - Cuts, fiber picks and “puffs” are obvious signs that the rope is breaking down.

Frays - Frayed rope is not as strong as tightly woven rope.

Glazing or fused fibers - Glazing or fusing is a sign of heat damage to the outer fibers. The loss of strength is actually more than the amount indicated by the fused fibers.

Discoloration - Look for areas of discoloration. Determine the cause of the discoloration and replace the rope if it is brittle or stiff.

Inconsistent diameter - Inspect for flat areas, bumps or lumps. This can indicate internal damage from overloading or shock loads and is usually sufficient reason to replace the rope. Inconsistent texture or stiff areas can indicate excessive dirt or grit embedded in the rope, or a melted core that has very little strength left. Remove from service and discard.

Condition of splices - New eye splices should cinch closely to rigging hardware. Over time they might tend to loosen with wear.

NEW MEMBERS

Tyler Powell
Jeremy Cason
Frank Slezak
Clint Pirtle
Andy Kock
Ian Rider
Justin Maxson
John Tyler

NEWLY CERTIFIED ARBORIST

Jeremy Cason

OMAHA LATINO CENTER

By Rafael Estrada, Nebraska Certified Arborist

Thanks for asking about The Latino Center. It is located on 24th Street in south Omaha. They teach English as Second Language Classes, help all ages that need U.S. GEDs and encourage higher education. They teach computer skills and help with employment through job searches, resume writing, etc. Kids are also helped by trying to prevent dropouts, encouraging them to graduate high school, and helping with homework. Parents are encouraged to keep children in school. They teach civic engagement and voter registration and things that help foreign-born Latinos and even Latino Americans know how to fit in better in the U.S. Preparing taxes for free helps them comply with filing and paying taxes. Cinco de Mayo and other celebrations like Mexican Independence Day, parades and other activities are good ways to interact and communicate with the Latino Community and those in the Omaha area who come to have fun.

Chemical contamination

- Rope discoloration could be from chemicals or caustic materials, i.e., gasoline or battery acid.

Dirt - Keep rigging rope away from sand, dirt and grit as much as possible. Dirt particles can get trapped in the fibers and cause damage. Clean a rigging rope according to the manufacturer's instructions. Use a garden hose with mild soap – do not use solvents. Air dry, do not use heat or place in a dryer.

If there are doubts as to the strength or integrity of the rope, then discard it. If you are frequently concerned about the condition of the frays, glazing or splice strength on the rope, replace it.

Reprinted with permission from "The Tree Worker, published by the Tree Care Industry Association (TCIA) November 2017. Editor Tchukki Anderson, TCIA Staff Arborist, BCMA, CTSP and Graphic Design & layout, Jon Gerstenberger

WOMEN BEHIND OUR MATURE ARBORISTS



By: *Jim Keepers, NAA Newsletter Coordinator*

This quarter's article features another lovely lady married to one of our association's mature arborists. As I stated last quarter, I am only recognizing those ladies who are married to an arborist who is over the mature age of 70. The lady in question is a very outgoing individual in her own right but has played a major role in her husband's military and arborist career these past 47 years.

The focus of this article is Edwyna (Edi) Williams Pierce who is married to Philip (Phil) Pierce. Phil is one of the 29 charter members who formed the NAA in 1977. Phil has played a major role in the development and growth of the association. He has been recognized for his accomplishments over the

past 40 years. Since this article is not about Phil, but about Edi, I will skip going into the accomplishments of Consulting Arborist Philip Pierce. I just want to take the time to thank Phil for all the support he has given to the NAA.

Edi met Phil on a blind date in October 1969 and they were married on June 27, 1970, in Alliance, Nebraska. They honeymooned in the US Virgin Islands where they have returned several times.

Edi is a life-long Nebraskan. In high school she played a clarinet and was a drum majorette in the marching band. She graduated from UNL with a degree in English Education in 1967 and taught at an Omaha Montessori School for three years. She supported Phil's Air Force air craft maintenance career until his discharge in 1971 and his movement into the arborist career field.

Edi and Phil have two sons. When the boys were in school she became very active in PTA, serving as President of each school's group where her sons attended. She also served as the Nebraska State PTA President. Edi was involved with PEGS, Chapter BX/PEO, and Junior League of Omaha which brought the Omnibus gifted education program for volunteers from Minnesota to Omaha. She has been involved with the Omaha Sight Conservation and Aid to the Blind, Family Service, Emmy Gifford Children's Theatre, the Springfield Library fundraising and landscaping project which became a Nebraska Statewide Arboretum site.

Her accomplishments and service to the community continued as her sons grew and Phil advanced in his arborist career. Edi worked for the Omaha Public Library Foundation and Nebraska AAA. She is currently a member and past president of the Loveland Garden Club, a member of the Lauritzen Garden, and the Omaha Henry Doorly Zoo. Edi has taken the Master Gardener training and is currently taking the Nebraska Federated Garden Club's Landscape Design course.

Edi loves her horse MyT Gold, an eleven-year-old palomino Quarter Horse which she has had since he was born. Other interests include bird watching and feeding, dog sitting for her grand dog Jazz, an eleven-year-old Golden Retriever, and raising Monarch butterfly larva. She plays bridge, reads Nora Roberts novels and pulls weeds in her spare time.

Edi and Phil love to travel and have attended numerous International Society of Arboriculture conferences. Edi and Phil's two sons are Tim and Ben. Ben and his family live in Portland, Oregon. They have one child, eleven-year-old Gracella. Tim is a Ralston, Nebraska resident who is an electrician for the City of Omaha Traffic Engineering. Both boys are Eagle Scouts, have worked at Philmont Scout Ranch, and love the outdoors.

Edi and Phil lived in the Elmwood Park neighborhood in Omaha for 23 years before moving to Villa Springs just south of Springfield, Nebraska. She says she is the inspiration and Phil is the perspiration on their 2+ acre waterfront sandpit lake property which suffered eight uprooted mature trees in the June 16, 2017 storm.

This article is just a short description of Edi Pierce's life and her accomplishments. She is a unique and special woman who has played a major role in Phil Pierce's life while he was in the military and the years he pursued his arboriculture career.



ANSI A300 AND Z133 STANDARDS FOR TREE CARE OPERATIONS NEW IN 2017

"The Z133 standards are the accepted industry safety standards for tree care work, and are essential to read and implement to run a safe tree care business."

The Z133 Safety Standard addresses the following items:

- **General Safety**
 - Traffic Control
 - Emergency Procedures and Readiness
 - Personal Protection Equipment (PPE)
 - Fire Protection
- **Electrical Hazards**
 - Working in Proximity to Electrical Hazards
 - Storm Work and Emergency Conditions
 - Line Clearance
- **Safe Use of Vehicles and Mobile Equipment**
 - Aerial Devices
 - Brush Chippers
 - Sprayers and Related Equipment
 - Stump Cutters
 - Vehicles
 - Cranes and Knucklebooms
 - Specialized Units
 - Equipment-Mounted Winches
- **Portable Power Hand Tools**
 - Portable Electric Power Tools
 - Chain Saws
 - Powered Pole Tools and Backpack Power Units
- **Hand Tools and Ladders**
 - Cant Hooks, Cant Dogs, Peaveys, and Tongs
 - Wedges, Chisels, and Gouges
 - Chopping Tools
 - Ladders
- **General Work Procedures**
 - Ropes and Arborist Climbing Equipment
 - Pruning and Trimming
 - Cabling
 - Rigging
 - Tree Removal
 - Brush Removal and Chipping
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BUR OAK BLIGHT

By Jennifer Morris, Forest Health Specialist, Nebraska Forest Service & Certified ISA Arborist

Over the last several years, an increasing number of bur oaks in the eastern counties of the state have had browning leaves in late summer. After the leaves die, some drop to the ground and some stay on the tree through the winter months. The bur oaks may appear healthy the next spring only to show the same symptoms again throughout the summer. After several years the trees most affected start to have severe twig and branch dieback. These symptoms are common for a leaf blight disease called bur oak blight (BOB).

BOB (*Tubakia iowensis*) is found to infect only bur oak trees and seems to be most severe on the subspecies of bur oak *Q. macrocarpa* var. *oliviformis* found on higher, drier sites in eastern Nebraska, northeastern Kansas, Iowa and parts of Minnesota and Wisconsin. BOB is caused by a primary infection and a secondary infection.

Primary infection: Diseased petioles (a stalk that connects the leaf to the branch) that have stayed on the tree over the winter, infect new shoots as they are expanding in a wet spring. The new petiole and leaves attached to the infected shoots also become infected and die in late July to early August. The dead leaves either stay on the tree during the next winter or drop off, but the dead petioles remain and are a source of infection the following spring.

Secondary infection: The same diseased petioles that have stayed on the tree over the winter infect new leaves that are fully expanded in a wet summer. Dark purple-brown lesions on the underside of the leaf are visible with the naked eye that will cause necrosis along veins of the leaf. The secondary infection only causes defoliation and is not a major source of infection for the following year.

In most cases, BOB will be more prominent lower in the canopy and expand upward infecting the entire tree canopy. While it is uncertain if BOB can kill a tree, it is more likely that the tree will become highly susceptible to boring insects after years of defoliation stress and start to decline. Contact your local extension office or the Nebraska Forest Service for help in identifying BOB. Increase tree vigor by mulching with wood chips and properly watering during dry periods.

No products on the market are labeled for BOB. Preliminary tests by Iowa State University of trunk injections of propiconazole right after leaves have matured and before symptoms appear (May to early June) have shown promise in control of BOB in the following season. Bur oaks can be sensitive to injections of propiconazole at high levels so it is best to use the lowest mix rate.



Purple brown necrotic veins bur oak blight (BOB)



Bur Oak wedge shape lesion characteristic of bur oak blight (BOB)

VIOLETION OF ANSI STANDARDS ANSI Z 133-2017, "FOR ARBORICULTURE OPERATION – SAFETY REQUIREMENTS"

Information provided by Mr. Peter Gerstenberger, TCLA Senior Advisor for Safety, Compliance & Standards

The new ANSI Standard, "ANSI Z 133-2017" under the General Safety section states the following: Personal Protective Equipment (PPE) requirement, Cut-resistant leg protection shall be worn while operating a chain saw during ground operations."

NEBRASKA GREAT PLAINS CONFERENCE SCHOLARSHIPS

Scholarships are now available for the 2018 Nebraska GREAT PLAINS Conference to be held at the Hotel RL, 3321 South 72nd St., Omaha, Nebraska on January 23-24, 2018. The hotel is the same location as last year. Scholarship application and registration information for the conference can be found on the NAA web site – www.nearborists.org.

Aspiring arborists are eligible to submit for the conference scholarships. All applications must be submitted to the NAA office by December 29, 2017.

Contact the NAA Office at 402-761-2219 for details.



OSHA views failure to provide/require the use of chaps as a serious violation. The maximum penalty, per occurrence, is \$12,481. If an employer gets a "repeat" or "willful" violation, the fine goes up tenfold. OSHA holds the employer accountable and has no recourse for going after employees at all, anywhere. Furthermore, OSHA doesn't regulate public sector employers, at least not in Nebraska.

NAA ADVANCED RIGGING/FELLING/CLIMBING CLASS

By Kevin Popken, NAA President Elect

When you do something so long it is only natural for many of us to come to the point where you think you know all there is and have seen all there is to know about what you do. In our industry things change rapidly. New climbing equipment, large equipment such as cranes to assist in removals, and new ANSI standards make it imperative for continued education to be a regular part of an active arborist's schedule. Add to that the fact that our industry is at the top of the list for the most dangerous careers in the world, and training can make the difference between life and death.



NATS Tony Tresselt instructing the advance class from his perch high in the tree. (Photo by Kevin Popken)

Our association has one of the best introductory Arboricultural courses in the country. We have had attendees come here from surrounding states for training that they could not get in their own state. Some time ago the board felt we needed to offer more educational opportunities for our certified arborists. From that discussion came the advanced classes.

The Advanced Rigging/Felling/Climbing class held the past four years in mid-October is taught by an instructor(s) from North American Training Solutions (NATS). NATS has a team of instructors who come with years of experience in the industry from throughout the U.S. and Canada. They bring new techniques and information that follows the latest ANSI standards to make our industry safer as well as productive. The class size is smaller, with a 3:1 student/instructor ratio providing great instruction and hands-on experience.

This year was no exception to the level of training attendees received. NATS trainer Tony Tresselt from Pennsylvania flew in and was assisted by our own Rob Dein (also currently with NATS) to offer an exceptional three days of hands-on training to sharpen skills, correct dangerous habits and introduce new equipment shipped in advance of the class by companies anxious to get products in the hands of arborists.

It is one of the great benefits of an association like ours to be able to use our resources to organize and put on an educational event like this. One would pay significantly more to attend a NATS event like this out of state. As an association, we can bring them here at a discount and without our members having the expense of time away from work for travel as well as hotel and meal expenses. Make plans to attend or send employees to attend in October 2018. It is a great program we would like to see more arborists take advantage of, not to mention 24 CEUs for not just NAA but ISA and CTSP as well.

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THREE COMMON BRACKET FUNGI

By Tom Weber, PhD, Professor Emeritus, University of Nebraska - Omaha



Fungi perform a vital function in nature as recyclers. Among their special recycling talents is the ability to degrade cellulose, hemi-cellulose and lignin, the three major components of wood. While most of these fungi work only on dead trees, a few are a bit over eager and can begin their recycling work on living trees. Each tree species is associated with its own particular group of fungi. This is generally determined by the toxic substances the tree lays down in the heartwood.

Often our first indication that a tree is being recycled before its time is the appearance of one or more fungal fruiting bodies on the trunk or limbs of the infected tree. These fruiting bodies are produced by the fungus for the dispersal of spores so they can establish growth in a new, suitable location. Typically the windblown spores must land on a wound site, perhaps caused by insects, squirrels, hail, wind, etc., in order to infect a tree.

The fungus grows in the wood for a considerable time before we see the production of fruiting bodies. This is similar to fruit trees becoming established before they begin producing fruit for their seed dispersal. And just as with fruit trees, each fungus typically produces its fruiting bodies at a particular time of year. Among the more noticeable fungal fruiting bodies seen on trees are those produced by the so-called "bracket" or "shelf" fungi some of which can be destructive parasites of living trees. Three of the more readily identifiable members of this group are *Ganoderma applanatum*, *Polyporus squamosus*, and *Laetiporus sulphureus*.

One fruiting body often found on living deciduous trees as well as downed logs and stumps is that produced by *Ganoderma applanatum*, commonly known as the "Artist's Conk." This fungus causes white rot in both heartwood and sapwood. The fruiting bodies are very woody and can be up to two feet across with the upper surface appearing brown. The white underside, although appearing smooth, is covered with minute pores in which brown spores are produced for release. When young, or wet, the upper surface often appears as if it were shellacked. Somewhat unusual for fungal fruiting bodies, this one is perennial, as a new layer of spore producing pores is formed on the underside of the fruiting body each year. If you break this fruiting body in two you will see bands, much like tree rings, representing each year's spore production. Because of its tough, woody composition and perennial nature, you can find these fruiting bodies year-round.

Ganoderma applanatum gets its common name, "Artist's Conk" from the fact that you can draw on the fresh, white pore surface with a sharp tool causing the surface to stain brown as it is bruised. This brown discoloration is permanent and thus the fruiting body can be sold as a work of art.

Another fruiting body commonly seen on living and dead hardwoods is that produced by *Polyporus squamosus*, also known as "Dryad's Saddle" or "Pheasant Back." This fungus grows in the heartwood of the tree, especially silver maple and box elder. The fruiting bodies can be up to a foot across with the top surface covered in darker brown 'scales' making it appear hairy, thus the common name "Pheasant Back." This fungus typically produces its fruiting bodies in the spring but they can also occasionally be found throughout the summer and fall. These fruiting bodies are a bit "fleshier" than those of *Ganoderma*, and are not perennial, they only remain on the tree for a few weeks before drying and falling off.

A third fungus that causes heartwood rot, this one favoring oaks, is the "Sulfur Shelf," *Laetiporus sulphureus*. These characteristic fruiting bodies are typically found in clusters on the trunk of the tree in late summer and fall. The fruiting bodies are orange on top, have a wavy margin and can be up to a foot across. The underside is yellow and, as with the other fruiting bodies mentioned above, covered with pores in which white spores are produced. This fungus is sometimes referred to as the "Chicken of the Woods" because, you guessed it, the flesh of the fruiting body is said to have the consistency and flavor of the breast meat of chicken. It can be a bit tough, especially in older fruiting bodies, in which case people sometimes cut off the outer margin and eat that. In any event, it needs to be cooked thoroughly if it is to be eaten.

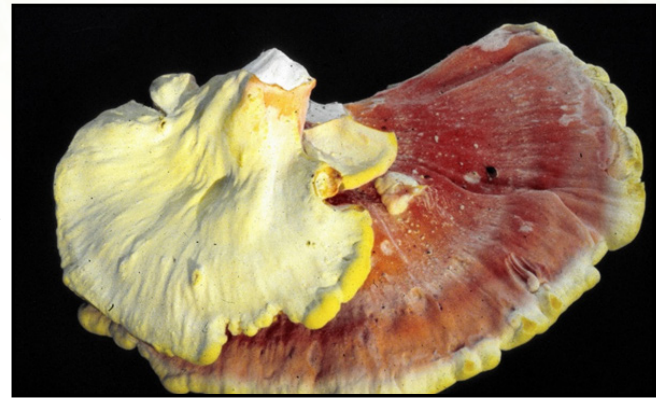
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Photos by Tom Weber, PhD, Professor Emeritus, University of Nebraska-Omaha

NAA'S ROLE IN NFS FORESTRY FIELD DAY

By Jim Keepers, NAA Newsletter Coordinator

The Nebraska Forest Service (NFS) requested NAA assistance in demonstrating the art of tree climbing during the Forestry Field Day at the Horning State Farm Demonstration Forest on Saturday, September 30. Randy Dillon, owner and operator of Dillon Tree Service, volunteered to do the demonstration. I also set up tables with information about the NAA and different tree samples. It has been number of years since a Forestry Field Day of this type was held at Horning State Farm.



Attendance was on the moderate side, but with more publicity I feel this event will draw larger crowds.

Thanks Randy for giving up your time and talents on a Saturday.



TRAINING NEW NEBRASKA CERTIFIED ARBORISTS: PRUNING & CLIMBING CLASS

By Jim Keepers, NAA Newsletter Coordinator

Neither rain, wind nor cold can hinder or stop the training of future Nebraska certified arborists. The weather conditions for the first day of the NAA's Arborist School: Pruning, Climbing & Safety Class were not safe to work in the trees so climbing instruction was conducted inside at the Carol Joy Holling Center. A total of 27 attendees took part in the class. Most of these individuals were striving to become Nebraska certified arborists. Jerel Converse and Robert Schreiner both Nebraska certified arborists shared the duties of lead instructors. They were assisted by Nebraska Certified Arborists Mike Ayers and Rob Dein.

The proper knots and their use in climbing are critical to understand when ascending a tree. A major emphasis was put into proper knot tying during the morning of the first day of class. The afternoon was spent learning how to use a harness/saddle to propel your body up into a tree. Most of the attendees had limited experience in climbing a tree so the afternoon of the first day was an eye-opening experience. Safety was also a major consideration during the entire class.



DO YOU KNOW THIS EXTENSION EDUCATOR?



Jody Green is an Extension Educator for Nebraska Extension in Lancaster County and has spent 21 months at the Lancaster Office. She received her graduate degree from Purdue University with a specialty in Urban Entomology. Her primary focus is developing educational programs for

the community related to structural and health-related insects such as bed bugs, head lice, ants, termites, cockroaches, fleas and other feared and hated pests. Her goals are to help people prevent and manage pests in and around homes, minimize unnecessary pesticide use, and encourage an appreciation for beneficial insects.

She recently helped present information about the biology of EAB, while Sarah Browning talked about the ash trees, and Laurie Stepanek talked about the treatment and quarantine. Jody is a valuable member of the team.

Order your NAA Polo and pick it up at the Nebraska GREAT PLAINS Conference!

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TRAINING NEW NEBRASKA CERTIFIED ARBORISTS: PLANT HEALTH & TREE BIOLOGY

By Kevin Popken, NAA President Elect

The 2017 Arborist School wrapped up with the Plant Health & Tree Biology Class held at the Carol Joy Holling Center on November 15-16. We had 30 in attendance with 28 taking the certification exam. Most in attendance were from the private sector with a few representing municipalities.

Due to instructor changes this past year we reworked a portion of the class. This allowed more time for tree biology and insects and disease taught by Laurie Stepanek and Jennifer Morris of the Nebraska Forest Service. Soils and construction impact were covered by John Fech from UNL Extension, while Eric Berg covered tree risk and hazard assessment. In my opinion, the schedule went smoothly and the instructors did a thorough job preparing attendees for the exam, which was provided after lunch on the second day. I would like to thank all the instructors for their continued help and availability to cover all the classes we offer. We could not do it without them.

For those of you needing CEUs, keep in mind that the Arborist School classes are great opportunities to pick up more hours needed to maintain your certification and of course freshen up on your tree knowledge/skills.

If you have suggestions for improvements to the class or overall education program, email me at kjpopken@gmail.com.



Eric Berg, NFS instructing Tree Risk and Hazard Assessment. (Photo by Kevin Popken)



Jennifer Morris, NFS, teaching class on tree Insects and Diseases. (Photo by Kevin Popken)

SPRUCE SPIDER MITES

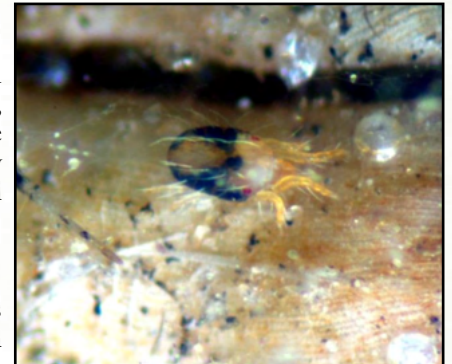
By Dr. Jonathan L. Larson, Nebraska Extension, Douglas-Sarpy County Educator

Spruce spider mites are a cool season mite species as they are most active in spring and autumn. This in contrast to two spotted and red spider mites which both thrive in hot, dry, summer conditions. Many common evergreens such as dwarf Alberta spruce, Colorado blue spruce, Douglas fir, pine trees, and junipers can be infested with spruce spider mites. They are small (1/50th of an inch) and start as a pale green color before becoming brown and dark green.



SYMPTOMS

Spruce spider mites tend to attack the oldest needles first and can therefore be found at the inner, bottom portion of the tree. As their populations build over successive years they will move into the outer portions of limbs. The earliest symptoms appear in April or May. Damaged needles will appear mottled or stippled with yellow and brown spots. These mites suck juices out from the plant creating this damage. As they continue to feed, eventually the whole needle will be yellow. Damage is not normally noticed until June when injured needles turn bronze. Upon closer inspection, you may notice spider-like webs in the tree and if you shake branches over white pieces of paper you can see the mites themselves with the help of a magnifying glass.



LIFE CYCLE

New nymphs hatch in March and April and begin feeding and mating. With a three-week development period there can be multiple generations in the spring. As summer approaches and temperatures near 90° adults present will lay eggs in the needles of trees and then perish. When fall arrives the summer eggs hatch and new mites renew the same cycle that occurred in spring. Adults present at the end of autumn will mate and lay the eggs that overwinter to the next spring.

MANAGEMENT

Homeowners can prevent spider mites issues by routinely hosing the tree down in the spring and fall. A strong jet of water will dislodge mites and drive them from the plant. Another option would be monitoring the trees closely each spring and fall for the aforementioned symptoms and applying either a summer oil or an insecticidal soap if damage is noticed. Summer oils can cause blue spruces to become green so keep that in mind when choosing your control method. Winter or dormant oils can be applied in December or January to eliminate overwintering eggs as well. If you did not monitor your tree and have found bronzed portions in the summer, those branches will not recover and will need to be trimmed out.



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