



Utah's 2017 Tree Climbing Championship

Meet Mike Lopez our President,
and new members of the board

Forest Bathing

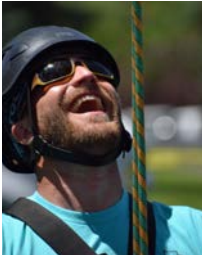
10

TOP OAKS

Dr. Mike Kuhns
recommends for the
interior West **Page 11**

UCFC

UTAH COMMUNITY FOREST COUNCIL • ISA - UTAH CHAPTER



Front Cover
 Jed McFarlane in the
 secured footlock at
 the 2017 UTCC

The Utah Community Forest Council/International Society of Arboriculture-Utah Chapter is a non-profit organization that advocates for proper management and care of Utah’s community forests through partnerships and public and professional education.

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SUBMISSION GUIDELINES

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 Submit articles, info, ads and high quality digital photos or photos to rachel.broadbent@usu.edu

ARTICLES
 We accept articles of general interest to arborists and green industry professionals.

PHOTOGRAPHS
 Submit electronic copies of original photos or include written permission from copyright owners. We use photos all facets of trees or tree care. Include name, address, phone number and a description with each submission.

EDITOR: Rachel Broadbent





MIKE LOPEZ
I got this off his facebook page. He has an album of the famous people he has met

CAN YOU IDENTIFY THE FAMOUS PEOPLE?

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Mike Lopez

About the President

Angel Lopez, (or known to his colleagues and friends as Mike) is an invaluable member of the Arboriculture community in the State of Utah. As a well-rounded Arborist he has held positions in the tree care industry from groundsman to General Foreman, from Office Assistant to Office Manager, and from Estimator to Manager. One of Mikes many desirable attributes is his ability to read, write, and speak both English and Spanish fluently. In turn, he has utilized these skills to make a positive impact in the Latino community within the tree care industry. In the duration of his career, he has gained experience working in all 29 counties in the State of Utah and has worked in California, Nevada, Idaho, Wyoming, Colorado, New Mexico, and Arizona. He

is passionate about tree care and enjoys investing his time on Tree Inventory Projects, Tree Preservation, and consulting with residential homeowners and large construction companies to better care for their trees. With his knowledge of trees in the Intermountain West, he looks at the long term approach for the tree(s) and the client. He enjoys volunteering as a judge at the UTCC and donating his time and talents to help fundraise for the local Boy Scouts Troop in the area where he resides. Currently Mike is an ISA Certified Arborist in good standing in the Utah Chapter and manages Atlas Tree Service in Murray, Utah. He is a family man with a wife, three wild sons, and one beautiful daughter. He gets along with everyone and can listen to those



that want and need to be heard. With years of community outreach, public relations, and implementation of correct strategies, he wants to help the ISA Utah Chapter reach their goals.

Urban Forestry Awards at Annual Meeting

As his first official duty, President Mike Lopez presented the UCFC annual awards on January 24, 2017 at the Annual Meeting during the Utah Green Conference. The following groups and individuals were honored at this event.

Alex Roylance

Distinguished Service Award

Alex contributes to the meaningful development of arboriculture in Utah by delivering formal apprenticeship classroom education. He has also successfully lead the update to the Springville City Tree Ordinance to include proactive management actions and arboricultural best practices which sustain tree resources and focuses tree care in an effective direction.



Barbara Richardson

Citizen Forester of the Year

In 2016 Barbara helped dozens of volunteers climb ladders to harvest nearly 2,000 pounds of apples that were donated to hungry families. Under her leadership, the Fruit Nuts program, doubled the amount of fruit donated each year for the past three years. In addition to harvesting, she oversees care of the trees, including mulching and pulling sod away from trunks.



Benjamin Behunin Sr.

Lifetime Achievement Award

Ben Behunin Sr. is well known in the arboriculture community for his high standards and quality of work. Ben was taught by his father at a young age to correctly prune and care for trees. His father, J. Leland Behunin was also well known in the state of Utah for his horticultural knowledge and expertise. Ben began working beside his father at age 5.



Brad Hays

Arborist of the Year

Brad is the Parks Director and Municipal Arborist for Santa Clara where he manages the TREE City USA program, Arbor Day celebrations, and is the Community Volunteer coordinator. Brad helped 11 young men earn their Eagle Scout through Tree planting activities in local parks, and he worked with over 500 high school and middle school students to plant approximately 450 trees throughout the community.





Centerville City Community of the Year

In 2016 Centerville City embarked on a complete city-wide sidewalk hazard survey using GIS technologies. The city identified and mapped issues involving trees and sidewalk infrastructure which gained the interest of the city council and mayor. The city administration hosted a public open house to share the findings of the sidewalk hazard survey which included aspects of tree placement and the biological needs of trees in the public right-of-way.



Diane Sagers President's Award

This award is presented to express our deep appreciation of Diane's dedication, enthusiasm, cooperation, and hard work. Diane worked tirelessly to prepare the ArborEssence publication for almost three decades.



Dr. Mike Kuhns Lifetime Achievement Award

The breadth of Dr. Kuhns' impact on the field of urban forestry is deep and continuous ever since he moved to Utah in 1992. Mike has influenced many projects. He authored the popular book, Trees of Utah and the Intermountain West, two, What Tree is That?, tree guide and produced the booklet Firewise Landscaping for Utah. The list of his scientific and extension factsheet articles is extensive, as is the countless number of presentations and workshops he's given. He is also responsible for the popular website TreeBrowser and the newly created app called MyArboretum.



Mike Maret Lifetime Achievement Award

Since joining the UCFC in 1994, Mike has been a very active member and volunteer. He has served as president, board member, education committee chair, liaison to the ISA and UNLA, and is a regular volunteer at the Utah tree climbing championship, and has coordinated and presented at numerous workshops and conferences.

Utah State University (USU) and the Department of Plants, Soils and Climate (PSC) is seeking applicants for a full-time, 9-month non-tenure track lecturer position (85% teaching and 15% service) in horticulture and plant sciences. This salaried position requires a base load of teaching face-to-face courses on-campus and teaching via distance education to off-campus students. Opportunities exist to supplement the salary through teaching extra-curricular courses off-campus. Service responsibilities include being the faculty advisor to the Plant Science Club, assisting with student internship programs, and overseeing PSC greenhouse and outdoor teaching facilities. Applications will be accepted until position is filled, but review will begin on August 15, 2017. Expected start date for this position is January 1, 2018. **Apply online.**

New Board Members

MEGAN DETTENMAIER

Is the Forestry Extension Educator at Utah State University where she graduated in 2012 with her MS in Wildlife Biology. While not a formerly trained in the forestry field, she has found a way to make her mark on Utah forestry issues. She plans, facilitates and produces the monthly Learn at Lunch webinar series which is seen by people from all over the world. She is the PI on two Division of Forestry, Fire, and State Lands Community Forestry Grants that are replacing damaged sidewalks (in Ogden and Logan) with a sustainable alternative, Terrewalks. She serves on the Logan River Taskforce and led community-wide riparian planting and educational outreach efforts along the Logan River. She published the handy

guidebook titled, [Taking Care of Rivers and Streams in Cache Valley](#), which helps homeowners living in the floodplain understand how simple actions can help them become good stewards of their riparian zone. She publishes Utah Forest News (3 x / year) along with other Utah Forest Factsheets, including [Tree/Sidewalk Conflicts: One Way to Save Trees](#). She co-authored and distributed >1,000 maps titled [Exploring Utah's Forests](#) to Utah educators (free of charge) and is currently working on a curriculum to accompany the map. She is a lifelong advocate for conservation, sustainability, and mindfulness and is dedicated to living her life and doing her job with these values as her guide.



JAKE BLEAZARD

Jake was already serving on the board and had completed his 3 year term, the UCFC was delighted to have him willing to continue serving. Jake lives in West Jordan with his wife, three daughters and son. He has a true passion for arboriculture, and loves to learn more and teach others what he's learned. He began his career with Trees Inc. in 1998 and worked with them for over 13 years. During this time, he became a certified arborist, utility, and tree climber with the ISA. Jake now works for Murray City Power and has been a UCFC board member for the past three years, and also teaches for the Utah arborist apprenticeship program. In 2014, he won the Utah Tree Climbing Championship and competed in the

International Tree Climbing Championship in Milwaukee. The past three years Jake won second place in the Utah climbing competition and competed in the North American climbing competition. He is excited to continue working with the UCFC and further his knowledge of arboriculture. Jake is generous with his talent and greatly valued by the UCFC community.



MORE GIVING

Mike Brown with Murray City wanted to donate the Skylotec saddle he won at the UTCC raffle to someone who needed it more than him. So he opened it up to the UT Climbing Arborists facebook page. There were many who expressed interest so he drew names out of a hat. Hats off to Mike! What a way to contribute to our community.



Don't complain about the heat, PLANT A TREE.





GIVING BACK

Have you heard the quote, **“If you want something done, ask a busy person to do it.”**? It is attributed to both Benjamin Franklin and Lucille Ball, both busy people themselves. Most of us are busy (if you do have extra time definitely consider volunteering with the UCFC), and that definitely applies to Jake Bleazard. The list of what he has going on is pretty long. Working for Murray City Power, father, husband, UCFC board member, Arborist School Instructor, climbing champion, competitor,

etc. And still he finds time to do a little more volunteer work. For the past 3 years Jake has guest lectured at the USU-Salt Lake regional campus for their Arboriculture class to give students hands-on access to climbing technique, equipment, and safety. The student’s always describe it as one of their favorite classes. This year the demo took place during an evening break in spring rains at Murray Park...after Jake already worked a full day!



Under Cover
Showing gear and techniques under the pavilion while waiting for a break in the rain.



WORK CLIMB JUDGES



THROWLINE JUDGES



SECURED FOOTLOCK JUDGES



BELAYED SPEED CLIMB JUDGES

JUDGES RULE!

Some of our judges have been part of the UTCC from the beginning and many are new to the process. But without them, the tree climb competition would not be possible. Those who have competed and then later judge often have a unique insight to the event. However, not everyone gets the opportunity to compete, and we are grateful for all our judges. Make sure to high-five or fistbump the judges when you see them.

A special thank you to Mark and Matt...Mark Malmstrom for taking on the huge responsibility associated with head technician over all technical aspects of each event, and to Matt Erkelens for being Head Judge over all the judging of the events.



AERIAL RESCUE JUDGES

2017 ArborMaster Climbing Kit Prize Package

The Utah ISA Chapter is pleased to announce the 2017 ArborMaster Climbing Kit Prize Package for the Tree Climbing Champion (TCC), held in conjunction with the chapter's 2017 Tree Climbing Championship (TCC) event. This climbing kit is offered to each chapter champion!

The package is intended to help equip the chapter representative(s) for the International Tree Climbing Championship (ITCC) Competition.

PRIZE PACKAGE INCLUDES:

- Husqvarna: Arborist Technical Helmet by Petzl, Husqvarna Composite Multi-Purpose Axe
- Buckingham Master 5.0 Arborist Tree Climbing Saddle
- Silky Tsurugi Curve Hand Saw
- ArborMaster® 150' Hawkeye Climbing Line by Samson
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Kevan Tolman



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Hugo Vargas



Mike Willis



Jaime
Woodmansee



Blake Wright

COMPETITORS PUSH EACH OTHER TO ACHIEVE MORE

Forty-four climbers competed at the 2017 Utah Tree Climbing Championship on June, 10-11 at Murray Park. The climbers participated in The Work Climb, Aerial Rescue, Belayed Speed Climb, Footlock, and Throwline competitions. We had 10 more participants than in 2016 which allowed for the top 5 contenders to proceed to the Master's Challenge. Despite being in competition, the championship is a time where climbers get to know and cheer for each other. It is exhausting and exhilarating. Great job everyone!

CONGRATULATIONS 2017 UTCC WINNERS

The UCFC just completed another great tree climbing competition at Murray Park. We had 44 climbers, over 60 judges and volunteers, and 24 sponsors. A huge thank you to Murray City Power for hosting the event, being a platinum level sponsor and for all of the additional work donated to get ready for the event, including the new UCFC Trailer. Thank you to all of our sponsors, we can't hold this important event without them. And, as always, thank you to Lisa Hanussak for all the hard work and extra time she puts in ensuring that the event runs smoothly. We couldn't have had such a great event without everyone who participated.

MASTER CHALLENGE

- 1st: Ryan Torcicollo
- 2nd: Jake Bleazard
- 3rd: Mike Tingey
- 4th: Kevan Tolman
- 5th: Johnny Atkin

AERIAL RESCUE

- 1st: Jake Bleazard
- 2nd: Johnny Atkin
- 3rd: Kevan Tolman
- 4th: Mike Tingey
- 5th: Tom Pugmire



MASTER CHALLENGE CHAINSAW

Our local Stihl representative with the chainsaw to be awarded to the Master's winner.

BELAYED SPEED CLIMB

- 1st: Ryan Torcicollo
- 2nd: Josh Galster
- 3rd: David Thunell
- 4th: John Dallinga
- 5th: Gary Pratt

SECURED FOOTLOCK

- 1st: Ryan Torcicollo
- 2nd: Johnny Atkin
- 3rd: John Dallinga
- 4th: Jake Bleazard
- 5th: Kevan Tolman

WORK CLIMB

- 1st: Jake Bleazard
- 2nd: Mike Tingey
- 3rd: Kevan Tolman
- 4th: Garrett Housley
- 5th: Ryan Torcicollo

THROWLINE

- 1st: Ryan Torcicollo
- 2nd: Kevan Tolman
- 3rd: Jeremy Miller
- 4th: Gary Pratt
- 5th: John Dallinga





2017 Utah
Tree Climbing
Championship
TREE CLIMBER


UCFC
UTAH COMMUNITY
FOREST FOUNDATION
FOR UTAH CLIMBERS

WHAT OAK SHOULD I PLANT?

BY DR. MIKE KUHNS

Oaks are great trees and we all should plant them. In fact, I believe that everyone should plant at least one oak in their life. But what makes oaks great? And what oak species are best to plant in Utah? I will attempt to answer those questions in this article, or at least give you my opinion on them.

First, here is some general, useful information about oaks. Oaks are in the plant family Fagaceae, which includes the genus *Fagus*; the beeches, but also includes the genus *Quercus*, the oaks. Here is a possibly useful aside: If you pay attention, you will notice that plant genera and species in the same family often are similar in their overall quality for planting in the landscape. For example, the willow family or Salicaceae consists of trees and shrubs in the willow genus (*Salix*) and the cottonwood/poplar/ aspen genus (*Populus*). Most of the trees in that family, though they are valuable in their native settings, do not make very good ornamental landscape trees because they grow too fast and get too big, are weak

wooded, and are insect and disease prone. This is true whether you are considering a *Salix* or a *Populus* species. The same goes for the Fagaceae family. Both the *Fagus* genus and the *Quercus* genus are some of the best species we plant. In a way, they are the opposite of the Salicaceae – they are relatively slow growing (though not as slow as people tend to think), they get big, but not too quickly, they are very strong-wooded, and they generally are not very insect and disease prone.

In fact, I consider oaks and beeches to be the best trees we have, especially in cultivated settings. Besides being strong and getting large, oaks also can be quite ornamental, though their ornamental features are sometimes subtle. At their best, oaks can have great fall color. The red oak group has the best fall color overall, turning bright orange-red to purple-red. This group includes leaves with pointed lobes or entire leaf margins (no teeth or lobes). The white oak group is less likely to have good fall color. White oaks have leaves with rounded lobes or teeth without lobes, and they have more muted yellow fall color or will go straight to brown. Some other traits that tend to separate species in these groups are that the white oaks tend to be more drought hardy than the red oaks and can tolerate higher soil pH, while some of the red oaks will get chlorotic. Pin



Sawtooth Oak
Atypical leaf for an oak, and of course the serrated leaf for which it is named. Red Butte Garden has a beautiful, albeit young specimen appropriately located south-east of the Oak Leaf sculpture.

oak, for example, is a red oak that shows severe chlorosis with soil pH only a little above 7.0, while I have never seen chlorosis in a bur oak (a white oak).

A couple of botanical differences between red oaks and white oaks are that the inner part of the shell on white oak acorns is hairy or fuzzy, the acorn cap is normally warty on a white oak and is covered with thin, small, leafy, overlapping scales on red oaks, and white oak acorns are not dormant when they fall off the tree in autumn. In fact, white oak acorns will sometimes start to produce their first root while still on the tree, and when they fall off that root grows and anchors the acorn in the soil before winter. This trait may make white oaks better able to

Burr Oak
Quercus macrocarpa





withstand fairly dry spring weather because they already have a root system started. Red oak acorns, on the other hand, are dormant when they fall off in autumn, and they do not start to put out roots and shoots until days lengthen and temperatures warm in the spring. Also, in general, leaves from white oak species are more likely to persist through into and through the winter than red oak leaves.

So now that we know a little more about oaks, here are the top 10 best oaks to plant in your landscape in the interior West.

10. shingle oak (*Quercus imbricaria*) – Shingle oak has a leaf with no lobes or teeth that is shiny on top and that turns a nice deep red fall color.

It is native to the east central U.S. but comes as far west as Nebraska. This is a good tree for landscapes and it is fairly tolerant of high soil pH and drought. It is not common in Utah, and will be hard to find. Its leaves may persist into winter.

9. Shumard oak (*Quercus shumardii*) – Shumard oak is from the Midwest and is known for its good, dark red fall color and for being tolerant of drought and high soil pH. It is uncommon in Utah and will be difficult to find. I must admit, I do not think that I have seen one in Utah, but I hear that they exist.

8. sawtooth oak (*Quercus acutissima*) – This is a very interesting oak, native to eastern Asia and Japan. Though it prefers acid, well-drained soils, it is a great, large tree with wide adaptability, that does well on moderately high pH soils. I have seen this tree grow an inch or more a year in trunk diameter over a several year period in the Midwest on fairly high pH soils (pH above 7.2). I also have seen it growing as a parking lot tree mostly surrounded by pavement. It has a somewhat conical canopy shape when young. The fall color I have seen was a very nice bright yellow.

7. Gambel oak (*Quercus gambellii*) – Gambel oak is one of 2 or 3 oaks native to Utah and much of the inte-

rior West. The other two Utah native oaks are live (or evergreen) oaks that only grow in extreme southwestern Utah, though they are planted and surviving in northern Utah. But Gambel oak is found more or less all over the state. Gambel oak is a shrubby tree, though it can get quite large. It reproduces both from seed (acorns) and from sprouting from its root system. It has a good to great fall color in most cases, though the leaves are very prone to insect and disease damage, and in bad years there may not be much leaf material left in the fall to turn color. It is very drought tolerant, as can be deduced by seeing where it grows naturally, which includes the edges of valleys and up into the foothills.

6. Turkey oak (*Quercus cerris*) – This oak is native to western Asia and southern Europe. Its leaves, bark, and acorns are very unusual and interesting. The leaves have deep teeth or that can be deep enough to call them lobed. It is a very desirable tree that is rarely planted in Utah or elsewhere in the U.S. It can tolerate drought, high soil pH, and clay soils. A variegated cultivar is available.

5. white oak (*Quercus alba*) – White oak is native throughout the eastern half of the U.S. as far west as the eastern edge of the Great Plains. Like most tree species that make it that far west, it is tolerant of drought and high soil pH, though seed sources from the southeastern U.S. may not be so tolerant of those conditions. White oak leaves have deep, rounded lobes. Fall color varies from bright orange to red, then turning brown, with there being a lot of genetic variation

White Oak
Quercus alba



to this trait. It is not very common in Utah, yet I have seen some large, old ones in Cache Valley, Ogden, and the Salt Lake Valley. It has a nice, wide canopy and casts dense shade and is fairly free of problems. It can get quite large. Leaves may persist into winter.

4. northern red oak (*Quercus rubra*) – This oak is native and very common throughout most of the eastern U.S. as far west as the edge of the Great Plains. It is usually found naturally on fairly good sites, but has some tolerance of drought and moderately high soil pH. This is a good oak for planting in Utah where soil pH is not too high. It is fairly tough and free of problems but needs more water than bur oak. Has a large, broad canopy and very nice branch structure. It grows at a medium rate and gets large. It has very good red fall color. It is not common in Utah, but I occasionally see young ones. It should be pretty easy to get.

3. English oak (*Quercus robur*) – English oak is common in Utah, mainly in the form of somewhat to very narrow crowned cultivars. There are many other forms of English oak that can and should be considered. It is native to Europe, northern Africa, and western Asia. Fall color is not great, and brown leaves persist into winter. It is commonly planted in European landscapes and does well in Utah. The leaf is interesting – it looks like a miniature white oak leaf. Many cultivars are available, including an English-white hybrid from Schmidt Nursery called ‘Crimson Spire’ that has outstanding fall color and that I have heard is doing well in Utah.

2. chinkapin oak (*Quercus muehlenbergii*) – This is a very good tree that is native to most of the eastern half of the U.S. and west to the edge of the Great Plains. Native trees are typically found on dry, wooded sites. It is not common in Utah but should be planted more, and I think it is in the last few years. It makes an attractive specimen or can be planted in groups of a few to many in yards, parks, or along streets. It has fairly nice yellow to orange-brown fall color. It will not be easy to find, but is worth the effort.

1. bur oak (*Quercus macrocarpa*) – Bur oak is native from the Great Plains east throughout the Midwest and Lake States, but it is so well adapted to most of Utah that it seems like a native. Where it is native it is an important tree species that grows on fairly dry upland sites as well as lower wetter sites. It can also be found in fairly dense forests or as scattered trees on the edges of the prairie. It is long lived and tolerant of high soil pH and drought. This is one of the best non-native trees for planting in most parts of Utah. This is a prime example of many of the tree species that grow into the edges of the Great Plains and that do well in Utah because of their adaptations to high soil pH, moderate to severe drought, heat, cold, and winds that are common on the Plains. Bur oak grows at a medium rate and gets very large. It has an excellent broad canopy and beautiful dark-green leaves, is affected by few pests, and is becoming fairly available in nurseries. Its fall color is not much to brag about, but its other good traits make up for that.

So go out and plant an oak, or two, this weekend. Don't put it off any longer.

For more information about oaks and for pictures go to the Tree Browser website at www.treebrowser.org. And for additional tree and forestry information go to the Extension Forestry website at forestry.usu.edu.

Forestry Extension efforts are led by Dr. Mike Kuhns, the Forestry Extension Specialist for the state. Mike is the Department Head of the Wildland Resources Department at USU. He works in all areas of forestry, with specialization in urban/community forestry and forestry in the wildland/urban interface.



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THE SUN AND FRANCESCO FERRINI

ITS DAMAGE TO PLANTS

LEAF BURN

The burned leaf. This kind of damage is very frequent in trees planted in streets after they had spent several years in the nursery where planting density is very high and the stems are not directly hit by solar radiation. In addition, due to climate change, daytime temperature are becoming higher and the day sunnier, meaning that in the south-west side of the trees, temperature can more easily reach the threshold after which sun scorch becomes easier, especially in the most sensitive species.

Sunburn can affect all above ground plant parts, including leaves (especially on variegated cultivar, bark, flowers and fruit. In some species, yellow areas develop on the leaves, then become brown or "burned." In many species sunburned leaves often appear glazed, turning a silvery or reddish brown color. These areas eventually die and turn brown. Young trees and shrubs have thin bark, and may not tolerate the hot sun right away, especially if they do not receive adequate irrigation. Trees become

older and develop thicker bark and a larger canopy which can protect the trunk from direct solar radiation. However, even old trees can be damaged if the inner branches are exposed to the hot sun by heavy pruning, especially during the hot summer months. Example of sensitive species are those with thin bark like some maples (*Acer* spp.), willow (*Salix* spp.), honeylocust (*Gleditsia triacanthos*), *Sorbus aucuparia* (European mountain ash), *Aesculus* spp. (horsechestnut), *Prunus avium* (cherry).

IRRADIATION OF THE TRUNK

The irradiation of the trunk usually occurs in autumn and winter. As reported in a paper published by Missouri Extension Service, sunscald is a form of injury to the trunk of many landscape trees. Often called southwest injury, it usually occurs on the southwest side of young trees. As the sun shines on the tree trunk, cells within the tree break dormancy and become active. When the sun sets and temperatures get colder, the active cells are killed. This injury may appear as sunken and discolored bark

similar to sunburn. By spring, the bark may crack and fall off in areas along the trunk. Dead tissue is revealed under the cracked bark and often fungi of the genus *Schizophyllum* can be present on the dead tissues. This fungus causes a white rot of sapwood and produces annual fruiting bodies that are hairy and white to pale brown when young but darken with age. The stalkless conks are tough, leathery, about 3-10 cm wide, and usually found in clusters. The fungus colonizes trees stressed by heat, sunburn, drought, or major wounds. It generally occurs on cut and fallen wood and dead parts of living trees.

To prevent sunscald, the trunks of susceptible trees can be covered with tree wrap. This is put on in the fall and must be removed in March to prevent girdling and possible insect damage. Until the bark has thickened on young trees, they may need to be wrapped yearly. Attention must be also given to the insects and any bark not attached to the trunk of the tree should be carefully removed.

Another product that can be used on the trunk is tree paint. White latex paint is often used in orchards to help prevent splitting and cracking on fruit trees. The paint will help reflect light and heat from the tree trunk, but due to aesthetic reasons this system is not widely used.



SHINRIN-YOKU FOREST BATHING

Regular bathing is great for many reasons, mainly so we don't get super dirty, but what about Forest bathing? How regularly are you doing that? Forest Bathing is the practice of taking a leisurely visit to a forest for relaxation. The practice originated in Japan where it is called shinrin-yoku which literally translates to "taking in the forest atmosphere" or "forest bathing". Relaxation is key. Just like a shower can accomplish the same 'end goal' as a bath, one is usually more rushed and the other usually more leisurely. When it comes to the forest, the point is to bathe, not shower, in the process of soaking up the sights, smells and sounds of a natural setting to promote physiological and psychological health. Though hiking or education are both good reasons to be in the forest, they have different objectives, health or information, to bathe in the forest properly, one must simply soak it up.

a 2010 study¹ using data from field experiments conducted in 24 forests across Japan found that subjects who participated in forest bathing had lower blood pressure, heart rates, and concentrations of salivary cortisol — a stress hormone — when compared with those who walked through a city setting. After years of research, there is now a collection of scientific evidence that proves that forest bathing helps:

- lower heart rate and blood pressure
- increases the ability to focus
- accelerates recovery from surgery or illness
- increases energy levels
- improves sleep quality
- reduces stress hormone production
- boosts the immune system
- improves mood and overall feelings of wellbeing

Incorporating forest bathing trips into a good lifestyle was first proposed in 1982 by the Forest Agency of Japan. It has now become a recognized relaxation and stress management activity in Japan. Though the reasons Shinrin-yoku is effective remain largely unknown, the practice itself continues to spread. And just like cleaning our bodies with water, the best results come from doing so regularly, not just once in a while. Think of your mental hygiene, and start Forest Bathing more often.

1. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2793346/?_escaped_fragment_=po=19.4444



BE ON THE LOOKOUT FOR THE INVASIVE EMERALD ASH BORER



The Emerald Ash Borer adult Photo: David Cappaert, bugwood.org

Emerald ash borer (EAB, *Agrilus planipennis*) is an invasive wood-boring beetle that has caused the decline and mortality of tens of millions of ash trees (*Fraxinus* spp.) in the U.S., and is considered the most destructive forest pest to ever invade North America. EAB will attack small, large, stressed, and even healthy ash trees. Although Utah only has two native ash species—the small, shrubby singleleaf ash (*F. anomala*) that occurs sporadically in southern Utah and velvet ash (*F. velutina*) in SW canyons—various planted ash species such as green (*F. pennsylvanica*) and white ash (*F. americana*) comprise up to 30% of the urban canopy in many Utah communities—and all are susceptible to EAB attack.

Originally from Asia and parts of Russia, EAB was first discovered in the U.S. in 2002 in southeastern Michigan. Although adults typically fly short distances (up to 2 miles),

Lori Spears, Invasive Species Survey Coordinator, Utah State University
Ryan Davis, Arthropod Diagnostician, Utah State University

EAB is primarily introduced to new locations through movement and delivery of infested wood materials, such as firewood and nursery stock (read more about how infested firewood transports tree-killing pests at dontmovefirewood.org). EAB is now known to occur in nearly 30 eastern and mid-western states, and is rapidly expanding its range. It has NOT YET been found in Utah, but an infestation has been found in Boulder, Colorado, representing its western-most occurrence in the country. Information on EAB's current distribution can be found at <http://www.emeraldashborer.info/>.



The Emerald Ash Borer adult. Photo: David Cappaert, bugwood.org

Adult EAB are metallic green beetles with bronze heads, short saw-toothed antennae, flattened backs, rounded bellies, and iridescent

purple-red abdominal segments beneath their wings. They are bullet-shaped, lack a defined waist, and are about 1/2-inch long and 1/8 inch wide.

Eggs are oval to round, 1/16 inch in diameter, cream-colored when first deposited, and reddish-brown as they develop. Eggs, however, are not easily observed due to their small size.



The Emerald Ash Borer larvae Photo: David Cappaert, bugwood.org

Larvae are cream-colored with 10 body segments and a flattened abdomen. They can reach a length of 1 inch when mature, are tapeworm-like in appearance, and have a pair of brown, pincer-like appendages on the last abdominal segment.

EAB infestations may exist for years before being discovered because initial damage occurs in low levels high in ash canopies. While adults do feed on leaves, the real damage is done by larvae that feed on



S-shaped channels created by EAB larvae (photo: Kelly Oten, North Carolina Forest Service, bugwood.org)

the vascular tissue just under the bark. Infested trees can become brittle and are prone to drop branches without much warning, therefore posing danger and a huge liability risk for property owners and municipalities. When removing branches or whole ash trees, watch for serpentine larval galleries filled with sawdust-like frass (insect poop) that curve at near right angles and increase in size as larvae feed and grow. Larval infestations can also lead to bark splits, canopy dieback, epicormic branching (suckers) at the base of large, dead branches or the base of the tree, and increased woodpecker activity (feeding). Adults leave tiny, D-shaped exit holes (1/8-inch wide) on tree

branches and trunks when they emerge in the spring. Once EAB reaches Utah, emergence is expected to begin in late May (between 450-550 degree days, base 50 degrees F) and run through August.

EAB infestations are fatal to ash trees unless insecticides are used to protect trees. Fortunately, there are effective insecticides that can protect individual ash trees even during outbreaks. Commonly recommended active

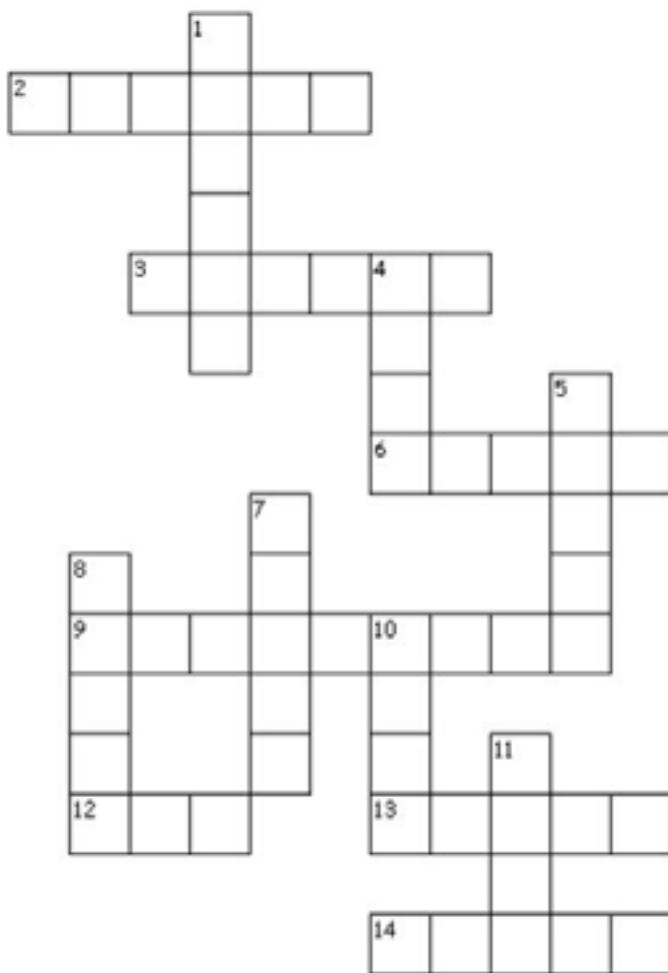
ingredients include Imidacloprid as a soil drench or an injectable, Dinotefuran as a soil drench or basal trunk spray, Emamectin Benzoate as an injectable (restricted-use product) and Azadirachtin as an injectable. Appropriately labeled Imidacloprid and Dinotefuran products should be applied annually, 4-6 weeks and 2-3 weeks prior to beetle flight, respectively. Imidacloprid is most effectively applied as a soil drench and Dinotefuran as a basal trunk spray. Emamectin Benzoate only needs to be applied every two years, 2-3 weeks prior to beetle flight. Azadirachtin (TreeAzin) is an OMRI-certified product and must be injected annually. Insecticide application for EAB control is nuanced. Effi-

cacy and application rates vary by the product and tree size. Some products have annual per-acre volume limitations that should be considered. For an in-depth discussion on EAB pesticides and their application, refer to "Insecticide Options for Protecting Ash Trees from Emerald Ash Borer."

It is important to remember that EAB has not been detected in Utah. Currently, there is no need to apply preventive pesticides for EAB. Once EAB is detected in Utah, ash trees within 15 miles of the detection location may be treated and trees beyond should be monitored. The treatment zone will increase as the populations



D-shaped exit holes created by EAB adults (photo: Debbie Miller, USDA Forest Service, bugwood.org)



ACROSS

- 2. This is the name for an area where thousands of trees grow closely together in the wild
- 3. The name for a leaf on a pine or spruce
- 6. Some North American Indigenous people made canoes out of these trees
- 9. This type of tree stays the same color all year and is often a conifer, but not always
- 12. This substance is like a tree's blood because it carries nutrients to all parts of it
- 13. This part of the tree has the same name as the back storage area of a car
- 14. We harvest sap from this type of tree to concentrate down for syrup

DOWN

- 1. This animal is a Canadian symbol and cuts down tree for food and homes
- 4. This is another word for a tree branch and also for your arm
- 5. This contains the seed from an oak tree
- 7. A bush is smaller than a tree and can also be called a _____
- 8. These come in many different shapes, but they are what all trees start out as
- 10. This part of the tree anchors it to the ground and gathers water
- 11. A product that is made when wood chips and water are combined and heated

Always look online for the most current Calender of Events at www.utahurbanforest.org

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The International Society of Arboriculture (ISA) and UCFC memberships now renew one year from the day the membership starts. Contact Lisa Hanussak for more information. lisa@utahurbanforest.org



Climber Dustin Badger receiving an award for performing a real emergency rescue during set up for the UTCC



Utah will be hosting the North American Tree Climbing Championship in October 20-22, 2017 at Liberty Park in SLC. This is an historic undertaking and we will need a lot of volunteers.

If you are willing and able, please contact - lisa@utahurbanforest.org

For more information see:
www.itcc-isa.com/events/regional/natcc

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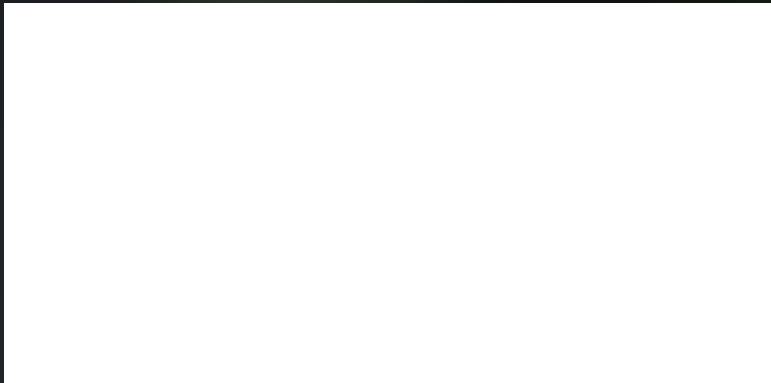
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
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