ISA FLORIDA CHAPTER

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In This Issue:

Hurricane Irma Turned the Everglades into a Tree 'Graveyard,' NASA Lasers Reveal

By Megan Gannon, Live Science

Hurricane Irma turned the vast mangrove forests of the Everglades into a tree graveyard, new NASA images reveal.

The mass tree casualties were revealed by light detection and ranging (lidar) surveys of the iconic swampland both before and after the massive storm. Irma shaved several feet off the average height of the canopy, and 60 percent of the mangrove forests had been badly damaged, NASA researchers found. [Hurricane Irma Photos: Images of a Monster Storm]

"The only areas where there were less damages in the post-hurricane environment were the forests that were submerged along the margin of the water as the sea-level surge came in from the hurricane and actually protected those mangrove trees," Douglas Morton, an Earth scientist at NASA's Goddard Space Flight Center in Maryland, told reporters last Wednesday (April 11) at the annual meeting of the European Geosciences Union here in Vienna.

Lidar images

Morton and his team use lidar surveys to study how forests change when trees fall and gaps form in the canopy. Lidar is a remote sensing technique that allows

Here, a ground-based lidar captures researchers within a mangrove forest in Ten Thousand Islands in southwest Florida, displaying much finer detail on the ground than available from the air.
Credit: NASA

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A Message From the President

Our Trees Florida conference that was held this past June at the Sanibel Harbor Resort in Ft. Myers was a great success! Hats off to Conference Chair Rick Joyce, the Education Committee and all the volunteers that helped make this conference a remarkable event.

What was exciting to see was the great attendance! We had a total of 335 people which is the highest attendance that we have had in many years.

Also exciting was the tree information shared on a variety of topics. Many people felt like this slate of speakers was our best ever.

It is always a highlight of mine to see friends from around the state. And, this year I was happy to meet some new people at our inaugural First Timer's Lunch. Several board members attended the lunch and exchanged information and ideas about our Florida Chapter.

I also heard the concurrent session (first ever) "Women in Arboriculture Luncheon" had great attendance as well! Mary Edwards (Past President of the Florida Chapter) was the guest speaker; Thank you, Mary, for a great inaugural event!

Both of these events and the entire conference is really helping us to build relationships and increase our knowledge so that we can "Promote the scientifically based practice of arboriculture through research, education, and public awareness." (Our mission statement from the Florida Chapter ISA web site at http://www.floridaisa.org/mission.php)

Be sure to mark on your calendars our next Trees Florida conference which will be held June 17-19, 2019 at the Ft. Lauderdale Beach Marriott.

Your Florida Chapter ISA President,

Scott Shultz
President, Florida Chapter ISA

TREE APPRAISAL
The New 10th Edition!
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scientists to essentially see through slices of the forest canopy, from the tallest trees to the shortest shrubs and grasses. NASA's low-flying planes equipped with lidar scanners send out up to 500,000 laser pulses per second to capture 3D images of the landscape below. "With this airborne set of tools, we're able to make detailed three-dimensional maps across large portions of forest regions that have been inaccessible to us," Morton said.

Damage to the Florida Everglades is seen from the air on Dec. 1, 2017. Credit: NASA

However, scientists never had this type of high-resolution airborne lidar data from before and after a hurricane, Morton said. His team had already collected data for the Everglades in March 2017, covering 500 square miles (1,300 square kilometers) of wetlands. So when Hurricane Irma hit on Sept. 10, the researchers took the opportunity to fly over the same area again in December.

Just how bad was the carnage?

Hurricane Irma's wind speeds of more than 140 mph (225 km/h) ripped trees out of the ground and sheared limbs off trees across the Everglades.

Morton said that about 40 percent of the area they could see in the images was covered with gaps from broken branches and fallen trees. A NASA announcement about the findings noted that the average height of the canopy shrank by 3 to 5 feet (1 to 1.5 meters) because of the damage.

"This degree of damages to the coastal mangroves in Florida is quite high," Morton told Live Science.

There could be some serious consequences beyond the Everglades if the mangrove trees do not recover, Morton said. One region that may be in particular trouble is theTen Thousand Islands area.

"The coastline will change, as mangrove trees stabilize sediment that helps create islands," Morton said.

Without these islands, the tides flow differently and storms could affect inland ecosystems more severely, Morton added.

He added that changing coastlines will also affect the way the area is impacted by rising sea levels.

The same researchers had scanned the rainforests of Puerto Rico before the island was struck by both Irma and later Hurricane Maria. The team returns to Puerto Rico for a post-storm survey to assess the damage and potentially identify landslide threats, according to NASA.❖

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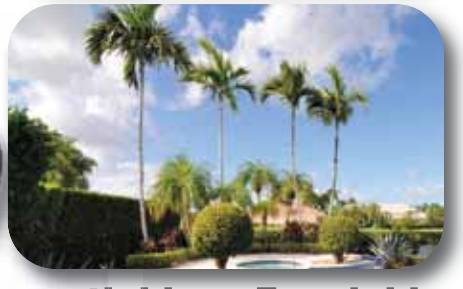

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Florida Chapter Board Updates

BOARD SHORTS:

FALL FUFC/FLORIDA CHAPTER JOHN WHITE SCHOLARSHIP AWARDED

The FUFC/Florida Chapter Scholarship Committee received more applications than ever before for the John White Scholarship which is offered for the Fall and the Spring semesters each year. We congratulate Deborah Hilbert as the recipient of the Fall 2018 scholarship. Deborah is a second year PhD student based at the UF Gulf Coast Research and Education Center in Wimauma. Her dissertation project is a collaborative effort with the Central Florida Urban Forestry Diversity Group identifying and planting under-utilized tree species for street tree use.

We appreciate that so many students applied this semester and look forward to receiving your applications for future semesters.

ITCC CLIMBERS ALISHA AMUNDSON AND JASON GERRISH

The Florida Chapter Board and the membership want to extend a thank you and congratulations to our two climbers who climbed in the ITCC up in Columbus, OH during the August event. Thank to Alisha and Jason for your commitment to representing the Florida Chapter and your endeavors that serve as role models for all our climbers in the state of Florida! We hope you enjoyed the experience and will be able to share valuable knowledge with fellow climbers here in our own "back yard".

BOARD REVISIONS TO FLORIDA ISA BY-LAWS AND POLICIES

The Florida ISA Board is currently in the process of revising the structure of the Chapter by-laws and policies in order to streamline future additions or changes to Chapter committees and activities. The Board expects to finalize the revisions at the upcoming September board meeting.

BOARD APPROVES SUPPORT OF UF STUDENT ARBORIST CLUB

The Florida ISA Board approved spending of up to $2500 on climbing gear which will be donated to the University of Florida for use by the UF Student Arborist Club. The Chapter plans to provide ropes, saddles and helmets, hopefully with additional support from various gear merchants.

BOARD APPROVES SITE FOR TREES FLORIDA 2019: JUNE 17-18-19, 2019

Mark your calendars! The Florida ISA Board approved the Marriott Harbor Beach Resort in Fort Lauderdale as the site of the 2019 Trees Florida Conference and Trade Show. During the Trees Florida 2018 Conference the recommendation to hold it directly after Father's Day weekend was put to the vote by luncheon attendees. The vast majority agreed this location will offer a great opportunity to celebrate Father's Day in a really special way – celebrate with your family on Father's Day weekend and then stay for the conference on June 17-18-19! Plan to celebrate and join us in 2019.

THE OLDEST KNOWN TREE IN EUROPE IS HAVING A GROWTH SPURT

By Brandon Specktor, Senior Writer | May 30, 2018

Perched high on a cliff in southern Italy, a bone-white pine tree has watched the Renaissance come and go, seen dozens of wars rage and resolve, and stood by as thousands of less-persistent organisms lived and died on the rocky slopes below. The tree, nicknamed Italus, has seen a lot. You would, too, if you were more than 1,200 years old.

Figure 1 Meet Italus, a 1,230-year-old pine tree from Italy who just became the oldest scientifically-dated tree in Europe. Credit: Gianluca Piovesan

With a life span of about 1,230 years, Italus has been deemed the oldest scientifically dated tree in Europe, according to a new paper published May 16 in the journal Ecology. The stately Heldreich's pine was discovered in an ancient grove among several other millennium-old trees in Italy's Pollino National Park, south of Naples. [Gallery: The Oldest Living Things in the World]

Italus, the oldest of the trees studied over a recent three-year survey, snags the title of Europe's oldest tree from the 1,077-year-old Bosnian pine known as Adonis, which was dated in Greece in 2016. Unlike Adonis, though, dating Italus wasn't as simple as counting rings; the old pine's insides were too mangled with age to get a clear reading.

"The inner part of the wood was like dust — we never saw anything like it," study co-author Alfredo Di Filippo, a professor in the Department of Sciences and Technology for Agriculture, Forest, Environment and Energy at Tuscia University in Viterbo, Italy, told National Geographic. "There were at least 20 centimeters [7.9 inches] of wood missing, which represents a lot of years."

To work around these missing years, the researchers took radiocarbon-dating samples from the tree's exposed roots to determine when the pine first began to bud. They also compared tree-ring

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counts from the pine's roots and what was left of the trunk, which grow at different rates but can still provide some ballpark date ranges to work from.

With these methods combined, the team estimated that Italus' first ring formed in A.D. 789, making it roughly 1,230 years old. (To put that into a historical perspective, Italus would have been sprouting just as the first Viking raiders landed in England.) And while the tree's battered core indicates it clearly went through some rough patches over the past 1,200 years, its rings have begun growing again in the past few decades, the researchers wrote. Italus could even live to be 1,300.

While Italus appears to be the oldest scientifically dated tree in Europe, there are numerous other trees throughout the continent thought to be in the multi-millennium club too but that just haven't been studied with such rigor yet.

The Llangernyw Yew in Conwy, Wales, for example, is thought to be between 1,500 and 5,000 years old, but it can't be dated accurately through tree-ring analysis, as its core has deteriorated so much over time. A massive oak tree named Kongeegen (or "the king oak") in Denmark's royal hunting forest is thought to be somewhere between 1,500 and 2,000 years old — but that, too, still needs to be scientifically verified. (According to the authors of the new paper, their combination carbon-dating/ring-counting method could potentially be used to calculate more accurate birth dates for other ancient trees like these.)

As for the world's oldest tree? That honor goes to an unnamed bristlecone pine tree in the White Mountains of California. The tree is more than 5,000 years old, making it a smidge older than the more famous, roughly 4,800-year-old bristlecone named Methuselah that lives down the road.

Meanwhile, a 9,560-year-old Norway spruce named Old Tjikko is considered the world's oldest individual tree belonging to a clonal colony — that is, a group of genetically identical trees that share the same root system but generate new trunks and branches over the millennia. Old Tjikko is suspected to be the only surviving trunk of an ancient clonal colony in Sweden. ❖

2018 Florida Chapter Awards

The Florida Chapter proudly congratulates the following individuals who were nominated by their peers and selected by the Awards Committee for their contributions to arboriculture and to the Chapter. Hats off to you all. Thank you for your special talents in the industry!

The awards ceremony was held during the June Trees Florida Conference luncheon. Thunderous applause greeted the recipients for:

EDWARD W. BOK AWARD: Celeste White

The Bok Award is the highest award category awarded by the Florida Chapter ISA. This award will be presented from time to time, as deemed appropriate by the awards committee, to that individual whose lifetime achievement is exemplary to the goals and mission statement of the Florida Chapter.

Celeste White, winner of the Edward W Bok Award with President Scott Shultz and Joe Samnik

AWARD FOR EXCELLENCE IN EDUCATION: Dr. A.D. Ali

This award is given to an individual who has made an outstanding contribution to the education of the Florida Chapter members or to the sum knowledge of arboriculture.

Dr. A.D. Ali, winner of the Award for Excellence in Education with Joe Samnik and President Scott Shultz

AWARD OF DISTINCTION: Jeremy Chancey

This award shall be bestowed upon an individual, long standing active member (10 years or more) who has provided substantial, long-term contribution to the advancement of the purpose and substance of the Florida Chapter.

Jeremy Chancey, winner of the Award of Distinction with Joe Samnik and President Scott Shultz

THE LOREN WESTENBERGER AWARD: Kris Stultz

This award shall be given to an individual who, like Loren Westenberger, has practiced the professional principles of arboriculture consistent with the mission and objectives of the Florida Chapter ISA to better the environment for future generations.

Kris Stulz, winner of the Loren Westenberger Awardof Merit with Joe Samnik and President Scott Shultz

PRESIDENT'S AWARD OF MERIT: Rob Calley

This award is bestowed upon an individual active member to recognize outstanding meritorious service in advancing the principles, ideas and practices of progressive arboriculture. This recipient will be chosen by the Florida Chapter ISA immediate past president.

Rob Calley, winner of the President's Award of Merit with President Scott Shultz and Past President Lori Ballard

What Makes A Tree A Tree?

By Rachel Ehrenberg, Knowable Magazine

(Credit: Cristina Gottardi/Unsplash)

Several years ago, after Thanksgiving dinner at my parents' house in Vermont, lightning struck a backyard maple tree. There was a ferocious crack and the darkness outside the kitchen windows briefly turned day-bright. It wasn't until spring that we knew for certain the tree was dead.

This maple was a youngster, its trunk the diameter of a salad plate. Were its life not cut short by catastrophe, the tree might have lived 300 years. But death by disaster is surprisingly common in trees. Sometimes it results from a tragic human blunder, as with the 3,500-year-old Florida bald cypress that was killed in 2012 by an intentionally lit fire. More often, calamity strikes via extreme weather — drought, wind, fire or ice. Of course, trees also are susceptible to pests and disease; adversaries like wood-decaying fungi can significantly shorten a tree's life. But the ones that manage to evade such foes can live for an incredibly long time.

Treeness

If one is pressed to describe what makes a tree a tree, long life is right up there with wood and height. While many plants have a predictably limited life span (what scientists call "programmed senescence"), trees don't, and many persist for centuries. In fact, that trait — indefinite growth — could be science's tidiest demarcation of treeness, even more than woodiness. Yet it's only helpful to a point. We think we know what trees are, but they slip through the fingers when we try to define them.

Trees don't cluster into one clear group: They emerge in multiple lineages and have adopted multiple strategies to become what they are. Take longevity. A classic example of the Methuselah-ness of trees is the current record-holder, a 5,067-year-old great bristlecone pine that grows high in the White Mountains of California. (That tree was almost 500 years old when the first pyramids were built in Egypt.) Scientists speculate that the hardy bristlecones owe their endurance largely to location: They avoid fires that sweep through lower elevations and pests that can't stomach the harsh terrain of the subalpine zone. The giant sequoias, a short way down the mountains from the bristlecones, take an entirely different longevity tack. These beasts — their trunks can be more than 30 feet across — live thousands of years, fighting fire and pestilence with thick, resistant bark and plentiful in-house repellent compounds.

Some 400 miles to the east, a spindly wisp of a tree has both the bristlecones and the sequoias beat when it comes to lifespan — through another strategy altogether. The quaking aspen (Populus tremuloides) — a tree

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Bristlecone pines are among the longest-living trees. (Credit: Thomas Ramsauer/ Shutterstock)

you can wrap your arms around that rarely grows taller than 50 feet — excels at sending up new shoots from its base. This results in giant stands of "trees" that are, in fact, one genetic individual connected beneath the ground. A Utah colony of quaking aspen is estimated to be 80,000 years old. Neanderthals were around back then.

Once you add clones to the mix, trees quickly lose their claim on old age. King's holly (Lomatia tasmanica) is a shiny green shrub native to Tasmania (shrubs, technically speaking, aren't trees because they don't have a central, dominant stem). There is only one population of king's holly in the world, and scientists think it's entirely clonal: Although it does occasionally flower, its fruit has never been seen. Recent radiocarbon dating suggests that it (they?) is at least 43,000 years old. Up there too is a scrubby ring of creosote bush out in the Mojave Desert of California, called "King Clone," with an estimated age of 11,700 years. Longevity is wholly unsatisfying in a search for a unified "treeness of trees," as forester Ronald Lanner terms it in a 2002 essay in Ageing Research Reviews.

Geneticist Andrew Groover of the US Forest Service Pacific Southwest Research Station in Davis, California, also spends a lot of time thinking about trees. He is quick to acknowledge that defining them is problematic. "Visit your favorite plant nursery and you will find plants categorized by their appearance and function, including a group categorized as 'trees'," he writes in a 2005 paper in Trends in Plant Science, "What genes make a tree a tree?" "This categorization is intuitive and practical but contrived."

Groover points to wood, surely a defining feature of trees, as a case in point. "True" trees (we'll get to that later) make wood through what scientists call secondary growth; this allows trees to grow out (thicken), in addition to growing up. Secondary growth emerges from a ring of specialized cells that encircle the stem. Called the vascular cambium, these cells divide in two directions: toward the outside of the tree, yielding bark, and toward the center of the tree, yielding wood. Year after

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year, this wood is deposited in new inner rings of growth that are doped with lignin and the long, rigid polymer called cellulose. After this cellular stiffening, the wood cells are killed and dismantled, for the most part, until nothing but their rigid walls remain.

No Solid Line

In plants that exist today, secondary growth probably had a single evolutionary origin, although the now-diminutive club mosses and horsetails invented their own version some 300 million years ago, enabling the extinct Lepidodendron, for example, to grow more than 100 feet tall. But secondary growth doesn't automatically lead to treeness: Despite that single origin, woodiness pops up scattershot across the plant family tree. Some groups of plants have lost the ability to form wood; woodiness has reappeared in lineages where it had vanished. It seems to evolve fairly quickly after plants colonize islands. Hawaii, for example, has woody violets, and the Canary Islands have dandelion trees.


(Credit: Bryan Minear/Unsplash)

Molecular biology offers some insights into why the ability to make wood is maintained and reappears so often in plant evolution. Genes that are involved in regulating the growing shoot — the upward, "primary" growth of trees and non-trees alike — are also active during the secondary growth that yields wood. This suggests that these already-existing and essential shoot-growth genes were co-opted during the evolution of woodiness. And it might explain why the ability to become woody is maintained in non-woody plants and why it's relatively easy, from an evolutionary standpoint, to dial woodiness back up.

That said, you don't need wood to be a tree. Monocots, an enormous group of plants that lost the ability to undergo secondary growth, have several arborescent members that aren't "true" trees but sure look like them. Bananas grow tall with what appears to be a trunk but is really a "pseudostem" mass of tightly packed, overlapping leaf bases or sheaths. The true stem of a banana plant emerges only when it's time to flower, pushing itself up and out through the leaf sheaths. Yet banana trees can be more than 10 feet tall. The family of palms, also monocots, grow tall by extending their initial, fat shoot topped by an enormous bud (note that palm stems don't widen as they grow tall).

Genes No Help

Given all this, perhaps it's not surprising that a recent analysis of tree genomes tells us little about the defining features of trees. Geneticist David Neale of UC Davis and colleagues pored over results from the 41 genomes (including grape) that have been sequenced, beginning with black cottonwood in 2006. Their analysis, published last year in the Annual Review of Plant Biology,

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did find that trees making edible fruits often have an outsized number of genes devoted to making and transporting sugars, compared with non-edible-fruit trees. Then again, so do grapes and tomatoes. Several trees, including spruce, apple and some eucalyptus, have expanded genetic toolkits for dealing with environmental stresses such as drought or cold. But so do many herbaceous plants, including spinach and Arabidopsis, that weedy little lab rat of the plant world that is about as un-treelike as you can get.

So far, there is no standout gene or set of genes that confers treeness, nor any particular genome feature. Complexity? Nope: Full-on, whole-genome duplication (an often-used proxy for complexity) is prevalent throughout the plant kingdom. Genome size? Nope: Both the largest and smallest plant genomes belong to herbaceous species (Paris japonica and Genlisea tuberosa, respectively — the former a showy little white-flowered herb, the latter a tiny, carnivorous thing that traps and eats protozoans).

A chat with Neale confirms that tree-ness is probably more about what genes are turned on than what genes are present. "From the perspective of the genome, they basically have all the same stuff as herbaceous plants," he says. "Trees are big, they're woody, they can get water from the ground to up high. But there does not seem to be some profound unique biology that distinguishes a tree from a herbaceous plant."

Notwithstanding the difficulty in defining them, being a tree has undeniable advantages — it allows plants to exploit the upper reaches where they can soak up sunlight and disperse pollen and seeds with less interference than their ground-dwelling kin. So maybe it's time to start thinking of tree as a verb, rather than a noun — tree-ing, or tree-ifying. It's a strategy, a way of being, like swimming or flying, even though to our eyes it's happening in very slow motion. Tree-ing with no finish in sight — until an ax, or a pest, or a bolt of Thanksgiving lightning strikes it down.
http://blogs.discovermagazine.com/crux/2018/04/16/what-is-a-tree/#.W0daeMInbIU ❖

New Pests Found in Florida

Henry Mayer, UF/IFAS Urban Commercial Horticulture Extension Agent

What do the following names have in common: *Anthonomus testaceosquamosus*, the hibiscus bud weevil; *Fiorinia phantasma*, the Phantasma Scale; *Aceria litchii,* the lychee erinose mite? All these pests were introduced or reintroduced to Florida during 2018 and were either new state or US record.

Fig. 1.- Lychee erinose mite damage, Dr. D. Carrillo, TREC

Aceria litchii, the lychee erinose mite

The lychee erinose mite has been found at two different locations in Lee County, Cape Coral (January, 2018) and Pine Island (February, 2018). The mite causes abnormal growths, curling and galls on leaves, which later become reddish-brown in appearance. This damage can initially appear superficial, but as the numbers of the mite increase, damage spreads to the fruits and flowers (Fig. 1). The mites only affect lychee (*Litchi chinensis*) and are too small to be observe directly without a microscope, so you need to rely on the plant symptoms.

Fiorinia phantasma, the Phantasma Scale

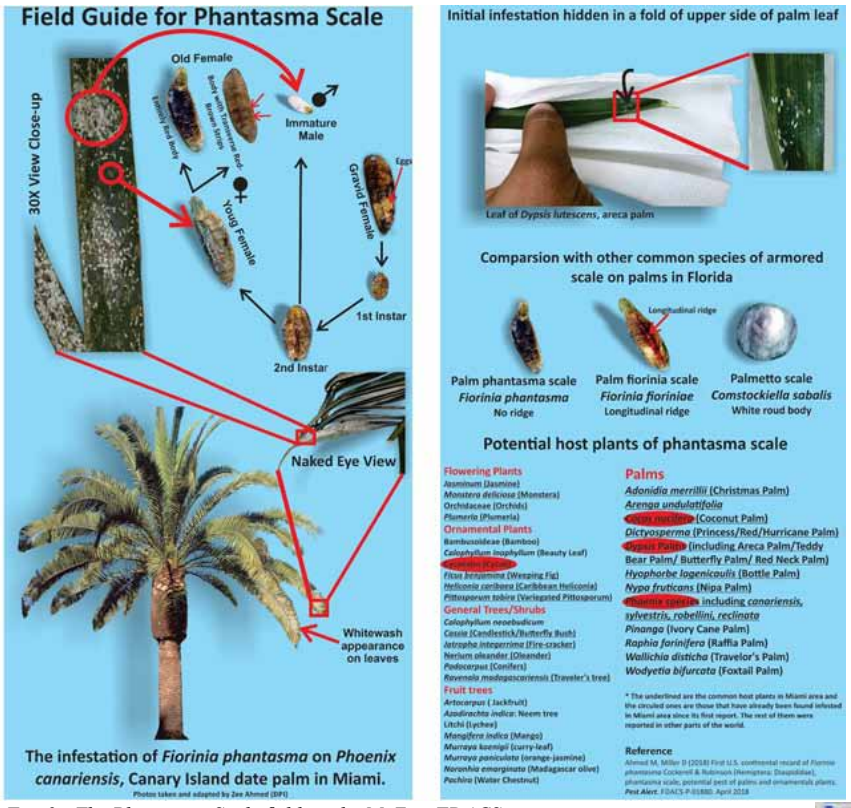


Fig. 2.- The Phantasma Scale field guide, M. Zee, FDACS

It's an armored scale affecting mainly the underside of the fronds located in the lower part of the canopy. The first U.S. continental record was collected in a Phoenix canariensis, Canary Island date palm on March from a non-commercial setting in Miami-Dade County. In other countries it has been found infesting at least 24 families of plants with marked preference for Arecaceae (palm trees) (Fig.2). Biological control is very important to keep the scale under control.

Anthonomus testaceosquamosus, the hibiscus bud weevil

During 2018, samples from the weevil were collected and identified positive in Broward, Miami-Dade and Hernando counties. This weevil is reported to feed on malvaceous flower buds, which potentially could cause significant loss of hibiscus flower buds. Adults lay eggs on young flower buds, and the immature weevils feed on the developing pollen (Fig. 3)

Fig 3.- The hibiscus bud weevil, P. Skelley, FDACS-DPI

Nuevas Plagas Encontradas en la Florida

Henry Mayer, UF/IFAS Urban Commercial Horticulture Extension Agent

¿Qué tienen los siguientes nombres en común: *Anthonomus testaceosquamosus*, el gorgojo del brote del hibisco; *Fiorinia phantasma*, escama fantasma; *Aceria litchii*, ácaro erinoso del lichi? Todas estas plagas fueron introducidas o reintroducidas en Florida durante el 2018 y todas constituyen registros nuevos para el estado o para EE.UU

Fig. 1.- Lychee erinose mite damage, Dr. D. Carrillo, TREC

Aceria litchii, ácaro erinoso del lichi

El ácaro erinoso del lichi se ha encontrado en dos lugares diferentes en el Condado Lee, Cape Coral (Enero de 2018) y Pine Island (Febrero de 2018). El ácaro causa crecimientos anormales, y agallas en las hojas, más tarde se vuelven de color marrón rojizo. Este daño puede parecer inicialmente superficial, pero a medida que aumenta el número de ácaros, el daño se extiende a las frutas y las flores (Fig. 1). Los ácaros solo afectan al lichi (Litchi chinensis) y son demasiado pequeños para ser observados directamente sin un microscopio, por lo que para su diagnóstico se debe confiar en los síntomas que presenta la planta

Fiorinia phantasma, escama fantasma

Es una escama acorazada que afecta principalmente el envés de las hojas ubicadas en la parte inferior del dosel. El primer registro continental de EE. UU. se recolectó en Marzo palmas de Phoenix canariensis, ubicadas en un entorno no comercial en el condado de Miami-Dade. En otros países se ha encontrado que infesta al menos 24 familias de plantas con marcada preferencia por las de la familia Arecaceae (palmeras) (Fig.2). El control biológico es muy importante para mantener bajo control esta escama.

Fig. 2.- The Phantasma Scale field guide, M. Zee, FDACS

Anthonomus testaceosquamosus, picudo del brote floral del hibiscus

Durante el 2018, se recolectaron muestras del picudo y se identificaron como positivas en los condados de Broward, Miami-Dade y Hernando. Este picudo se alimenta de brotes florales en plantas de la familia Malvaceae, lo que potencialmente podría causar una pérdida significativa de capullos en plantas de hibiscos. Los adultos ponen huevos en los capullos en flores jóvenes, y las larvas se alimentan del polen (Fig. 3)

Fig 3.- The hibiscus bud weevil, P. Skelley, FDACS-DPI

SAVE THE DATE: SEPTEMBER 19, 2018

We are officially announcing the 4th Annual Saluting Branches event, to be held on **Wednesday, September 19, 2018**! You can Sign up to be notified as locations and other details become available. (Note that you will still need to register for your specific location later in the year.)

LOCATIONS FOR 2018

The Saluting Branches day of service for 2017 was held at 45 National Cemeteries across the US. We are in the process of determining locations for 2018. **Know of a good one?** Request Location for 2018

Watch the 2017 Saluting Branches Tribute Video

SALUTING BRANCHES 2017 WAS AMAZING!

The largest one-day volunteer event in the tree industry with over **2,200 volunteers**

www.salutingbranches.org

Saluting Branches, created by Rainbow Treecare in partnership with the U.S. Department of Veterans Affairs, National Cemetery Administration

U.S. Department of Veterans Affairs

World's Strongest Biomaterial Now Comes From a Tree

A new method creates superstrong fibers out of cellulose

by Katharine Gammon: Chemical & Engineering News

Spider silk has long been considered the strongest biological material in the world and has inspired generations of materials scientists to understand and mimic its properties. However, new findings knock spider silk off its pedestal, reporting that engineered cellulose fibers, derived from plant cell walls, are the strongest biobased material (ACS Nano 2018, DOI: 10.1021/acsnano.8b01084). The material is more than 20% stronger than and eight times as stiff as spider silk. It could eventually be used in lightweight biobased composites for cars, bikes, and medical devices, the researchers say.

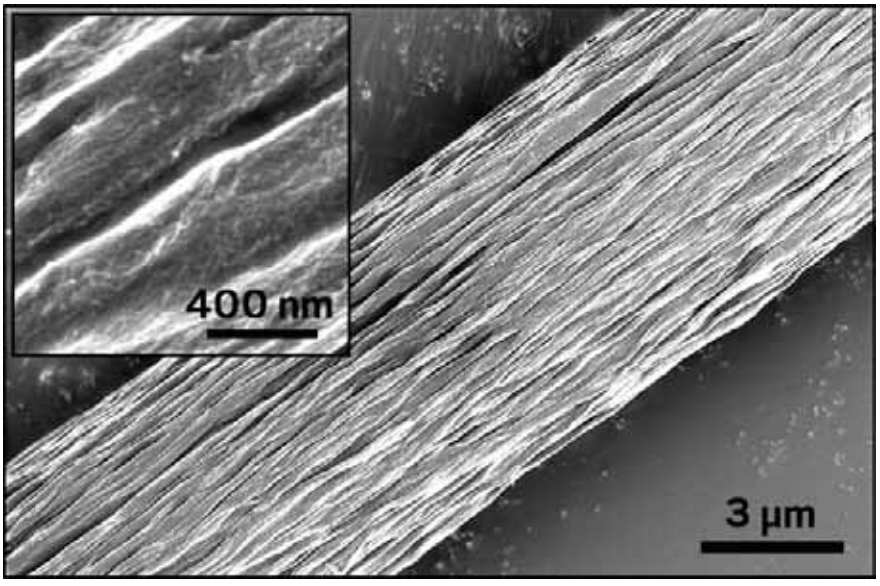
L. Daniel Söderberg of KTH Royal Institute of Technology and his colleagues took inspiration from trees in their search for lightweight, strong, renewable materials. The outer cell walls of woody trees provide strength and stiffness, helping trees to stand tall. Those cell walls contain cellulose nanofibers, which are aligned and embedded in a matrix of lignin and hemicellulose. That alignment transmits the exceptional strength and stiffness of individual nanofibers to the macroscale properties associated with wood, says study coauthor Nitesh Mittal. Even so, wood is not as strong as the nanofibers themselves because defects in alignment occur, which weaken the material.

Mittal's team tried to mimic this structure using commercially available cellulose nanofibers from spruce and pine trees, 2 to 5 nm in diameter and up to 700 nm long. Using a process called hydrodynamic focusing, they squeezed the nanofibers together using streams of water into larger fibers 6 to 8 μm in diameter and up to a meter long.

Using electron microscopy, the team confirmed that the resulting structure mimicked the unique arrangement found in tree cell walls but was even better: The nanofibers aligned nearly perfectly, without defects, in a tight thread.

Further testing revealed that the material had a tensile strength of 1.57 gigapascals, stronger than natural dragline spider silk fibers, the previous reigning champion, whose strength ranges from 0.6 to 1.3 GPa. The strongest cellulose fibers were also 1.2 to 1.5 times as strong as wet-spun carbon nanotubes and graphene fibers, non-biobased materials prized for their strength. The cellulose fibers' tensile stiffness was 86 GPa, eight times as stiff as silk, allowing it to be used in artificial joints or surgical sutures that require a stretchy but strong material. Artificially assembling these nanofibers makes something stronger than what nature produces, Mittal notes; scientists working on spider-silk-based materials have not made anything stronger than what comes from the spider.

In the future, materials like these could form parts in load-bearing applications like cars and bikes, where most materials come from unsustainable sources or processes that produce large carbon emissions. They could also be used for tissue engineering applications, and the material is strong enough to be used as for body parts like limbs, according to Mittal.



Scanning electron micrograph of a cellulose fibril surface shows the near-perfect alignment of tree-derived cellulose nanofibers. Credit: ACS Nano

Zhenan Bao, a materials scientist at Stanford University, says the new work is interesting. "The tensile strength they got is impressive for biosynthetic materials," she says. "The method they used is very simple to realize. This work shows the great potential of controlling structures to achieve remarkable mechanical properties."

The drawback to this and all wood-based materials is that they are humidity sensitive, Mittal says, which limits their practical application. The big challenge for those working with such materials is to identify other biobased building blocks to mix with nanocellulose that could increase the usefulness of the material.❖

Consultant's Corner

by Joe Samnik, Expert Tree Consultant

WHAT I HAVE LEARNED AS AN EXPERT WITNESS IN OVER 800 LITIGATION ASSIGNMENTS

I have had the good fortune of being named as an expert witness in over 800 litigation matters. I have been qualified in federal, civil, criminal, small claims and eminent domain courts of law. I have testified to tree values, wrongful deaths, personal injuries, eminent domain and product liability. My representation is nearly 50/50; plaintiff vs. defendant. I have traveled across the nation. I have witnessed some remarkable events. I haven't seen it all yet; however, what I have seen has been quite an educational experience. Knowledge, is after all is said and done, what one learns after knowing it all; 20 years, or so.

In preparation for an upcoming litigation assignment I fell into reflecting upon that which I have learned during my tenure as an expert witness. These bits of empirical knowledge do not include that which most experts study and refine by reading the vast amount of books and articles on the subject easily found in the marketplace. Rather, my professional lessons and observations revolve about those experiences which define the niche of excellence which separates from mediocrity.

Have a read at your convenience please. Even if you are not an expert or have never been inside a courtroom, these lessons bleed over into the marketplace of everybody's conduct as the passage from acceptable to excellent becomes defined.

1. **Always, Always Tell the Truth:** While quite intuitive and seemingly obvious, telling the truth regardless of the consequences remains an elusive goal for many expert witnesses. There are a number of reasons to tell the truth, the whole truth and nothing but the truth. Contempt of court comes to mind. My career would be ruined; immediately if not sooner if I did not tell the truth under oath. The utter shame associated with being untruthful. But perhaps the best reason never to lie is that I would be gaming the system. Our system of justice has cost more than 1 million lives in wars to defend it, the truth. And while our justice system is not perfect it is way ahead of whatever is in second place. Always tell the truth; it's easy to remember.

2. **Honor, Integrity and Character:** These are the finest and best attributes which I can bring to the judge or the jury. If these attributes are a part and parcel of my ethos, nothing higher can be brought to bear than these three much sought after categorical imperatives.

3. **The Other Side Has a Story to Tell As Well:** I may well not agree with the other side's conclusions or opinions. I might think them ludicrous. Bizarre. Categorically ridiculous. Perhaps they have no merit as does their case. But they too have a right to be heard. They get to tell their story just like I have a right to tell my story. It is the judge or the jury that decides who is right and who is wrong; not me. I must respect their story and the person telling that story.

4. **Be Respectful of The Attorney Across From Me:** Yes, she may attempt to discredit me in front of the judge or the jury. Make me look like a fool. Make me out to be a liar. But, that's her job. A king's ransom has been paid for her education and for her continuing education. She herself has put in the unbelievable effort, time and numerous sacrifices to stand before me and execute her knowledge and her talents in front of the judge and jury. She passed the bar exam! She has a client depending on her to completely discredit me and/or my opinions. That's her job. It's not personal. Perhaps if I had lunch with her over a different set of circumstances life would be grand. I might have met my new best friend. I just don't take it, her personality and her tactics while in the space of attempting to impeach me, as anything personal. Time is money. She has a lot of money at stake. She may be taking a gamble, depending on the outcome of the case - the actual verdict - when she accepted the case and the client on a contingency basis. Much,

Witness continued on page 23

From Your TREE Fund Liaison Chair - Eric H. Hoyer

Spring 2018 Grant Awards from TREE Fund

Tour des Trees
By the time this publication is printed, the annual Tour des Trees bicycle event will have already taken place. The event was held in conjunction with the International ISA Conference and Trade Show, this year in Columbus OH. The riders thank all their supporters for their donations to the TREE Fund once again this year! More stories to follow on the Tour's highlights!

Grants awarded
TREE Fund has awarded over $260,000 for tree research and education in our Spring 2018 grant-making season. Please join us in congratulating our recipients and thanking the donors who make their work possible.

Hyland R. Johns Grant
Andrew Hirons, PhD and Henrik Sjöman, PhD, Myerscough College, UK

Safe Arborist Techniques Fund Grant
Alexander Laver and James Shippen, PhD, Tree Logic (Working with Coventry University, UK)

Utility Arborist Research Fund Grant
John Goodfellow, Bio-Compliance Consulting, Inc.

Sponsored Grant
Carolyn G. Mahan, PhD, Penn State Altoona

Ohio Chapter ISA Education Grant
Kent Roosevelt High School Forestry & Landscape Management Program

Bonnie Appleton Memorial Scholarship
Rebecca Pobst, Michigan State University

Fran Ward Women in Arboriculture Scholarship
Maria Tranguch, Oregon State University

Horace M. Thayer Scholarship
Brady Dauber, Cuyahoga Community College

John White Memorial Scholarship (not John P White Scholarship of FL)
Michael Tilton, U. of Massachusetts Amherst

Robert Felix Memorial Scholarships
Jackson Chandler, Brigham Young University

Katrina Henn, Mississippi State University
Kaitlyn Pike, DePaul University ❖

Witness continued from page 21

much money is at stake. Often, more than you and I make in a lifetime - combined. And the only thing in her way is me. So, yes, she's going in for it all.

5. **Don't Worry About Getting Paid:** The time and effort most experts put into making certain they get paid is astonishing; simply unbelievable. If they spent that much attention to the case they would have to perhaps a better outcome. Not me. I will get paid. I'm not in the least bit concerned. My retaining attorney might need a contract fine; send it on and I'll sign it. I do not require a retainer. Why? Just more bookkeeping. My invoice will get paid. No worries. I've had a close call or two over the years but I've always been paid. Keep my nose to the assignment. The money is just a byproduct of my service anyway.

6. **At Least Once Take the Case You Can Never Win.** So there I was sequestered in a federal case involving over $1 million of trees. I get this phone call from an attorney regarding the unthinkable act of destroying a venerable object - the oak trees at Toomer's Corner. The pride of the Tigers. Poisoned by some lunatic. I listen to the story the attorney told to me. I had the assignment that night of researching the name, Harvey Updike. The next morning the attorney called me. Had I done my homework? You bet I did! The monster! I was already thinking of what approach to value I was going to use to appraise the subject and much beloved oak trees when I was told it was the defense attorney on the phone. I was to be on the defense team representing Mr. Updike. Oh, and no need to send any type of a fee schedule as Mr. Updike was indigent. The judge would tell me what I was to be paid. And it would not be those big slick city fees some experts charge. No sir. I could have declined the case but it was the words of the attorney that morning I have never forgotten. Everybody deserves the best representation possible; even poor Harvey Updike. Accepting that assignment was one of the better career moves I have ever made. The process cleansed my thinking. I got death threats. Unbelievable telephone calls from Auburn folks. I learned so very much. And more doors have opened and more situations have been diffused when it is learned that I was on the defense team of Mr. Harvey Updike. Roll Damn Tide…

7. **My Number One Courtroom Fear Is the Same Number One Courtroom Fear of the Cross Examining Attorney:** And that number one shared fear is: The cross-examination! It's a small world. Yes, the attorney across from me believes she has discovered all of my opinions. She did so at my sworn deposition; something like court but without a judge. I was under oath. She has me all boxed in and buttoned down based upon my answers to her during my deposition. Now, after my deposition, she and her tree expert have put their collective heads together. They've got a game plan for me at trial. They have all of their questions set and ready to go. All of their traps are set. They've got me for certain. That is because I do not know what questions they will be asking at court in front of a jury. Or in front of a judge. But her problem is that she does not know what my answers will be. A level playing field. Perfect.

8. **You Can't Win Them All:** Of course for an expert there is no winning or losing. That is relegated to the attorneys involved in the matter. An expert's job is to teach the jury certain facts subject of particular expertise; that which they may not know, enabling them to make a more informed decision. There are a multiplicity of various legal reasons why certain facts are not given to the jury for their deliberations. There are at work in the courtroom numerous legal issues which the expert has no control over. An expert's testimony in part or in whole may never go to the jury for deliberation. If an expert thinks that their opinions will carry the day every time, they're in the wrong business; to the extent that testifying is a business at all.

9. **I Won't Get Bullied:** During deposition or at trial there are four attorney personality types that will be across from me. They include: the Intellect; the Southern Diplomat; the Stupid One and the Raging Bull in the China Shop. The Intellect is a very calculating, slow and deliberate attorney who carefully crafts every question with a desired end result in mind. These attorneys take the high road in an effort to impeach. The Stupid One approaches her prey by being so seemingly ignorant of every question asked in an effort to get the witness to ramble on. Very effective approach to discovering ancillary facts with which to impeach. The Southern Diplomat is one of

Witness continued on page 24

Witness continued from page 23

the nicest people you'll ever meet. Aw shucks, she's just there to make sure that everything is okay and that you're comfortable. She is not an enemy; she is not trying to impeach me, she's just there because she wants to be, with no endgame in mind. Everything is roses. This is just a visit; not sworn testimony. No worries; life is just a bowl of peaches. Then comes the Raging Bull breaking everything she sees and trampling over every answer given to her inquiry. She is mean. She is angry - all of the time. There is no misunderstanding her attempts to gore and destroy. Each of these personality types has been adopted after years of trial and error on the attorney's part. They're just doing their job. But I've got a job to do as well. And it is not an easy one. If it were just a matter of telling the truth then there would be no problems. However, these attorneys want the truth but they also want admissions that may not be the truth but are a logical transition from my testimony to what the jury will hear. In any event, I do not take it personally; however, I won't get pushed around either. I have a fuse that runs with Gabriel's Horn - to the bitter end. If I'm getting bullied or abused by the opposing attorney I will state so on the record. I have other legal options open to me if I feel I'm getting abused and I won't hesitate to initiate them. I will conduct myself like a gentleman; please reciprocate. Let's keep the 8 ball on the table please.

10. **<u>Not All Attorneys Are Created Equally:</u>** As in any profession there are those in the ranks who choose not to conduct themselves in an honorable and ethical manner. This includes attorneys. Birds of a feather flock together. I must be very cautious of the assignments proposed for me to accept. I cannot be caught up in any type of legal settlement mills. I cannot become a part of any attorney who seeks to settle for a fast buck. A fast buck attorney does not give to her client what they may deserve. I must be careful to ensure that the attorney who might retain me is of the highest ethical standards and wants what's best for her client; presumably, justice.

So, at this point in my practice and in my small but humble shop, these are the take-home lessons I have learned after being involved in over 800 litigation matters regarding trees and landscapes. Perhaps you might find some of my bullet points applicable to you and to your life's work. I do wish each of you well and a bountiful harvest commiserate with that which you have sewn.❖

Council of Representatives

Hello Florida Chapter ISA Arborists!

ISA's worldwide professional membership network includes Associate Organizations, Chapters (that's us), and Professional Affiliates. This network is collectively referred to as Components. The primary function of the ISA CoR is to provide a forum for collaboration and cooperation between ISA Component organizations.

Our most recent CoR meeting was at the 2018 ISA Annual Conference in Ohio in early August. Our agenda allows for discussion on issues that our components are working on. Our hope is that by working together and learning from our neighbors, we are able to improve programming across our ISA network. I look forward to sharing this information with you.

Please feel free to contact me (kpearson@fortlauderdale.gov) with your input and support regarding information, concerns, improvements, updates, discussions, etc. I am your voice and I am here to help serve the Arborists of the Florida Chapter – Internationally!

Kimberly Pearson
Florida Chapter ISA Municipal Arborist Representative
Florida Chapter ISA Council of Representative Member

News From International

BIG NEWS! ISA Board of Directors Announces Headquarters Move!

The ISA Board of Directors is pleased to announce plans to relocate the ISA Headquarters office to the Atlanta, Georgia U.S.A. metropolitan area in 2019.

With the responsibility for setting the strategic direction of the organization, the ISA Board of Directors has been engaged in environmental scanning exercises and long-range discussions about the key engagement points and opportunities for the ISA. The Board selected Atlanta as the next headquarters for the ISA as a result of a feasibility study conducted by a consulting company, Board member site visits, and collaboration with a relocation specialist. The Atlanta metro area offers increased access to other non-profits and associations, increased domestic and international flights thereby reducing organizational travel expenses and time, along with increased member and credential holder engagement opportunities. This move positions ISA to leverage the growth that we have seen in our membership and credential offerings for continued success.

The ISA Board recognizes the loyalty and support that has been provided by the ISA staff and acknowledges their commitment as one of the main reasons for ISA growth over the years. The Executive Director has been charged with managing the transition of an ISA office relocation. Transition and relocation packages are being developed to assist employees as they navigate the implications of this decision. All current ISA employees will be treated in a caring and professional manner. The impact on our members and credential holders will be minimized as much as possible during the transition.

The new ISA headquarters will officially open in the new location by mid-2019. With the organization approaching its 100-year anniversary, this move will create new opportunities for ISA to build on current work and program offerings and set the organization up for continued success over the next 100 years. We look forward to continuing to serve our members and credential holders from this new location.

View the official ISA news release here. ❖

2018 Certification Exam Schedule

The FLORIDA CHAPTER of ISA is pleased to announce our 2018 schedule of Certification exams. See the chart below for the site nearest you.

Date	Exam/ Class	Location	Time	Last Date to Register	Cost Member/ Nonmem
December 8, 2018	ISA Certified Arborist English/Spanish and Specialist Exams	Miami Dade County Extension Homestead, FL	9:00 AM to 1:00 PM	12 business days prior to exam: November 20, 2018	$170/ $280
February 23, 2019	ISA Certified Arborist and Specialist Exams	Broward County Extension Davie (Ft. Lauderdale), FL	8 AM to 12 PM	12 business days prior to exam: February 7, 2019	$170/ $280
April 13, 2019	ISA Certified Arborist and Specialist Exams	Broward County Extension Davie (Ft. Lauderdale), FL	8 AM to 12 PM	12 business days prior to exam: March 28, 2019	$170/ $280

There are currently 3 exams available for registration – exams are scheduled throughout the year so make sure to check back on the website when they become available. The test schedule is subject to change as additional tests and review sessions may be added.

Can't wait? Remember that most ISA credentials are conveniently available. at Pearson Vue Testing Centers throughout Florida for an additional test center fee. See the ISA International website for more information.

First-time applicants can apply online on the International ISA website.

PREPAYMENT IS REQUIRED VISA/MC/AMEX accepted. US FUNDS ONLY

The pdf of the application form (to mail in) is part of the Certified Arborist Information pdf.

The ISA International office in Champaign, IL must receive your application and exam fees AT LEAST TWELVE BUSINESS DAYS before the exam date. NO EXCEPTIONS. (The ISA International office is closed New Year's Eve, New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and the day after, and Christmas week)

To purchase an ISA Certification Study Guide, call the Florida Chapter ISA at 941-342-0153 or order online

Florida Chapter ISA - 2018 Education Schedule

***The schedule below is tentative and subject to changes.**

Date	Seminar/Class	Location (s)	Open for Registration
September 26, 2018	Palm Fundamentals	Miami (Fairchild Gardens)	Register Online
October 5, 2018	Palm Fundamentals	Larog (IFAS)	Register Online
TBD	Tree Appraisal - The New10th Edition!	Orlando	
Oct/Nov	Safety and Climbing	Tampa/Ft. Lauderdale	
November 27, 2018	1-day TRAQ (Renewal)	Orlando	Register Online
November 28-30, 2018	3-day TRAQ (Full Course)	Orlando	Register Online

Welcome!

New Florida Chapter Members

Here are the individuals that joined the Florida Chapter during the second quarter of 2018. If you see a name from your area of the state, look up their phone number online* and give them a call. Introduce yourself and find out what aspect of arboriculture the new member is involved in. Let's make the Florida Chapter friendlier. We're all working in different ways for the same goals. Get to know other Chapter members. You might make some helpful connections for the future.

Sarah Irene Arnold, Clearwater, FL
Bobbie Jo Ball, Clearwater, FL
Robert S. Ball, Clearwater, FL
Michael Barlas, Largo, FL
Mark Bartels, Pompano Beach, FL
Kathryn Bongarzone, Pompano Beach, FL
Nick Bonn, Jacksonville, FL
Jeff Thomas Bruno, Miramar, FL
Nancy Calderone, Boca Raton, FL
Michelle Charrez Perez, Kathleen, GA
Matt Civetti, West Palm Beach, FL
Joe Martin Clay, Dunedin, FL
Craig M Clifton, Deland, FL
Ashley Blair Cramer, Santa Rosa Beach, FL
Michael Crawford, Dunedin, FL
Laura Davis, Clearwater, FL
Patrick Deery, Homestead, FL
Vincent Robert DiPadua, New Port Richey, FL
Eric Dixon, Palm Harbor, FL
Roberto A Espinales, Fort Lauderdale, FL
Gal Moshe Fenner, West Palm Beach, FL
Jeffrey E. Fish, Fort Lauderdale, FL
Dave Fister, Estero, FL
Daniel Goldstein, Davie, FL
Adriana Gomez, Goldenrod, FL
Jeremy Gongalez, Saint Petersburg, FL
Randy Gonzalez, Davie, FL
Michael Guillotte, Saint Augustine, FL
Henry Gwynn, Tallahassee, FL
Lisbeth Hamer, Port Richey, FL
Adam Kanter, Boca Raton, FL
Fred Kelly, Tampa, FL
Edward Michael Kennedy, Clearwater, FL
Elizabeth Kirchoffer, Safety Harbor, FL
Ricardo Lanati, Davie, FL
William Lester, Spring Hill, FL
William Mallett, Port Charlotte, FL
Nicholas Matthews, Tavernier, FL
Forrest McCullough, Apopka, FL
Brandon McDuffie, Longwood, FL
Christopher McKine, Pembroke Park, FL
Mark Mclaughlin, Fleming Island, FL
Billy J McLean, Clarksville, FL
Mike Mejia, Hollywood, FL
Walter Anthony Monk, Tampa, FL
Derek Gaben Nelms, Gulf Breeze, FL
Tyler Palmer, Titusville, FL
Nathan Peirce, Saint Petersburg, FL
Nathan Calder Pugh, Tallahassee, FL
Thomas Rueda, Pinecrest, FL
Joseph Simmons, Jacksonville, FL
Brian Smith, Fort Myers, FL
Barbara Stalbird, Saint Petersburg, FL
Tyler Ryan Tanzler, Longwood, FL
Felicia Taylor, Yulee, FL
Johnny R Turvin, Jacksonville, FL
Scotty Veal, Pinellas Park, FL
Jose Luis Villa, Miami, FL
Gary L Weidner, Lehigh Acres, FL
Larry Wood, Tampa, FL
Shaun Young, Sarasota, FL
Alejandro Zaragoza, Ponte Vedra Beach, FL

**Go to http://www.isa-arbor.com, then go to "Members Only" and log in. Then go to ISA membership directory. If you do not know your log in for members only, contact ISA headquarters at (888) 472-8733. Once you log in, you can update your address, check your CEU's, edit or verify Certified Arborist information and search the membership list.*

Letters to the Editor

We welcome your thoughts about Florida Arborist articles, about your Florida Chapter, or about tree issues in general.

Email your letters to:
jan@floridaisa.org

or mail to:
Florida Chapter - ISA
7853 S. Leewynn Court
Sarasota, FL 34240

Please remember: Letters should be no longer than 300 words. We reserve the right to condense letters, or to edit as necessary.

An invitation to all members
to attend a

Board of Directors Meeting!

Call 941-342-0153
for specific times and locations

Up-coming 2018 Board Meeting - Dates & Locations

September 21, 2018 – Orange County Extension, Orlando
November 2, 2018 - IFAS office, Orlando

Arborist Certification Committee Report

By Norm Easey, Florida Certification Liaison

There are currently three ISA certification exams scheduled in Florida during 2018/2019. Click here to watch for future dates. The ISA Certified Arborist exam is also available at Pearson Testing Centers throughout Florida. See the ISA International website www.isa-arbor.com for more information about the various ISA arborist credentials and how to earn them.

Florida Chapter currently has 1979 Certified Arborists.

The Florida Chapter would like to congratulate the following 32 Florida or Florida Chapter individuals for earning their certifications as Board Certified Master Arborist, Certified Arborist, and Utility Specialist :

Board Certified Master Arborist

Apollo Francis O'Neil, Ozona, FL

Certified Arborist

Leslie Agudelo, Miami, FL
Gloria Alejandra Antia, Biscayne Park, FL
Sarah Irene Arnold, Clearwater, FL
Stefan Babjak, Largo, FL
Autumn Briggs, Davenport, FL
Tyler Bronzan, Coconut Creek, FL
Billy Butterfield, Orlando, FL
Miguel Castillo Lagrange, Southwest Ranches, FL
Leah Davis-Bonsenor, Miramar, FL
Eric Dixon, Palm Harbor, FL
Kerry Dunaway, Spring Hill, FL
Peter Fastuca, Gainesville, FL
Roy Fitzgerald, Palm Harbor, FL
Michael D. Gilileo, Jr., Lakeland, FL
Bryan Guerra, Sunrise, FL
Steven Guinta, Coconut Creek, FL
Alan David Holt, Panama City, FL
Maxine Hunter, Hawthorne, FL
Peter Allen James, Pompano Beach, FL
Spencer Kube-Ereshan, Alachua, FL
Kenneth Layel, Treasure Island, FL
Abraham Luna, Fort Myers, FL
Walter Anthony Monk, Tampa, FL
Matthew Rogers, Plantation, FL
Kyle Jordan Stoudenmire, Jacksonville, FL
Petar Stracenski, Miami, FL
William Cal Webb, Deland, FL
Theresa Wymer, Miami, FL
Amanda Young, Fernandina Beach, FL

Utility Specialist

William Commander, Jr., Ridge Manor Estates, FL
Darrin Salvador, Orange Park, FL

Are you thinking about becoming certified?

Visit the International ISA website

To access the certification application handbook with further information.

International Society of Arboriculture
Florida Chapter

Our Mission: "To Promote and Improve the Scientifically Based Practice of Professional Arboriculture"

Arborist Code of Ethics

Strive for continuous self-development by increasing their qualifications and technical proficiency by staying abreast of technological and scientific developments affecting the profession.

Not misuse or omit material facts in promoting technical information, products or services if the effect would be to mislead or misrepresent.

Hold paramount the safety and health of all people, and endeavor to protect property and the environment in the performances of professional responsibilities.

Accurately and fairly represent their capabilities, qualifications and experience and those of their employees and/or agents.

Subscribe to fair and honest business practices in dealing with clients, suppliers, employees and other professionals.

Support the improvement of professional services and products through encouraging research and development.

Observe the standards and promote adherence to the ethics embodied in this code.

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