

Fall 2014
In This Issue:

Crown Pruning	1
President's Message	2
Bald Eagle Rescue	6
Tree Fund Chair	8
Saline Soils English/Spanish	10
Bruce Smith	17
Upcoming Florida TCC	18
Scholarships	19
Congratulations	21
Consultant's Corner	22
Tree Disease Sweeps	26
Florida Chapter Board Updates	29
Florida Chapter Cert. Exam Schedule	30
Florida Chapter Education Schedule	30
New Florida Chapter Members	31
Arborist Certification Committee Report	32
Florida Chapter Tree Climbing FORMS	33-39

How much crown pruning is needed for a specific wind-load reduction?

Frank Rinn

Abstract:

Crown reduction is a standard procedure to reduce the risk of urban trees with structural defects near the trunk base. However, the recommended amount of pruning is usually based on a 'gut-feeling'. Understanding principles of tree wind-load as presented here will enable tree experts to more accurately determine how much of the crown to remove. In general, trees need to be pruned (their crowns reduced) much less than many arborists think to compensate for risk due to trunk or root defects. The advantages of less pruning and fewer and smaller pruning cuts include reduced impact on tree health and appearance, and environmental benefits, less pruning response, and cost-savings to the tree owner.

Keywords: *Wind load, crown reduction, pruning, and tree safety*

Introduction

When significant trunk and root collar defects are identified in urban trees, crown reduction is one of the most common practices to reduce wind load and, as a consequence, to increase the so-called breaking and uprooting safety. Although this is a standard procedure in many countries, the amount of required reduction is mostly estimated by 'gut-feeling'. Many arborists use the percentage of trunk cross-sectional area loss determined or estimated at the trunk defect as a guide to the amount of height or crown sail area reduction needed to achieve reasonable safety. For example: if 50 percent of the trunk cross-section is decayed, the crown has to be reduced by 50 percent. In general, this is far more

than actually needed.

The impact of a specific amount of height or wind-sail area reduction cannot be directly translated into a corresponding wind-load reduction because the functional dependencies are complex and not linear. To make decisions on crown reduction pruning more precise and reliable, a basic understanding of tree wind-load, as described below, is mandatory.

In this simplified approach, torsional aspects are left out, as they are much more complex and shall be described in another article. Thus, this text focuses on the bending moments at the stem base due to windloading.

[Crown Pruning continued on page 4](#)

A Message From the President



Greetings.

Our annual conference, Trees-Florida 2014, was an outstanding event attended by approximately 300 people. The site, Innisbrook Resort in Palm Harbor, was a beautiful venue with numerous family-friendly activities. In addition, this year's event had the highest number of exhibitors and sponsors to-date. The combined efforts of the Conference Planning Committee, the Education

Committee, The Tree Fund representatives and Chapter Staff are greatly appreciated.

In 2015, there will not be a Trees Florida event. Instead, the Chapter is hosting the Annual Conference of the International Society of Arboriculture in August. The event will be held at the Gaylord Palms in Orlando. This is an opportunity to showcase our Chapter and our beautiful state. The conference Chair is Mr. Don Winsett, and he is currently seeking volunteers to perform various tasks during the event. If you are interested in volunteering, please contact the Chapter office.

In addition to hosting the ISA Annual Conference, plans are under way to host an International Conference on the Economics of Tree Care in 2015. This event is currently being planned by the Education Committee and will include speakers from various parts of the world. The tentative venue is the Tampa Bay area and the tentative date is spring 2015. Stay tuned for further information.

Finally, the Florida Chapter Tree Climbing Championship is planned for October 25 and 26 in Myers Park, Tallahassee. The event is being coordinated by Mr. Adam Jackson and the TCC Planning Committee. The Outdoor Tree School, a day-long educational seminar, will take place on Friday, October 24, and is being coordinated by Ms. Kim Paulson and her group. Mr. Ron Litts is graciously providing oversight for both events. This Florida event has been rescheduled for this fall in order to accommodate the International Tree Climbing Championship which will take place in Rowlett Park in Tampa on March 21-22, 2015. We are excited to welcome climbers from around the world at this international event being held right in our own backyard!

The Board continually seeks your feedback. Do not hesitate to send your opinions to the Chapter office or to directly contact members of your Board of Directors. If you are interested in serving on any of the committees, please contact me at ad.ali@davey.com.

Sincerely,

Dr. A.D. Ali
President, Florida Chapter ISA

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Workshop Flyer



Pruning with Dr. Ed Gilman

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Flyer



Outdoor Tree School

Tallahassee - Friday, October 24, 2014



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See forms at back of this Florida Arborist
See event details on page 18 of this Florida Arborist
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[Crown Pruning continued from page 1](#)

Tree wind-load relations

The discussion presented below regarding wind-load basics is a summary of concepts excerpted from published articles by Davenport, Ruck, Spatz, Brüchert, and Niklas. Following Davenport (Fig. 1), wind speed (v) increases with height above ground (z) and this is typically described by the following equation:

$$v(z) = v(z_{ref}) * \frac{z^a}{z_{ref}^a}$$

z_{ref} is defined as the height above ground where the wind is no longer disturbed by surface roughness, such as trees or buildings. The exponent (a) describes the surface roughness and typically ranges from 0.1 to 0.5:

Surface type	Exponent
Town Center	0.4
Suburbs	0.3
Forests	0.28
Agricultural land	0.25
Ocean	0.16

For the typical urban and suburban tree to be inspected in terms of traffic safety, the exponent (a) thus ranges between 0.3 and 0.4.

The drag on any part (i) of the crown ‘sail area’ as represented by the locally acting force (f_i) mainly depends on wind speed (v), air density (q) and the drag coefficient (c):

$$f_i \sim \frac{1}{2} * q * c * v^2$$

In a simplified approach, the total force (F) on a tree crown with a ‘sail’ area (A) is a sum of all (infinitesimal) forces (f_i):

$$F = \sum f_i = \frac{1}{2} * q * c * v^2 * A$$

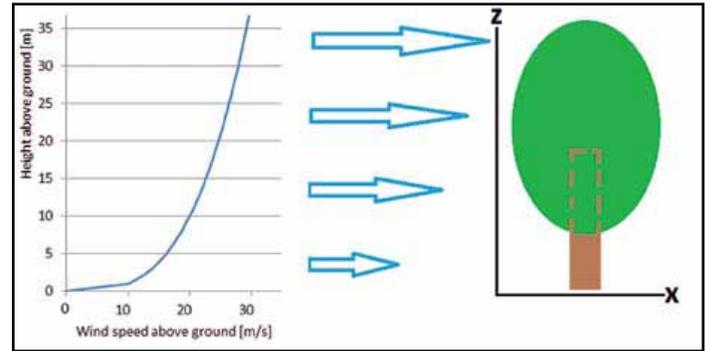
This approach is a very rough approximation for several reasons, such as:

- Wind speed (v) changes with height above ground.
- The drag coefficient (c) of the crown changes with wind speed (v).
- The ‘sail’ area (A) changes with wind speed (v).

The dependencies, especially between wind-speed, height, drag coefficient, and sail area, are nonlinear, and thus difficult to describe here comprehensively. However, a simple approach can be applied based

on measurements published by Ruck that showed how the drag coefficient of trees drops from around 1 for low wind speeds to approximately 0.3 for high wind speeds in storms and gusts (>30m/s). This drop in drag-coefficient covers the effects of both crown re-configuration and smaller sail area in higher wind speeds.

Figure 1. Assuming a ‘roughness’ parameter for typical suburban situations (a=0.3) and a wind speed of 40m/s on 100m above ground (=reference height), this is the resulting vertical increase of wind speed dragging the tree crown.



Assuming constant air density and drag coefficient, the total force (F) acting on a tree crown is proportional to a wind speed integral over the surface area:

$$F \sim \iint (v(z))^2 dx dz$$

Effective wind load

In terms of engineering, safety of a structure is mostly defined as the load-carrying capacity divided by the load. This value is often called the ‘safety factor’. Consequently, stem breakage and uprooting safety of a tree are usually determined by the corresponding load-carrying capacity divided by the bending or tipping moment as representing the load. For calculating the bending moment, the force (f_l) acting on each part (i) of the crown sail area (A) has to be multiplied by the length of the acting lever arm (li), which, in this simplified case, is height (z) above ground:

$$m_i = f_i * l_i = f_i * z_i$$

The total bending moment (M) acting at the stem base is proportional to wind speed multiplied by height, integrated over the crown surface area:

$$M \sim \iint (v(z))^2 * z dx dz$$

Replacing wind speed by its determining parameters, the total wind bending moment (representing the load on the tree) can be described by:

$$M \sim \frac{v(z_{ref})^2}{z_{ref}^{2a}} \iint z^{1+2a} dx dz$$

The integral represents a sum of infinitesimal steps, running over the sail area (x from 0 to crown width W, and z from 0 at ground level to tree height H). Despite the importance of shape of the crown sail-area, the integration result reflects the dominating influence of tree height and crown width on bending moment as the major functional dependencies:

$$M \sim W * H^{2+2a}$$

[Life in the Urban Forest continued on page 5](#)

Crown Pruning continued from page 4

Hasenauer showed in empirical studies (1997) that the crown diameter of solitary trees typically correlates with tree height: crown-width ~ treeheight^b, b>1, resulting in:

$$M \sim H^2 + 2a + b$$

Assuming the height exponent (a) is being approximately 0.3 to 0.4 for urban and suburban trees, the bending moment at trunk base depends on tree height to the power of more than 3.5: $M \sim H^{3.5} + \dots$

That means that tree height is the most important factor dominating trunk base bending-moment due to wind-loading of mature urban trees.

Practical consequences

If two trees of similar crown architecture and site conditions are compared and one has a height twice that of the other, the wind-load bending moment at the stem base of the taller tree would be at least an eight times higher (2³=8) than that of the shorter tree. However, due to the influence of width, shape, and height of the crown, a tree-height reduction of 10% (H*0.9) does not directly lead to a wind-load reduction of 27 percent (0.93³≈0.73) or 31% (0.93.5³≈0.69). But, the resulting wind-load reduction percentage is commonly significantly greater than the reduction of the tree height and crown sail area.

If we assume, in a simplified approach, a tree resembling a circle on a pole (Fig. 2), the resulting wind-load reduc-

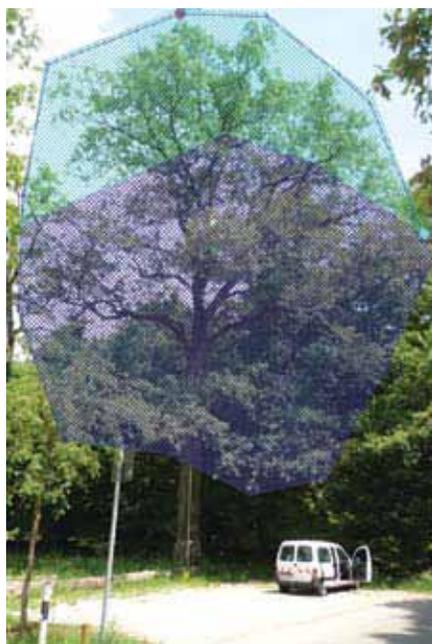


Figure 2. (Left) If this nearly circularly shaped crown would be reduced in height by about 10% this would lead to a reduction of the sail area by a little more than 10% and of the wind load by about 20%, approximately.

Figure 3. (Right) A reduction of the tree height by about 20%, in this case, leads to a reduction of the sail area by about 30% and squeezes down the wind load bending moment at the stem base by about approximately 50%.

tion can be approximately twice as high as the reduction in height. That means, in this case, if tree height is reduced by 10 percent, wind-load is reduced by 20%, approximately.

In a more typical case of a common mature urban tree (Fig. 3), resulting wind-load reduction is more than twice the reduction in tree height. Although this amplification factor of 2 or more is very common, there is no simple rule for calculating the resulting wind-load reduction from the amount of height reduction because it depends on the ratio of crown height and width to overall tree height. As a rule of thumb, a factor of two is reasonable. That means, if a tree needs a strong reduction of wind load by about 50% (because of decay in the trunk base, or increased wind-load due to site changes), tree height has to be reduced most likely by less than 25 percent!

In addition, we have to take into account that the size of internal decay column does not equal the corresponding loss in load-carrying capacity (Rinn 2011) and that mature trees inherit much higher safety factors due to their natural allometric design (Rinn 2013). This commonly results in much lesser required windload reduction even when extensive defects are present as compared to many currently applied standard procedures.

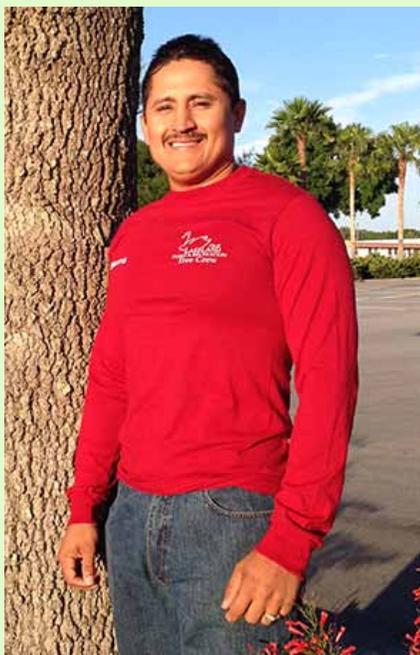
If all these aspects are understood and applied in combination, the actual level of crown reduction required will often be much less than commonly practiced. Mature trees will remain healthier and survive longer when their crowns are reduced to

the extent actually needed to achieve reasonable tree safety. In addition, less crown reduction leaves greater photosynthetic capacity, enabling trees to better defend themselves against insect pests, and fungal pathogens. Thus, when properly applied, crown reduction improves tree safety and, at the same time, has significantly less negative impacts on tree health and vitality, as well as esthetic and environmental benefits, while providing cost-saving to private and municipal tree owners. It also can minimize the chance of sunburn injury and resultant decay, particularly in species sensitive to extensive pruning. ❖

Bald Eagle Rescued in Lakeland



Arborists do more than save trees!



It was a joint effort to save a bald eagle that was entangled in fishing line and hanging from a tree in Lakeland, FL recently. The combined efforts of the Florida Fish and Wildlife Conservation Commission (FWC), Lakeland Fire Department, Lakeland Parks and Recreation, Polk County Animal Services and a Lakeland arborist made it possible to free the eagle.

The eagle was hanging above a pond and apparently had been there since early morning. Help arrived when Elias Rodriguez, with the City of Lakeland Forestry crew, reached the bird and cut the fishing line; the bird fell into the water. A firefighter in a kayak was waiting in the pond below and he quickly scooped the eagle up in a net. The eagle was handed over to a FWC biologist and an animal control officer who worked together to untangle the bird.

The eagle was immediately taken to a veterinarian. The bird didn't have any fractures, but two feet of fishing line was found embedded in its carpal wing joint. The FWC biologist at the scene reported that the bird was responsive and alert. The eagle will be rehabilitated at a local wildlife rehab facility for its return to the wild. ❖



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From Your TREE Fund Chair - Eric H. Hoyer

TREE Fund Update

HOW ARE WE DOING?

Half way through the calendar year Florida is well on its way to a great year of supporting the TREE Fund. The Tree Research and Education Endowment fund supports arboricultural and urban forestry research and provides educational outreach to students from around the country. Perhaps Florida's largest contribution is from its Tour des Trees contingency consisting of four riders this year – Andy Kittsley riding in his 18th Tour, Dr. Andrew Koeser of the University of Florida, Scott Davis, Public Works Director of Miramar, and Bill Veach, a retiree from Ft. Myers Beach. Thus far, the team has raised just over \$8,800 (as of July 13); each rider is responsible for \$3,500 so they must raise a total of \$14,000. Donations can be made to the team or

to individual riders at <http://stihltourdestrees.org/2014-rider-gallery>. The ride started July 27 and went through scenic Wisconsin where it concluded at the International Conference in Milwaukee. Remember – even though the Tour is over, donations are accepted through October.

One of the main features of the International Conference is the live auction to raise money for the TREE Fund. The Florida Chapter contributed \$1,200 toward a \$2400 Kennedy Space Center package which includes a four night stay for two at an Orlando hotel, lunch with an astronaut, admission to the Space Center, a guided tour, and airfare. We are hoping this package will sell for much more than its face value; any revenues over the \$2400 value will be credited to the Florida Chapter. The Florida Chapter also raised money for the TREE Fund at the recent Trees Florida Conference in Innisbrook. The Silent Auction raised \$3,465, the “heads and tails” bandanas were a hot item and garnered an additional \$710, donations \$290, the golf outing \$485, and the fishing derby \$110 for a total of \$5,060 for the Trees Florida conference.

There is still an opportunity to contribute to the TREE Fund and it's easy. For you Amazon shoppers, **Amazon gives to the TREE Fund**. The TREE Fund is a registered charity with AmazonSmile, the charitable portal to Amazon.com. AmazonSmile is a simple and automatic way for you to support the TREE Fund every time you shop, **at no cost to you!** AmazonSmile will give 0.5% of your eligible purchase total to the TREE Fund, with no cap on donations. AmazonSmile has the same products, prices, and service that you get at Amazon. You may use the same account on Amazon and AmazonSmile; your shopping cart, wish list, registries, and other account settings are also the same. Go to <http://smile.amazon.com/ch/37-1018692> and start shopping--it's that easy to support tree research and education.

Thank you for everyone's support thus far this year. We should be well on our way to exceeding \$20,000 to the TREE Fund for 2014. ❖



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How Saline Soils and Salt Spray Drift Impact Trees and Shrubs

Henry Mayer, Miami Dade UF/ IFAS Extension Agent

Information based on the articles of: A. Shober, R. Black, B. Appleton and E. Hanlon



Fig. 1 Coastal habitat

If you think that the state of Florida offers a wealth of plant material and good growing environment, you're right. But try gardening near or on the Atlantic and the

Gulf coasts and you may have problems. Winds carry salt spray inland leaving salt deposits on plants. Salt causes water to move out of the plants in a process called exosmosis. Especially on young leaves, this often results in the marginal burning and loss of leaves in non-salt-tolerant plants. Salt tolerance of a plant relates to resistance and ability to grow under conditions of (1) high winds, (2) salt spray, (3) alkaline soils, and (4) infertile, sandy soils. The tolerance of a given plant to salt may be affected if any of the four conditions become extreme.

How do saline soils affect trees and shrubs?

Plant root cells contain a membrane which allows water to pass through, but which prevents salt from entering. As the soil's salt content increases, it becomes more difficult for water to pass through the membrane into the root. In addition, if salt levels get high enough they may actually dehydrate roots or cause "salt burn" by drawing water out of root cells.

Plants vary in their ability to grow in salty soils. Plants that grow only in saline soils are called "halophytic" or salt loving. Halophytic plants are generally found in coastal areas, in salt-water marshes, and in brackish (moderately saline) wetlands. The presence of some of these plants (such as spartina and sea

oats) is generally indicative of a saline soil

Most landscape plants are sensitive to soil salinity. Seedling trees and shrubs and young transplants can be particularly sensitive to salt exposure. The severity of salt damage to plants depends upon the amount and duration of exposure, and the concentration of salt. For example, coastal areas that receive consistent salt spray may always have elevated levels of soil salinity. Areas subject to flooding by brackish water may only be affected by salinity following storms and high tides. The higher the amount of salt in the soil, the greater the impact on plants. Salt damage is generally more severe during periods of hot, dry weather.

Salt Spray

Salt spray is created when waves break on the beach, throwing tiny droplets of salty water into the air. On-shore breezes blow this salt-loaded air landward where it comes in contact with plant foliage. The amount of salt spray plants receive varies depending on their proximity to the beachfront, creating different vegetation zones as one gets further away from the beachfront. The

[Saline Soils continued on page 12](#)

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¿Cómo los Suelos Salinos y la Sal Impactan a los Árboles y Arbustos?

Henry Mayer, Miami Dade UF/ IFAS Extension Agent

Información basada en los artículos de: A. Shober, R. Negro, B. Appleton y E. Hanlon



Fig. 1. Hábitat costero

Si usted cree que el estado de Florida ofrece una gran cantidad de material vegetal y un buen ambiente para las plantas, usted tiene razón. Pero trate de instalar un jardín cerca del Atlántico o de las costas del Golfo, y puede que tenga problemas. Los vientos del mar contienen sales lo que dejan depósitos en las plantas. El exceso de sales en el ambiente hace que el agua salga del tejido de las plantas en un proceso llamado exosmosis. En plantas con poca tolerancia a la sal se observa quemadura en las márgenes de las hojas jóvenes. La tolerancia a la sal de una planta se refiere a la resistencia y a la capacidad de crecer en condiciones de (1) fuertes vientos, (2) spray por sal, (3) suelos alcalinos, y (4) suelos infértiles y arenosos. La tolerancia de una determinada planta a la sal puede ser afectada si alguna de las cuatro condiciones se presenta.

¿Cómo los suelos salinos afectan a los árboles y arbustos

Las células de la raíz contienen una membrana que permite que el agua pase a través de ella, pero evita que la sal pase. Cuando el contenido de sal en el suelo aumenta, se hace más difícil que el agua pase a través de la membrana de la raíz. Además, si los niveles de sal son lo suficientemente altos pueden sacar el agua de las células de la raíz causando deshidratación “wilting” y quemaduras.

Las plantas varían en su capacidad de crecer en suelos salinos. Las plantas que crecen en suelos salinos se llaman “halófilas”. Las plantas halófilas se encuentran generalmente en las zonas costeras, salinas y salobres (moderadamente salinas). La presencia de algunas

de estas plantas (como spartina) son generalmente indicativas de suelo salino. La mayoría de las plantas son sensibles a la salinidad del suelo. Árboles y arbustos pequeños pueden ser especialmente sensibles a la exposición por sal.

La severidad del daño depende de la cantidad y la duración de la exposición y la concentración de sales. Por ejemplo, las zonas costeras que reciben constante sales tienen niveles elevados de salinidad en los suelos. De igual manera, las zonas sujetas a inundaciones provocadas por agua salobres provocadas por mareas altas o tormentas pueden ser afectadas por la salinidad. Cuanto mayor sea la cantidad de sal en el suelo, mayor será el impacto sobre las plantas. La salinidad es más alta durante los períodos de clima caluroso y seco.

Spray por sales

El spray por sales se crea cuando las olas rompen en la orilla de que se produzcan mayores daños.

Suelos Salinos continued on page 14

Florida
e-Tree News



The Florida e-Tree News is a free monthly e-letter sent out by the Florida Chapter ISA. It is intended to inform arborists, tree care workers, landscape architects and other green industry professionals of up-to-date arboriculture information in the state of Florida.

www.floridaisa.org

Saline Soils continued from page 10

most salt-tolerant species survive in the frontal dune area. As distance away from the ocean increases, the level of salt spray decreases, allowing plants with less salt tolerance to survive.



Fig. 2. - Live oak with spray damage on the East side (ocean side)

The aerial drift of salt-laden water droplets that are deposited on trees and shrubs causes salt spray damage. When droplets evaporate, the salt's sodium and chlorine ions can penetrate stems, buds and leaves, causing direct damage. Salt spray damage to trees and shrubs is most frequently seen on seaside plants. Additional stresses in these areas, including wind, sun, heat, exposure, heavy traffic and saline soils, increase the likelihood of damage.

How does salt spray affect trees and shrubs?

Exposure to salt spray can cause stem and foliage disfigurement, reduced growth, and often plant death. Because aerial salt spray damage may appear similar to damage caused by other stresses, a tree or shrub's location and damage symptoms should be carefully evaluated to correctly identify the damage's cause.

Symptoms of salt spray damage

Examine injury patterns on trees and shrubs. Winter salt spray damage to deciduous plants causes bud death and twig dieback. Tree and shrub growth after this damage will have a "witches-broom" (tufted) appearance. On foliage, salt spray causes leaf burn or scorch, or needle browning. Direct signs such as white salt residue are a strong indication that salt spray may be injuring landscape plants.

How Do I Know if I Have a Soil Salinity Problem?

The soil can be tested for electrical conductivity (EC) if you suspect a salinity problem. It is also possible to

Saline Soils continued on page 13



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▶ See the video



Saline Soil continued from page 12

test irrigation water if the water is the suspected source of the salinity. This may be an issue when irrigating with reclaimed water or well water in coastal regions. The EC test measures the ability of a solution to conduct electricity, so the higher the EC value, the more salt there is in the solution. This is straight forward for irrigation water, since the test can be run directly on that solution. In order to test the EC of soils, the soil must first be mixed with water and then the EC of the water is measured. It is important to note that the EC test will provide information about how much salt is in the sample, not which salts are present. Results of the EC test can be presented in several units, including deciSiemens per meter (dS/m) and or millimhos per centimeter (mmho/cm), which are units read directly from the testing instrument.

Alternatively, salinity may be reported as milligrams per L (mg/L) or parts per million (ppm) of total dissolved salts based on a mathematical relationship. Conversion factors for the EC and salinity units are located in Table 1. The EC categories for soils and irrigation water are listed for all units in Tables 2 and 3, respectively.

Table 1. Conversion factors for EC and salinity test results.

To convert from this EC or Salinity Unit	Conversion Factor	Result is this EC or Salinity Unit
1 mg/L	x 1	1 ppm
1 dS/m	x 1	1 mmho/cm
1 mmho/cm	x 1000	1 imho/cm
1 dS/m or 1 mmho/cm	x 700	1 mg/L or 1 ppm (TDS)
1 dS/m	x 8	Salt Index

Table 2. Relationship between plant salinity tolerance and soil EC or salinity measurements for sandy soils

Plant Tolerance	Electrical Conductivity dS/m or mmho/cm	Salinity mg/L or ppm
Sensitive	<3	<2100
Moderately Sensitive	3-6	2100-4200
Moderately Tolerant	6-8	4200-5600
Tolerant	8-10	5600-7000
Highly Tolerant	>10	>7000

Table 3. Interpreting EC (or salinity) measurements of irrigation water

Class of Water	Electrical Conductivity dS/m or mmho/cm	Salinity mg/L or ppm
Excellent	<0.25	<175
Good	0.25 – 0.75	175 – 525
Permissible	0.75 – 2.00	525 – 1,400
Doubtful	2.00 – 3.00	1,400 – 2,100
Unsuitable	>3	>2,100

Literature Review:

- http://manatee.ifas.ufl.edu/lawn_and_garden/master-gardener/gardening-manatee-style/s/salt-tolerant-plants-florida.pdf
- <http://pubs.ext.vt.edu/430/430-031/430-031.html>
- <http://edis.ifas.ufl.edu/ss118>
- <http://edis.ifas.ufl.edu/mg447> ❖

Suelos Salinos continued from page 11

¿Cómo la sal afecta a los árboles y los arbustos?



Fig. 2. - Live oak con daños por salinidad en el lado Este (lado del mar)

Exposición por sal puede causar desfiguración del tallo y el follaje, reducción del crecimiento, y a menudo muerte de la planta. Los daños por sal parecen similares a los daños

causados por otros factores, por lo que deben evaluarse cuidadosamente para identificar correctamente la causa de los daños.

¿Cómo puedo saber si tengo un suelo salino?

Un suelo puede ser analizado por conductividad eléctrica (CE) si se sospecha un problema de salinidad. También es posible analizar agua de riego si el agua es la fuente sospechosa de la salinidad. Esto puede ser un problema cuando utilizamos aguas recuperadas o agua de pozo localizadas en las regiones costeras.

La prueba de la CE mide la capacidad de una solución para conducir la electricidad, por lo que un valor alto de CE, implica que la solución tiene muchas sales. Con el fin de medir la CE de los suelos, el suelo debe ser mezclado con agua y, a continuación, la CE de la solución se mide. Es importante señalar que la medición de la CE proporcionará información sobre la cantidad de sales presentes pero no del tipo.

Suelos Salinos continued on page 15

MARK YOUR CALENDAR!

OUTDOOR TREE SCHOOL

Tallahassee - Friday, October 24, 2014

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Suelos Salinos continued from page 14

Por otra parte, la salinidad se determina en miligramos por litro (mg/L) o partes por millón (ppm) de sales disueltas en la solución. Algunos factores de conversión para la CE y la salinidad se encuentran en la Tabla 1. La Tabla 2 y 3 muestran la relación entre la tolerancia de las plantas, el agua de riego y la cantidad de sales.

Tabla 1. Factores de conversión de CE y la salinidad

Para convertir estas unidades de CE o Salinidad	Factor de Conversion	Resultados en estas unidades de CE o Salinidad
1 mg/L	x 1	1 ppm
1 dS/m	x 1	1 mmho/cm
1 mmho/cm	x 1000	1 imho/cm
1 dS/m or 1 mmho/cm	x 700	1 mg/L or 1 ppm (TDS)
1 dS/m	x 8	Salt Index

Tabla 2. Relación entre la tolerancia a salinidad de las planta y el CE en el suelo

Tolerancia de la Planta	CE dS/m or mmho/cm	Salinidad mg/L or ppm
Sensitive	<3	<2100
Moderately Sensitive	3-6	2100-4200
Moderately Tolerant	6-8	4200-5600
Tolerant	8-10	5600-7000
Highly Tolerant	>10	>7000

Tabla 3. Interpretaciones de CE (o la salinidad) en mediciones del agua de riego

Clase de Agua	Conductividad Electrica dS/m or mmho/cm	Salinidad mg/L or ppm
Excellent	<0.25	<175
Good	0.25 – 0.75	175 – 525
Permissible	0.75 – 2.00	525 – 1,400
Doubtful	2.00 – 3.00	1,400 – 2,100
Unsuitable	>3	>2,100

Revision de Literatura:

- http://manatee.ifas.ufl.edu/lawn_and_garden/master-gardener/gardening-manatee-style/s/salt-tolerant-plants-florida.pdf
- <http://pubs.ext.vt.edu/430/430-031/430-031.html>
- <http://edis.ifas.ufl.edu/ss118>
- <http://edis.ifas.ufl.edu/mg447> ❖



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The Florida Chapter ISA Loses a Family Member - Bruce Smith



The Florida Chapter ISA lost a member of the ISA family recently with the passing of Bruce Smith. Bruce Smith passed away June 20, 2014 at the young age of 55. Bruce will be remembered for his many contributions to the arboriculture community and to the Florida Chapter ISA.

Bruce was co-owner of his family run tree business in Sarasota with his wife Lita. He had been in the tree industry for more than thirty years. Bruce gave his time to the industry serving on ISA ITCC committee, ISA test committee, special projects for the EGS committee such as publications and training videos including the Art and Science of practical Rigging. He served on the ANSI Z133 committee. He was on the Florida Chapter Board of Directors from 2000-2007, was Chapter President in 2005. Bruce also served as a Chapter TCC chair

for several years and was an arborist safety trainer for the Florida Chapter. In 2013 he was the recipient of the highest award given by the Florida Chapter, the Bok Award for lifetime achievement. Lita accepted the International ISA Millard F. Blair Exceptional Contribution to Practical Arboriculture Award posthumously at the International Conference in Milwaukee in August. In his spare time Bruce was an avid wood turner and woodworker, creating nearly 100 pieces of art, vessels and furniture.

A memorial/Celebration of Life is planned for November 2nd, 2014 at the Marie Selby Botanical Garden in Sarasota from 3 - 9 PM. Memorial donations may be made in Bruce's name to the Florida ALS Association or Tidewell Hospice. Donations toward his Celebration of Life may be made at [GoFundMe](#).

The ISA family will miss his gentle manner, his charismatic nature and the passion he brought to everything in which he was involved. He will truly be missed. Rest in peace dear friend. ❖

TREE APPRAISAL WORKSHOP

ORLANDO - Mead Gardens in winter Park - Tuesday, September 30, 2014

FORT LAUDEERDALE - Holiday Park - Friday, October 3, 2014

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The TreesAreCool program is administered by the Florida Chapter of the International Society of Arboriculture (ISA).

Florida Chapter Tree Climbing Championship and Arbor Fair - Oct. 2014

FLORIDA CHAPTER



Join us in Tallahassee for the Florida Chapter Tree Climbing Championship and Arbor Fair - **October 25-26, 2014** at Myers Park: 909 Myers Park Drive, Tallahassee, FL.

FCTCC Arbor Fair Chair: Ron Litts, E-mail ronlitts@gmail.com

FCTCC Climbing Chair: Adam Jackson, E-mail ajjackson@valleycrest.com

FCTCC Setup: Danae Jackson, E-mail danaejackson@gmail.com

FCTCC Education: Kim Paulson, E-mail treeladyoffice@aol.com

Contact the Committee members above if you have any question about competing or volunteering, or being an exhibitor or a sponsor! We all look forward to seeing Florida's best climbers compete for the opportunity to represent the Florida Chapter at the International Tree Climbing Championship in TAMPA on March 21-22, 2015.

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MARCH 21-22, 2015 TAMPA, FL**

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Sarasota, FL 34240
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*Winner of the Florida Chapter TCC will need to be a member of International ISA in order to compete at the International TCC

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Exhibitors

Interested in exhibiting at a booth at our event? [Click here for the Exhibitor Form and Contract .](#)

Sponsors

Sponsors are greatly appreciated at our annual event! Monetary and/or Gear donations are accepted. [Click Here For Sponsor Forms.](#)

October 2014 Tree Climbing Championship Prize Package

The Florida TCC prize package is intended to help equip the chapter winner(s) (male/female) for the International Tree Climbing Championship in Tampa on March 21-22, 2015.



Scholarship Awarded

Congratulations to John Roberts as recipient of the Fall 2015 John White Memorial Scholarship. John is a PhD student in Environmental Horticulture at the University of Florida. The John White Scholarship is awarded jointly by the Florida Chapter ISA and the Florida Urban Forestry Council. The John P. White Memorial Scholarship was created to encourage students to pursue careers in Florida's arboriculture/urban forestry industry or a related field.

Applications for the Spring 2015 semester are due by November 15, 2014. Don't delay! Find the application at www.floridaisa.org.

Applications for the Spring 2015 semester are due by November 15, 2014. Don't delay! Find the application at www.floridaisa.org.

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Applications for the Spring 2015 semester are due by November 15, 2014

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ArborMaster Climbing Kit Prize Package

The Florida Chapter ISA is pleased to announce the 2015 ArborMaster Climbing Kit Prize Package for the Florida Chapter Tree Climbing Champion (TCC). This climbing kit is being offered to each chapter champion (both man and woman, if applicable)! The package is intended to help equip the chapter representative(s) for the International Tree Climbing Championship (ITCC) Competition being held right in our own "back yard" - in Tampa, FL March 21-22, 2015.

Each prize package includes:

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Congratulations and Thank You!



2014 Florida TCC winner *Jason Gerrish* went on to represent the Florida Chapter at the International TCC in Milwaukee during August. Congratulations on your achievement and thank you for representing the Florida Chapter.

Climbers: Get “geared up”!

Climbers: get “geared up” for the next ITCC that will be held right here in our own back yard! Join us at the Florida TCC in Tallahassee on October 25-26 to take aim at the chance to compete in Tampa against international climbers during spring 2015! What an honor to climb for your own state on your own turf! Submit your Florida TCC registration early to save your spot. Forms are located at the back of this publication and at www.floridaisa.org. ❖

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Consultant's Corner

by Joe Samnik, Consulting Arborist



DESTINATION: BEAUTIFUL PARK OF HORRORS

We have all been there before; whether a family vacation, quick getaway, conference or convention, the destination venue has become as important as the meeting agenda itself, personal or professional.

And to be certain the first thing to grab one's attention is the landscape. Beautiful flowers that you only wish were at your home or office, gorgeous palm trees whose trunks look like they were hand cut into the shape of diamonds (which they were), green rolling hedges, flowering trees, variegated shrubs, and the obligatory closely manicured carpet of green grass. What a sight. The landscape almost invites you to walk upon it, smell it, touch it or otherwise become engaged with the feng shui, somehow connecting with our urban imperative to become one with nature Ah, *faites vos jeux* gentlemen, gentle ladies, and kids of all ages as there are hidden dangers associated with this inviting Garden of Eden. Some of the more memorable, if not tragic outcomes follow, gathered from the recesses of my mind walking the hallowed halls of my recollection for decades now.

THE INDECISIVE WOMAN

The attentive mother of two finally gets a long deserved vacation from the de rigueur of everyday day life. With a cabana boy in close check she orchestrates the direction of just



precisely where to have her lounge chair placed on the carpet of green grass. Over here please. No, wait over there. Okay, one last choice. Put it right *there*. As her dutiful attendant pursues a drink with an umbrella in it, the mother of two settles into a restful pose under a palm tree whose last fiber of strength gives way to an internal decay. The tree fails and crushes her.

Fourteen months later a site analysis reveals the undeniable

evidence of the internal decay but on the outside of the trunk. Highly visible and obvious; however, the question becomes, was the highly visible sign obvious at the time of failure?

THIRTY-ONE FLAVORS

After finally making up his young mind on which flavor of ice cream he desires, the little boy and his father must now



decide where in the cacophony of sights and sounds they will sit to enjoy their culinary delight. You now know the drill. Over there, no, over here, wait, there's the *perfect* spot. As the little boy and his dad bond over their culinary treat, nestled in the shade of a multi-stemmed palm tree, an invisible lack of structural strength is eroding the ability of the palm trunk to support itself. The trunk fails and lands upon the little boy. But wait, there's more! Can you zoom-in on the base of the remnant trunk? What is that...a mushroom? Well, sort of. Actually it is called a basidiocarp and is the fruiting flower of the disease, a very obvious sign of trouble in a palm tree.

TO BUILD A FIRE

Few can deny the joy of camping in the woods. Surrounded by nature and a crackling camp fire, one may quickly forget the day-to-day grind. There are some basic decisions to be made, like where to place the camping chairs so that the smoke from the camp fire does not cause respiratory failure. Should dinner be made over the camp fire or had at the four star restaurant just a quick golf cart ride away? Once again the obligatory drill of just exactly where to place the chairs. Please refer to the aforementioned scripts on seating arrangements. Once in place the chair offers the exact creature comfort which affords a relatively smoke free environment. Presumably, the loud and sharp cracking noise of the decayed trunk buckling under

[Park of Horror continued on page 23](#)

[Park of Horrors continued from page 22](#)

its own weight was wonderment as the 70 foot monster sized tree crashed upon the chair's occupant, instantly eliminating the conundrum of where to eat dinner that night. So, let's get a chain saw guy and a front end loader over here. Cut the tree into six foot sections and roll them over please. Ah, what's this? A cavity in the trunk measuring four feet in length and at least eight inches in depth...

WHEN IT RAINS IT POURS

Thankfully, there is no placement of chairs associated with this tragic event. There is just a woman in the noon tide of a brilliant career who decided to make a run for it during a monsoon instead of staying in the gift shop and waiting it out. After the newly installed palm tree failed and crushed the woman, who survived but will be eating dinner through a straw for the rest of her life, any number of experts testified that



the problem was the number of stakes propping up the palm tree. One expert opined that three stakes is enough to provide structural support. Another expert stated categorically that four stakes provided no additional strength than three stakes. Yet another noted it did not make a difference because one of the nails, whose job is to be affixed to the support stakes, completely missed the target for which it was intended ergo there were no supports holding up the tree which failed. Under the ground and out of sight another phenomenon was occurring. Due to the heavy rains and perhaps a broken irrigation line or two, the sandy soils simply failed to hold onto the root system and slipped away from the tree. No support system could have held the palm tree in an upright position.

DUMB OR DUMBER



If you are dumb you are unable to speak. If you are stupid you may fall into the category of our next resort quest that ended up as being both. So, what does one do when waiting in the

lobby for check- in? Read, observe, check email, go to the bar? No, wait, check out that drop dead gorgeous plant growing in that beautiful urn, can't get that plant back home in Michigan. And look, the name of the plant is prominently displayed for future shopping opportunities on Amazon, *Dumb Cane*. What an interesting name! Derivations aside, let's get a cutting of it to take back home. Wow, look at the white sap that exudes from where the cutting was made. Yikes, it's sticky and all over the place. Let's go wash our hands in the restroom. Nay, let's wipe the offensive substance on the couch cushion and then, well, let's smell it. No smell. Let's taste it. Now there's a stupid idea but hey, it's vacation time. Hold on here. Why is her throat swelling? Why can't she talk? Why can't she breathe? Okay, full panic mode here. While her name has yet to be called for check in, let's jump up and down, scream (silently, of course), grasp her throat, and start the process of pushing and clearing everything off the check-in desk and grab anybody in sight and shake them vigorously. Let's call the police and dial 911. The Heimlich maneuver didn't work. Neither did CPR. How about showing the cutting to the 911 responders? Now there's an idea worth consideration. Shortly after administering an anaphylactic remedy the Future Farmers of America reportedly checked into her room after a brief stint in the ER. It is not known if her cutting rooted or not back home.

HOW MUCH IS THAT DOGGIE IN THE WINDOW?



Of course some folks cannot go on vacation without their best friend. Guised as a service animal but not fooling anyone in management of the room she reserved with the word, Presidential, in front of it, this prized

Afghan hound looked the part of the blue ribbon winner at the Westminster Dog Show. Long and lovely pure white coat, this regal K9 eventually had to do her business. And nothing short of the finest display of turfgrass will suffice for this necessity of life. Wait, what is that sign sticking up in the lawn? *Pesticide Treatment-Stay Off*. Certainly that warning wasn't meant for Precious. No, this is a very unique animal and the chelated iron, still dripping from the blades of grass to which it was applied for instant green-up results, would never stain the impeccable coiffured long white coat of the aforementioned Precious. I'm guessing here that the owner went for one of those new short hair cuts that are such the

[Park of Horrors continued on page 24](#)



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Treemart

RPG Growers are committed to enhancing the image and quality of field-grown trees through the hardening-off process. Research continues to show that hardened-off field-grown trees are more wind resistant, use water more efficiently at planting, establish faster after planting, and when planted with container trees in a situation of limited water or irrigation will have dramatically higher survival rates.

To Subscribe to the RPG Times Newsletter or to request copies of the Tree Grading, Planting or Pruning Cue Cards contact an RPG member or visit www.rootsplusgrowers.org

[Park of Horrors continued from page 23](#)

rage among the coterie of elite dog owners.

BEWARE: BAD PLANT



Have you noticed the lengths to which corporate America is going to demonstrate that they are *Green*? Green is the new black. And not to be outdone one resort mass planted a ground cover of

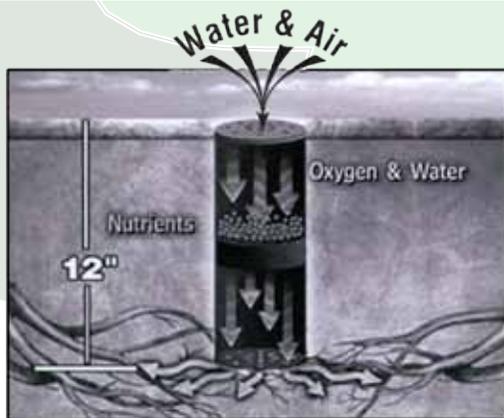
Japanesque xeriscape plantings known as *Euphorbia milli*. You can just go ahead and call it 'crown-of-thorns' with emphasis on the word, thorns. To be sure, this is a beautiful plant. With small green leaves and beautiful pink blooms. It does not grow much higher than eight to ten inches. It will survive on rainfall. It has few if any insect problems and tends not to host diseases. But there are those pesky thorns, lots of them, long and very sharp. And, like our lady from Michigan discovered, its sap can truly do a number on you. This is especially true when the sap gets into your eyes. Think blindness. Now comes the question, where in the landscape should we put this plant. Yes, of course, along the pathway leading to the children's pool. Why didn't we all think of that? No worries there. Children are not inquisitive beings and the probability of them trying to pick or smell a flower is highly remote. The chances of their unprotected legs brushing against the thorns are quite improbable. Yet, beyond belief, somehow a child attempted to pick a flower for his mom. After impaling his finger on the thorns, he instinctively reacted by jerking his hand away from the plant. Out came the sap. And, in the midst of screaming and crying, wiped his eyes with the finger covered with sap and at least two protruding thorns. His classmates have now nicknamed him Patch for the covering over what used to be his eye.

Sadly, the column space for this short review of the foibles of resort and destination visits has come to an end but not the list of those who have contributed and sacrificed so much to make the stories possible.

Joe Samnik is a consulting arborist entering his 46th year of consulting on the complex issues of trees and landscapes. Joe is the recipient of the Lifetime Achievement Award for excellence in arboriculture, and has been the guest speaker at over eighty international, national and state conferences. He has been named as an expert witness in excess of 500 cases. ❖

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Tree disease sweeps through Everglades

Major die-off underway

By [David Flesher](#), Sun Sentinel | May 18, 2014

A plant disease blazing through South Florida is killing off swamp bay trees, an important part of the architecture of the Everglades that provides food for a vast range of wildlife and traditional medicine for the Seminole Tribe.

Laurel wilt disease, a fungus carried by a beetle the size of a grain of rice, has been detected across more than 500 square miles of the Everglades, according to a forthcoming paper by state and federal scientists. The beetle, thought to have arrived from Asia in the Port of Savannah in packing crates, has hopped down the southeast coast, infecting avocado trees in the commercial groves of southern Miami-Dade County, reaching

ern Everglades are lined with dead swamp bay trees, said Tony Pernas, exotic plant management specialist with the National Park Service.

In Broward County, the disease has killed trees in the flat expanse of sawgrass and trees islands through which drivers pass on Alligator Alley. The amount of damage varies, with some tree islands showing a 10 percent loss of canopy and others, particularly in the southern Everglades, showing a 50 percent loss, said LeRoy Rodgers, lead scientist for the Land Management Bureau of the South Florida Water Management District.

“We’re obviously very concerned,” he said.



the wilderness of western Palm Beach County in 2012 and western Broward County in 2013.

“This is a huge, huge threat to the Everglades,” said Jason Smith, associate professor of forest pathology at the University of Florida. “The loss of that tree canopy is going to totally change the ecosystem. It’s arguably far more damaging to the Everglades than the pythons. These trees are dying rapidly in very, very large numbers.”

Since first being detected east of Everglades National Park in 2011, the disease has spread across about one-sixth of the Everglades. Many canals through the south-

Although the disease turned up at the Loxahatchee National Wildlife Refuge in western Palm Beach County, it appears to have stalled there, without spreading beyond the few trees in which it was found, said Christen Mason, a biologist at the refuge.

The trees produce an abundance of blue and black berries, staples in the diets of wild turkeys, black bears, squirrels and other animals that inhabit the tree islands. The leaves serve as food for two butterflies, the spicebush swallowtail and the palamedes swallowtail.

They are a source of traditional medicine for the Semi-

[Tree Disease continued on page 27](#)

Tree Disease continued from page 26

nole Tribe. In a column in the Seminole Tribune, tribal Chairman James Billie told of going as a child with his grandmother to gather leaves of the Tu lee tree for the Medicine Maker.

“The leaves have many uses, such as repelling evil spirits or easing the pain of arthritis,” he wrote, expressing concern about the disease. “And the list goes on and on.”

As the trees die off, they leave open spaces in the canopy that could easily be colonized by invasive Brazilian pepper or old-world climbing fern, which provide little food for wildlife.

“These tree islands don’t have a lot of species that are capable of growing in these conditions,” said Smith, of UF. “If these trees die, what do you replace them with? If you don’t replace them with something, you have the potential for invasive species to take over.”

The disease kills by choking the tree’s tubes for transporting water and nutrients. There is no cure. A vaccine that allows trees to resist the fungus exists, but even avocado growers can’t afford to inject every tree, and no one thinks this would be a practical solution.

There is one source of hope: A small percentage of trees appear to be resistant to the disease. Scientists have obtained funding to locate these trees and attempt to propagate them. This summer, a group of scientists will

go to the Loxahatchee National Wildlife Refuge and other areas of the Everglades and look for the swamp bays still left standing.

In the avocado groves of southern Miami-Dade County, the second-largest crop in the country after California’s, a helicopter makes routine flights over the 7,400 acres of groves in a survey for wilting or brown leaves, the signs of the disease, said Jonathan Crane, a UF tropical fruit crop specialist.

“We’re very concerned,” said Florida Agriculture Commissioner Adam Putnam. “This is one of a number of threats to iconic Florida crops. We’re doing everything we can to save the avocado.”

The state has received \$5.4 million in the latest federal farm bill to fight laurel wilt in the avocado groves, among other diseases. The state has formed a working group, set out beetle traps to monitor the infestation and collaborated with the industry and UF to study the disease.

Among the symptoms: sudden leaf wilt, darkened wood and very quick death. Among the causes of the disease’s spread is the transport of firewood, and authorities have asked the public to try to restrict themselves to local firewood.

Although the disease could also pose a threat to residential avocado trees, it’s unclear whether it has spread to them yet. The Broward and Palm Beach extension services, which operate with UF to provide horticultural information to the public, said they have received no inquiries to indicate the presence of laurel wilt in backyard trees.

“That doesn’t mean it isn’t here,” said Michael Orfanedes, commercial horticulture agent for the Broward Extension. “We’ve been watching this thing. People should be vigilant for it.”

sun-sentinel.com/news/palm-beach/fl-everglades-tree-killer-20140518,0,5723587.story

dfleshler@tribune.com, 954-356-4535

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NEW DATE THIS YEAR

**FLORIDA CHAPTER
TREE CLIMBING
CHAMPIONSHIP
AND ARBOR FAIR**

**Tallahassee - Myers Park
October 25-26, 2014**

Forms at back of this Florida Arborist
Event details on page 18



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Florida Chapter Board Updates

BOARD SHORTS:

Board Changes

B The Florida Chapter welcomes a new Utility Arborist representative, Diana Gilman with Lee County Electric Cooperative (Ft. Myers). Past Utility rep, Don Winsett, stepped down after being elected to the board of International ISA. Don will continue to act as chair of the upcoming International Conference that will be held in Orlando in August, 2015. ❖

Visit by Executive Director of International ISA, Jim Skiera

V The Florida Chapter was happy to welcome Jim Skiera to the Trees Florida 2014 Conference and Trade Show that was held at Innisbrook, Palm Harbor, FL. Jim was able to attend the board meeting held the day prior to the conference and reported on issues that ISA is currently involved in world-wide such as the review of the Certified Tree Worker Program, the CTLA Appraisal Guidebook revision, and expansion into Taiwan and hopefully Croatia, Lithuania and Peru. He stated that he is excited to prepare for the 2015 International Conference that will be held at the Gaylord Palms Resort in Orlando. The Florida Chapter also kept Jim busy during the conference as a featured speaker on that Monday. ❖

Mousing Around for 2015

M Don Winsett, A.D. Ali and Norm Easey recently spent some time at the Milwaukee ISA Conference with mouse ears on! The three were representing next year's conference that will be held in Orlando in 2015. The local host committee will assist ISA International Conference staff throughout the year and would love to hear from you if you are interested in helping out! Contact Norm at floridaisa@aol.com if you can volunteer in any capacity with the International ISA Conference (August 2015), the International TCC (Tampa in the spring) or the annual TREE Fund Tour des Trees (biking from Orlando to Key West!!)

2014 Award Winners



The Florida Chapter Awards Committee was pleased to announce and present this year's Chapter Awards at the June Trees Florida 2014 Conference at Innisbrook in Palm Harbor, FL:

Edward W. Bok Award - Norm Easey

Awarded in recognition of lifetime achievement by exemplary practices to the goals and mission statement of the Florida Chapter ISA.

Award for Excellence in Education - Bob Brennan

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.

Award of Distinction - David Reilly

This award is 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.

The Loren Westenberger Award - Apollo O'Neil

Awarded for the practice of professional principles consistent with the mission and objectives of the Florida Chapter ISA to better the environment for future generations.

The President's Award of Merit - Lori Ballard

Awarded for the guidance, advisement and support of the Florida Chapter ISA president.

Congratulations to the winners! Thank you for all you have done for the Florida Chapter ISA.

2014 Certification Exam Schedule

The FLORIDA CHAPTER of ISA is pleased to announce our
2014 schedule of Certification exams. See the chart below for the site nearest you.

Date	Exam/ Class	Location	Time	Proctor or Instructors	Last Date to Register	Cost Member/ Nonmem
November 1, 2014	Certified Arborist Exam	Miami-DadeIFAS 18710 SW 288 Homestead, FL	7:30 a.m. to 12:00	Dr. George Fitzpatrick & Mr. Henry Mayer		

This schedule is subject to change as additional tests and review sessions may be added. Visit www.floridaisa.org for updates.

For an application form to register for an Exam call the ISA Office in Champaign, IL at 888-472-8733

To purchase an ISA Certification Study Guide, call the Florida Chapter ISA at 941-342-0153 or fax an order form to 941-342-0463.

The ISA Illinois must receive your application & exam fees A MINIMUM OF TWELVE BUSINESS DAYS prior to the exam date. NO EXCEPTIONS! (ISA Illinois is closed New Year’s Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and the day after, and Christmas Day). First-time applicants can apply online at www.isa-arbor.com.

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



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Florida Chapter ISA - 2014 Education Schedule

*The schedule below is tentative and subject to changes.

Date	Seminar/Class	Location (s)	Open for Registration
September 30, 2014	Tree Appraisal	Orlando	<u>Register Online!</u>
October 3, 2014	Tree Appraisal	Fort Lauderdale	<u>Register Online!</u>
October 21, 2014	Pruning with Dr. Ed Gilman	West Palm Beach	<u>Register Online!</u>
October 24, 2014	Outdoor Tree School	Tallahassee	
October 28, 2014	Pruning with Dr. Ed Gilman	Tampa Bay Area	<u>Register Online!</u>
October 30, 2014	RPG Seminar	Zolfo Springs	<u>Register Online!</u>
November 5, 2014	Pruning with Dr. Ed Gilman	Ft. Myers	<u>Register Online!</u>
January 2015	TRAQ	Tampa Bay Area	

Welcome!

New Florida Chapter Members

Here are the individuals that joined the Florida Chapter during the second quarter of 2014. 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.

Kenneth Allen, Davie, FL
 Benjamin Banks, Tallahassee, FL
 Patrick Bellanger, Sarasota, FL
 Adam Bergdoll, Preston, MD
 Chris Brannan, Holiday, FL
 Joseph Brinson, Jacksonville, FL
 Russ Britton, Castle Hayne, NC
 Cory Burch, Inverness, FL
 Alvaro Burgos, Orlando, FL
 Roy Carter, Dunedin, FL
 Laura Coar, Winter Garden, FL
 Dale Croft, Orlando, FL
 Travis Crosson, Avon Park, FL
 Marshall Cunningham, Loxahatchee, FL
 Harold Curington, Florahome, FL
 Stephen Davis, Palm Beach Gardens, FL
 Karen DeMaria, Key West, FL
 Efrain Dominguez, Miami, FL
 Justin Duce, Jacksonville, FL
 Suellen Granberry-Hager, Boca Raton, FL
 Michael Guido, Loxahatchee, FL
 Danae Jackson, Apopka, FL
 Kenneth Knight, Davie, FL
 Andrew Koon, Largo, FL
 Luis Lenwell, Holiday,

James Martin, Largo, FL
 Keith McCarron, Tallahassee, FL
 Jeremy McGreal, Clearwater, FL
 Norberto Mejias, Fort Myers, FL
 Erik Nobs, Ozona, FL
 David Osborn, Seminole, FL
 Robin Pelensky, Vero Beach, FL
 Cesar Peralta, Fort Myers, FL
 Jorge Pinero, Miami, FL
 Shawna Price, Royal Palm Beach, FL
 Charles Quandt, Boynton Beach, FL
 Jena Roper, Tarpon Springs, FL
 Jason Rubin, Port Charlotte, FL
 Matt Samnik, Holiday, FL
 Gary Shurman, Tarpon Springs, FL
 Terry Smith, Dania Beach, FL
 Carson Smith, Palm Harbor, FL
 Jake Somberg, Palm Bay, FL
 John St. Pierre, Punta Gorda, FL
 Andrew Taylor, Fernandina Beach, FL
 Jonathan Tietz, New Port Richey, FL
 Fotios Vasacas, Tarpon Springs, FL
 Kent Walia, North Miami, FL
 David Wallace, Fort Myers, FL
 Adam Warf, Raleigh, NC

**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:
 floridaisa@comcast.net

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 2014 Board Meeting - Dates & Locations
 September 10, 2014 - Orlando
 November 11, 2014 - Orlando

Arborist Certification Committee Report

By Norm Easey, Florida Certification Liaison

There is currently one ISA certification exam scheduled in Florida within the next six months.. [Click here for the specific dates](#). The ISA Certified Arborist exam is also now available at Pearson Testing Centers throughout Florida. See the ISA International web site www.isa-arbor.com for more information about the various ISA arborist credentials and how to earn them.

Florida Chapter currently has 1844 Certified Arborists.

The Florida Chapter would like to congratulate the following 35 individuals for earning their Arborist Certification Municipal Arborist Certification or Utility Arborist Certification during the second quarter of 2014:

Certified Arborist

Brett Anderson, Jacksonville, FL
 Steven Anderson, Kissimmee, FL
 Christopher J. Anuszkiewicz, Clearwater, FL
 Benjamin Banks, Tallahassee, FL
 Jimmy Beaver III, Sunrise, FL
 Kit Bock, Foert Myers, FL
 Chris K Brannan, Holiday, FL
 Joseph Brinson, Jacksonville, FL
 Alvaro Burgos, Orlando, FL
 Roy Carter, Dunedin, FL
 Jill B. Cohen, Weston, FL
 Justin Duce, Jacksonville, FL
 Michael Hanson, Palm Springs, FL
 Rodney A. Jones, Punta Gorda, FL
 Frank A. Kahoun III, Oakland Park, FL
 Colin Kelly, Longwood, FL
 Lawrence Labus, Clearwater, FL
 David Landers, Sarasota, FL
 William Mc Donough, Hollywood, FL
 Jeremy McGreal, Clearwater, FL
 Jonathon Mclaughlin, Longwood, FL
 Robert McMullen, Doral, FL
 Erik Nobs, Ozona, FL
 David Osborn, Seminole, FL

Vincent Parker, Beverly Hills, FL
 Chad Paukert, Dunedin, FL
 Richard E. Rohrmann, Lake Buena Vista, FL
 Michael Rojas, Miami, FL
 Carson B. Smith, Palm Harbor, FL
 Daniel Taban, Clearwater, FL
 Joseph Taylor, Clearwater, FL
 Miles Upcavage, Plant City, FL
 Fotios Vasacas, Tarpon Springs, FL
 Benjamin J. Wasielewski, Kissimmee, FL
 Greg Wilhelm, Sarasota, FL



Are you thinking about becoming certified?

[Visit the International ISA website](#)

to access the certification application handbook with further information.



**Florida Chapter ISA Tree Climbing
Championship and Field Day**
 Saturday, October 25, 2014
 Myers Park - 909 Myers Park Drive - Tallahassee, Florida

Exhibitor Form

Company Name _____ Contact Person _____
 Street Address _____
 City _____ State _____ Zip _____
 Phone _____ FAX _____
 Email Address _____

Please list the names of the individuals (**and tee shirt size**) who will be representing your company (Registration for two representatives per exhibitor booth for Saturday only).

Name on badge 1: _____/Tee shirt size ____ **Name on badge 2:** _____/Tee shirt size ____

Please make checks payable to **Florida Chapter ISA** and mail to: 7853 S. Leewynn Ct. – Sarasota, Florida 34240

Tree Climbing Championship & Field Day Exhibitor Opportunities

All Exhibitors will receive on-site signage and recognition in the Field Day program. Exhibitors will be provided sufficient outdoor space for one (1) large truck or two (2) small devices, or an outdoor display.

- Outdoor Exhibitor space for Equipment/Trucks/Displays \$ 500.00
 (payable through a monetary payment, appropriate gear or prizes, or combination of both)

***Exhibitor SETUP will be from 8:00 to 9:00 am on Saturday, October 25, 2014. Trade Show opens at 9:00 am.**
***Exhibitor BREAKDOWN is when competition ends or 30 minutes before sunset**

NOTE: PLEASE SEE EXHIBITION RULES ATTACHED TO THIS FORM or at www.floridaisa.org

I have read the terms and conditions of this Application and the attached Florida Chapter ISA Tree Climbing Championship & Field Day Exhibition Rules and agree to them accordingly.

Printed Name: _____ **Signature:** _____ **Date:** _____

Monetary Payment

Payment: Charge to Visa, MasterCard, or Discover Check Enclosed (payable to **Florida Chapter ISA**) Check # _____

Card Number: _____ Expiration Date: _____ CV Code _____

Exact name on card _____

Card billing address _____

Card billing City/State/Zip _____

Your receipt will be emailed to you (please provide email address above).

In-Kind Equipment, Gear, or Prizes

If you would like to include gear or prizes for the TCC as part of your payment or in addition to your exhibitor space registration, please describe your item(s) below and include a monetary value (**required**). **Please contact the Florida TCC Field Day Chair prior to shipping items: ronlitts@gmail.com**

Please send item(s) to: Florida Chapter ISA – 7853 S. Leewynn Ct. – Sarasota, Florida 34240

Florida Chapter ISA contact: 941-342-0153 – floridaisa@comcast.net - or FAX to 941-342-0463
 Tree Climbing Championship & Field Day event contact: Ron Litts at ronlitts@gmail.com

Florida Chapter Tree Climbing Championship and Field Day

Preliminary Events Saturday October 25, 2014
 Masters Challenge Sunday October 26, 2014
 Mandatory gear check will be required - details to be announced

Myers Park
 909 Myers Park Drive
 Tallahassee, FL

NOTE: PETS AT THIS PARK MUST BE ON LEASH AT ALL TIMES



CLIMBER ENTRY FORM

Register early to reserve your spot! **SPACE IS LIMITED!** Due by October 10, 2014

Name _____

Company _____

Address _____

City _____ State _____ Zip _____

Phone # (_____) _____ T-Shirt size (register early so we can provide your requested size) _____

E-Mail Address (for contacting and to send a receipt) _____

OPTIONAL EDUCATIONAL EVENT

The Outdoor Tree School is being offered on Friday October 24, 2014 FREE OF CHARGE to all registered competitors and volunteers. Space may be limited - we cannot always guarantee available space.

Leon County UF/IFAS Extension - 615 Paul Russell Road - Tallahassee, FL 32301-7060.

CLASS NOT HELD AT MYERS PARK - SERVICE PETS ONLY ON THE EXTENSION PROPERTY

(registration fees for non-competitors or non-volunteers to attend class: \$85-Florida Chapter Member or \$95-Nonmember)

- YES! You plan to attend the Outdoor Tree School on Friday October 24, 2014 for free as a climber.
- NO, you do NOT plan to attend the Outdoor Tree School.
- Check here if you want your lunch to be meat-free/vegetarian.

REGISTRATION FEES

- \$75 - Florida Chapter ISA member price
- \$90 - nonmember price
- Check enclosed (Make out to Florida Chapter ISA)
- Cash Enclosed
- Credit Card VISA MasterCard Discover

**If you are not comfortable emailing your credit card information, please fax, mail or phone it in.

Card Number _____

Exp. Date _____ 3 digit Card Code _____

Exact name on card _____

Card billing address _____

Card billing City/State/Zip _____

Submit this entry form, the Competition waiver form and payment to:

MAIL: Florida Chapter ISA ♦ 7853 S Leewynn Court ♦ Sarasota, FL 34240
 PHONE: 941-342-0153 FAX: 941-342-0463
 EMAIL: floridaisa@comcast.net (you may submit this form as an email attachment)



**FC-TCC Tree Climbing Championship
Competition Waiver Form**



Please PRINT Clearly

Contestant's Name: _____ Age: _____

Address: _____ Zip: _____

Employed by: _____

Phone: (____) _____ Email: _____

Number of years you have climbed: _____

Waiver and Hold-Harmless by Contestant

In consideration of acceptance of my application for entry as a contestant in the Climbing Championship, I hereby waive any and all claims I may have at anytime, and any and all claims which might otherwise be made by, or on behalf of, or on account of me, or by me, or by any person or entity in any way as my subrogee against the property owner and the International Society of Arboriculture, its officers, directors, employees, agents, members, guests, invitees, and any person who would be lawfully entitled to indemnification from them for any liability to, or on behalf of, or on account of me, for any injuries or damages of any kind whatsoever arising on account of or in consequence of my activities or participation in the Climbing Championship, or in any other way related to the Climbing Championship. I further agree to hold the property owner and the International Society of Arboriculture, its officers, directors, employees, agents, members, guests and invitees, safe and harmless from any expense for defense, settlement, payment of damages, or other expenses related in any way to injuries sustained by me in any way related to the Climbing Championship. I recognize and assume all risks and danger involved in my participation, and will not under any circumstances rely upon the care, attention or assurance of anyone other than myself for matters relating to my safety.

Dated _____ Signature of Contestant _____

Certification and Waiver by Employer of Contestant

I hereby certify that I am the employer or a duly authorized representative of the employer of the above-named individual planning to participate in the Climbing Championship, and that the employer has encouraged this participation. I further certify that I have satisfactorily confirmed that the employee will be covered by statutory protection levels of Workers Compensation Insurance or the equivalent, for any injuries sustained in the course of participation. The employer hereby waives any and all subrogation claims it may have against the property owner and the International Society of Arboriculture, its officers, directors, employees, agents, members, guests, or invitees, as a result of any compensation or their benefits or expenses incurred or paid by it, its insurance carrier, or otherwise on its behalf, in the event any claim or injury results from this participation, and will hold the property owner and the International Society of Arboriculture, its officers, directors, employees, agents, members, guests, and invitees safe and harmless from any expense for defense, settlement, payment of damages and other expenses relating in any way by this employee. I further certify that I am duly authorized to execute this Certification and Waiver on behalf of the employer and that any and all necessary resolutions have been duly passed and adopted by the employer.

The exact name and address of the employer, and state of incorporation (if applicable):

Dated _____

Signature of Employer or Authorized Representative _____

Mail, fax or email (you may submit as an email attachment) this completed competition waiver form
along with the competition registration form and payment to:
Florida Chapter ISA ♦ 7853 S Leewynn Court ♦ Sarasota, FL 34240 fax 941-342-0463 floridaisa@comcast.net

Florida Chapter Tree Climbing Championship and Field Day

Preliminary Events Saturday October 25, 2014; Masters Challenge October 26, 2014

Myers Park
909 Myers Park Drive
Tallahassee, FL



NOTE: PETS AT THIS PARK MUST BE ON LEASH AT ALL TIMES

JUDGE AND VOLUNTEER FORM

Print or Type - Due by August 1, 2014

Name _____

Company _____

Address _____

City _____ State _____ Zip _____

Phone # (_____) _____ T-Shirt size (register early so we can provide your requested size) _____

E-Mail Address (for contacting) _____

Allergies? Yes No Please list: _____

Have you ever volunteered at any TCC event before? Yes No

List event(s) & year(s): _____

Are you First Aid/CPR Certified? Yes No

Do you have experience as a gear check technician? Yes No

List any specific qualifications or past experience: _____

OPTIONAL EDUCATIONAL EVENT

The Outdoor Tree School is being offered on Friday October 24, 2014 FREE OF CHARGE to all registered competitors and volunteers. Space may be limited - we cannot always guarantee available space.

Leon County UF/IFAS Extension - 615 Paul Russell Road - Tallahassee, FL 32301-7060.

CLASS NOT HELD AT MYERS PARK - SERVICE PETS ONLY ON THE EXTENSION PROPERTY

(registration fees for non-competitors or non-volunteers to attend class: \$85-Florida Chapter Member or \$95-Nonmember)

- YES! You plan to attend the Outdoor Tree School on Friday October 24, 2014 for free as a volunteer.
- NO, you do NOT plan to attend the Outdoor Tree School.
- Check here if you want your lunch to be meat-free/vegetarian.

THANK YOU FOR YOUR OFFER TO VOLUNTEER!

I am able to help:

- Friday October 24th: with site preparation and set-up
- Friday PM October 24th: with run-through and gear check
- Saturday October 25th: with check-in
- Saturday October 25th Sunday October 26th: with judging
- Saturday October 25th Sunday October 26th: with timing and record keeping
- Saturday PM October 25th: with the FC-TCC dinner
- other _____

Submit this volunteer form and the Volunteer waiver form to:

MAIL: Florida Chapter ISA ♦ 7853 S Leewynn Court ♦ Sarasota, FL 34240
 PHONE: 941-342-0153
 FAX: 941-342-0463
 EMAIL: floridaisa@comcast.net (you may submit this form as an email attachment)



**FC-TCC TREE CLIMBING CHAMPIONSHIP
VOLUNTEER WAIVER FORM**



Please PRINT Clearly

Volunteer's Name: _____

Address: _____ Zip: _____

Employed by: _____

Phone: (____) _____ Email: _____

Waiver and Hold-Harmless by Volunteer

In consideration of acceptance of my offer to be a volunteer for the Climbing Championship, I hereby waive any and all claims I may have at anytime, and any and all claims which might otherwise be made by, or on behalf of, or on account of me, or by me, or by any person or entity in any way as my subrogee against the property owner and the International Society of Arboriculture, its officers, directors, employees, agents, members, guests, invitees, and any person who would be lawfully entitled to indemnification from them for any liability to, or on behalf of, or on account of me, for any injuries or damages of any kind whatsoever arising on account of or in consequence of my activities or participation in the Climbing Championship, or in any other way related to the Climbing Championship. I further agree to hold the property owner and the International Society of Arboriculture, its officers, directors, employees, agents, members, guests and invitees, safe and harmless from any expense for defense, settlement, payment of damages, or other expenses related in any way to injuries sustained by me in any way related to the Climbing Championship. I recognize and assume all risks and danger involved in my participation, and will not under any circumstances rely upon the care, attention or assurance of anyone other than myself for matters relating to my safety.

Dated _____ Signature of Volunteer _____

Certification and Waiver by Employer of Volunteer

I hereby certify that I am the employer or a duly authorized representative of the employer of the above-named individual planning to volunteer at the Climbing Championship, and that the employer has encouraged this participation. I further certify that I have satisfactorily confirmed that the employee will be covered by statutory protection levels of Workers Compensation Insurance or the equivalent, for any injuries sustained in the course of participation. The employer hereby waives any and all subrogation claims it may have against the property owner and the International Society of Arboriculture, its officers, directors, employees, agents, members, guests, or invitees, as a result of any compensation or their benefits or expenses incurred or paid by it, its insurance carrier, or otherwise on its behalf, in the event any claim or injury results from this participation, and will hold the property owner and the International Society of Arboriculture, its officers, directors, employees, agents, members, guests, and invitees safe and harmless from any expense for defense, settlement, payment of damages and other expenses relating in any way by this employee. I further certify that I am duly authorized to execute this Certification and Waiver on behalf of the employer and that any and all necessary resolutions have been duly passed and adopted by the employer.

The exact name and address of the employer, and state of incorporation (if applicable):

Dated _____

Signature of Employer or Authorized Representative _____

**Mail, fax or email (you may submit as an email attachment) this completed competition waiver form
along with the competition registration form and payment to:
Florida Chapter ISA ♦ 7853 S Leewynn Court ♦ Sarasota, FL 34240 fax 941-342-0463 floridaisa@comcast.net**

Levels of Sponsorship

Platinum	\$1,000	<ul style="list-style-type: none"> • Company logo on TCC tee shirt (<i>if payment is received by September 30th</i>) • 4" x 6" logo sticker on TCC trailer for one year • Opportunity to display banner (provided by your company) in each of 5 event rings • Company announced and thanked at awards dinner • Company name will be included on an email invitation sent out to prospective attendees • Your company name listed in the Field Day program and poster displayed at the events you have sponsored
Gold	\$ 500	<ul style="list-style-type: none"> • Company name on TCC tee shirt (<i>if payment is received by September 30th</i>) • Opportunity to display banner (provided by your company) in 1 (one) event ring • Company announced and thanked at awards dinner • Company name will be included on an email invitation sent out to prospective attendees • Your company name listed in the Field Day program and poster displayed at the event you have sponsored
Silver	\$ 250	<ul style="list-style-type: none"> • Company name on TCC tee shirt (<i>if payment is received by September 30th</i>) • Company announced and thanked at awards dinner • Company name will be included on an email invitation sent out to prospective attendees • Your company name listed in the Field Day program distributed at the Field Day event
Bronze	\$ 100	<ul style="list-style-type: none"> • Company announced and thanked at awards dinner • Company name will be included on an email invitation sent out to prospective attendees • Your company name listed in the Field Day program distributed at the Field Day event

Thank you for your donation!

PLEASE NOTE: Your Sponsorship does not include Field Day registration or **exhibitor space**. The Florida Chapter ISA is a 501(c)(3) non-profit organization; therefore all contributions to the Florida Chapter ISA may be tax deductible within the limits of the law. The Florida Chapter ISA's Federal ID is #65-0667299.



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.



Florida Arborist
Florida Chapter ISA
7853 South Leewynn Court
Sarasota, FL 34240