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Why It Matters...

As I write today for an issue of the magazine that won’t hit your doorstep for a month, I’m waiting to find out if dear ones to me in London are OK. By next month, the impact of today’s tragic news story will have faded tremendously for the overall public, just as it did with Spain last year. However, having just celebrated the Fourth of July and working as a staff team to prepare for our first Legislative Conference as an industry, there are a number of things that come to mind on a tough day for our world.

I happen to believe in democracy and what this country stands for, which also requires something of me. It means that I have a duty as a citizen to vote, to be involved, to know the issues, to have an opinion, and to engage around that.

I happen to believe that the right to assemble is critically important for our society to function, and without that you would not have a TCIA. It seems so easy that the TCIA membership renewal form crosses your desk each year, and it probably never crosses your mind that in other countries organizations like ours have a much tougher time coming into existence. Assembling here is a right. Not so in other places around the world.

As part of a trade association, members also have a responsibility. Yes, TCIA has a charge to provide value to members to help them advance tree care businesses. It’s why we spend tremendous amounts of time, money and energy working on the Transformation of the Industry – helping businesses with one-on-one counseling on a daily basis on everything from field advice to safety issues to citation matters to business plans to accreditation to IT to human resources to financial management – on and on the list goes.

But there is something that is also required of members in a trade association. Trade associations are born because of common business interests. Those are often reflected through creating positive business environments legislatively and through sound regulation. A trade association at its best requires members to be involved. We’re back to that engagement word.

And so as I write to you, I am delighted that we partnered on our first Legislative Conference with ANLA and PLANET in July, and I am pleased that TCIA will have representatives from approximately 17 states with our delegations. I am disappointed that we only have about 30 people registered for the conference two weeks out.

TCIA can do a LOT of things for you. TCIA cannot represent you to each state legislator and representative. They care about votes and money from their constituency. If we ever want help from them, it takes building relationships in advance of having challenges. It’s about them knowing you.

We create the world that we live in. Your trade association is most vital when you are an ACTIVE part of it. We can change the world together – as is reflected on the more global scale with the multi-country coordination and determination to deal with terrorism. We’re far more effective on issues when we stand together and engage. While we may not be dealing with terrorism, the principles of how we get something done are the same – it requires something of us.

When each individual member decides to be an observer of what is going on in the tree care industry as opposed to a participant, the entire industry is weaker. Particularly, if you compare us to other green industries that have developed a presence over time, we are not carrying the strength of the voice that we have the other countries organizations like ours have a much tougher time coming into existence.

I ask of you to consider whether you want to be shapers of your world? TCIA welcomes and invites you to take the next step forward for your company and your industry. Let’s work together to use the privileges that we have to bring about the Transformation of the Industry together.

I still believe that you’re worth it and that it matters.

Cynthia Mills, CAE
Publisher
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AUGUST

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Washington in Review
OSHA has proposed changes to standards that affect all arborists who work proximate to overhead conductors and use aerial lifts.

Management Exchange
By Steven Austin Stovall
Recruiting is the process of attracting talented individuals to the organization, and it’s more than just throwing a broad net across the labor pool.

Arborist Innovations
By Patrick Darius
A new twist to an old knot.

TCI EXPO Exhibitor Listing
A report on who will be exhibiting what at TCI EXPO in Columbus, Ohio, Nov. 9-11.

Classified Advertising

Member Profile
The Davey Tree Expert Company celebrates 125 years of growth.

TCIA Reporter
Safety and training products, news, commentary and benefits of membership with the Tree Care Industry Association.

Tree News

Advertiser Listing

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By Ellyn Shea
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Adding Years of Enjoyment to Your Climbing Career

By Robert W. Phillips

It is not every day that we develop an idea that can make our daily routine easier and more efficient. The idea may first come with its own set of questions, but as you begin to apply it on the job it creates its own set of rewards. The thing to do is watch, observe, learn and apply some or all of the idea to suit your needs as they arise each and every day.

Try to look outside the ordinary box of techniques for a safe solution to help you become quicker at your job and less exhausted when you actually get up in the tree to do the work. Each of us is looking for something different in our climbing styles or techniques. What is right for some may be inappropriate for others, because of a physical obstacle or because they are just not willing or able to use it – for whatever reason. Choose what is right for you and don’t base your decisions on what others are doing just because it looks “cool.”

Techniques that are used by some people today come with limitations and safety concerns. Use caution and pay attention.
A Climbing Lesson Learned

How to Avoid a Potentially Serious Incident

Contributed by Melissa LeVangie

On Saturday, May 21, 2005, Connecticut held its first Tree Climbing Competition. Greg Lukos and Larry Dvorsky, with the help of many volunteers and judges, organized an excellent day of skilled tree climbing at Heritage Village in Southbury, Conn.

In the afternoon the Secured 50-foot Footlock Event was held. The event gave the climbers, judges and spectators a very serious educational situation to learn from; information we are sharing so that, as an industry, we can improve upon the safety of our future tree climbing competitions.

The situation: While climbing, a new climber fatigued when footlocking up the rope. Determined to finish, they continued to climb using the “sit-and-hang” method, a method many climbers new to tree-climbing competitions are using. The sit-and-hang method describes when a climber will sit in his or her saddle while being suspended from the Prusik. They lean back in the saddle to take another lock with their feet, lean forward to stand on the lock, then slide their Prusik up, and will then repeat the steps.

In this case, while advancing their knot the climber had unknowingly slightly undressed the Prusik. When the climber went to sit back on the knot the Prusik slipped about 6 inches. With the distance lost on the rope, the belay stopped the climber from falling while the Kline fall-arrest harness buffered the short fall. The climber was wearing the harness over their climbing saddle. However, during the short fall the fall-arrest harness readjusted itself so that the dorsal D-ring attachment holding the climber was situated directly behind the climber’s helmet and pinned the individual’s head in a bent down and forward position.

The sternum strap had slid from chest position to directly beneath the climber’s neck and began to choke the individual. With the dorsal D-ring attachment directly behind the climber’s head, they could not reposition their head backward to alleviate the pressure being applied by the choking sternum strap and the situation quickly became serious.

The climber tried to alleviate the choking but couldn’t and the spectators realized the climber’s foot was entangled in the rope from the previous lock. The individual couldn’t look down at their foot to untangle their foot because of the restricted head position and choking of the sternum strap.

The climber understood the situation had become critical and yelled “just let me down,” recognizing the need to be lowered on the belay line. However, the climber could not be lowered due to the Prusik knot applying overhead friction to the climbing line and, with their foot entangled in the rope, without increased choking of the individual.

The climber was talked through, step by step, how to untangle their foot from the line. With their foot free, they took another lock on the rope, stood up and alleviated the choking. The climber retrieved their Prusik from above their head and, in combination with the belay, was lowered safely to the ground.

The incident nearly crossed the line to becoming a serious accident. This is one of those lessons where steps can be taken easily to prevent this from happening again in the future to another climber. Many trained and experienced climbers as well as safety trainers from various companies witnessed the situation. Through many lengthy conversations, individuals involved offered suggestions to keep this from happening again.

Our thoughts behind why the particular Kline fall-arrest harness choked the climber:

The extension and contraction of the climber’s body while footlocking initiated

(Continued on page 14)
the rope that was used to pull the pulley up with the climb line set in it. There are several ways to accomplish the same principal. It is not a case of right or wrong; it is just one way or the other. One method that has been working for me lately is this.

I secure my pulley to one end of my line, either with a double-locking carabiner clipped to an eye-splice or secured with a good dead-end knot. The choice of knots is up to the individual. I have used many different knots—some work better than others. The main thing is to tie one that doesn’t come undone. I generally back up my knots with another knot just to be extra sure that the first knot will not come untied. Now that you have the pulley attached to the second line and the climbing line set in the pulley, place a microascender on the second line, and attach the pulley with a double-locking carabiner to the microascender. (See figure 1.) When you pull on the second line the microascender should go up the line and set when you pull down on the two lines that are set in the pulley. (See figure 2.)

**Figure 2**

Figure 3
In the real world, one requirement that never changes is finding ways to help your crews work more safely. That’s why Altec tree care equipment is rugged, reliable and designed with integral safety features. Our complete line of aerial devices and wood chippers is highlighted by our newest machine – the Altec LRV60-E70. It will help your crews work smarter and more efficiently. This unit combines 75 feet of working height and smooth maneuverability with the lowest cost of equipment ownership in the industry and unmatched financing options. For tree care units that help you work “Safer and Smarter®,” call the company that builds them – Altec.

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One limitation to this method is that it requires that you go up the rope on the pulley to retrieve the microascender. When I get up to the pulley, I take a separate split-tail section of climbing rope and tie a second friction hitch just below the microascender. I either undo the microascender or I release the pressure on the cam of the microascender and ride it down on the friction hitch. I prefer to use the Blake hitch as my choice of friction hitch when I am using this technique.

There are many ways to do this same technique. Instead of dead-ending the end of the second line to the double-locking carabiner, leave a tail of rope 10 to 18 inches long after tying it to the double-locking carabiner and use the tail of the rope to tie a Blake hitch to the second line. Place a small pulley beneath the Blake hitch so that when you pull down on the line below the Blake hitch the pulley will force the Blake hitch up the line. (See figure 3.) If you didn’t need or want to climb up to the top to retrieve the Blake hitch, you can place above the Blake hitch a small pulley and attach a throw line to that small pulley and pull down on it, which should bring down the Blake hitch when you are through climbing. (See figure 4.) It is also possible to incorporate a double pulley system with this method.

The idea is not going to come to some climbers without applying a little determination and perseverance. Don’t give up without at least giving this technique a chance. Many of us are happy with something being done one way because that is the way it has always been done. Being complacent on the job is good for some.
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Climbing Lesson Learned

(Continued from page 38)

ated continual vertical movement and adjustment to the original intended position of the sternum strap. The combination of the sternum strap moving, the final resting location of the dorsal D-ring attachment and the climber’s entangled foot were the three reasons why the climber was choked.

- The Kline fall-arrest harness was not designed for that particular application of footlock event.
- The extension and contraction of the climber’s body while footlocking initiated continual vertical movement and adjustment to the original intended position of the sternum strap.
- The combination of the sternum strap moving, the final resting location of the dorsal D-ring attachment and the climbers entangled foot were the three reasons why the climber was choked.

Our suggestions to discourage the situation from happening again:

- We derived that if the Footlock Event is set up on a false crotch, in an emergency situation the entire system and climber could be lowered from the ground. The response time would expedite providing assistance and first aid to the climber.
- If a tree cannot be selected to meet the specific criteria as a stand alone event, then combine the use of the Work Climb tree to host each event separately. The Footlock Event is one of the fastest to setup, break-down and complete by climbers.
- Fall-arrest harnesses should be selected to best fit individual climbers. If the selected harness has a sternum strap, ensure it has a means of limiting its movement vertically (by means of Velcro, etc.).

Thank you for taking the time to read this. Our goal is to share this with the arboricultural industry to mitigate situations that might threaten a climber’s safety. Please share this with people who you feel may benefit from this experience. Knowledge is power.

Please do not hesitate to contact me if you have any questions about what happened at the Connecticut Climbing Competition or to discuss thoughts and ideas.

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Sagamore Hill honors Bartlett for preservation

F. A. Bartlett Tree Experts Chairman Robert A. Bartlett Jr. was honored with a special award from Sagamore Hill, home of Theodore Roosevelt and now a National Historic Site operated by the National Park Service, during Independence Day festivities at the home in Oyster Bay, N.Y.

The John A. Gable Award for Historic Excellence is given to groups or individuals who have done meritorious work in history and preservation at Sagamore Hill. Bartlett was recognized for its care of the trees on the grounds, including an historic European copper beech planted by Roosevelt himself.

Greg Marshall, acting superintendent, presented the award to Neil Hendrickson, a scientist at the research laboratories of Bartlett Tree Experts, has served as the chief consultant for trees on the grounds of Sagamore Hill and particularly for the European copper beech planted by Roosevelt adjacent to the entrance of the home in 1899. Known by many visitors as the ‘elephant tree’ because the trunk resembles an elephant’s leg, the tree was showing signs of age. Treatment and care noticeably improved the health of the tree over the last two years. In addition to care of the beech tree, Bartlett has seen to its propagation and provided other services to the trees on the grounds, including pruning and cultivation of the orchard.

Hendrickson, a scientist at the research laboratories of Bartlett Tree Experts, has served as the chief consultant for trees on the grounds of Sagamore Hill and particularly for the European copper beech planted by Roosevelt adjacent to the entrance of the home in 1899. Known by many visitors as the ‘elephant tree’ because the trunk resembles an elephant’s leg, the tree was showing signs of age. Treatment and care noticeably improved the health of the tree over the last two years. In addition to care of the beech tree, Bartlett has seen to its propagation and provided other services to the trees on the grounds, including pruning and cultivation of the orchard.

Oregon pocket manual for chain saws now in Spanish

Oregon Cutting Systems’ Oregon Maintenance and Safety Manual, with information on the selection, safe use and maintenance of cutting chains, guide bars and sprockets for chain saws, is now available in Spanish. The manual is offered to chain saw users at no charge simply by contacting Oregon Cutting Systems Group of Blount Inc. at (503) 653-8881, or visit www.oregonchain.com and click on either “Technical and Safety Information” or “Maintenance and Safety Manual.” The English version can also be viewed and downloaded, or can be requested in book form.

Komatsu Zenoah America promotes two in Georgia

Komatsu Zenoah America Inc. has promoted Yusuke “Chris” Aoki to the new position of operations manager, and named Takashi Kidera vice president of new business development. Komatsu Zenoah manufactures RedMax handheld outdoor power equipment. RedMax, Komatsu Zenoah America Inc. is headquartered in Norcross, Ga.

In his new position, Aoki is responsible for parts inventory management as well as warehouse operations and production. Before assuming his current position, Aoki worked in production engineering at Komatsu Zenoah’s manufacturing facility in Kawgoe, Japan. Aoki is a graduate of Tokai University in Hiratsuka City, Japan. He currently lives in Duluth, Ga., with his wife, Hisako.

In his newly created position, Kidera is responsible for engine sales and developing new markets for the company’s products. Before assuming his new position, Kidera was a technical engineer at Komatsu Zenoah’s manufacturing facility in Kawgoe, Japan. Kidera graduated from Tokyo Metropolitan College of Technology. The Duluth, Ga., resident is married and the father of three children.
Good ideas grow at EXPO workshops

Tree Care Industry Association Presents:
Tree Care Academy
Advanced Courses

Tuesday, Nov. 8
(the day before TCI EXPO opens)
Columbus Convention Center
Columbus, Ohio

These intensive workshops take place the day before the TCI EXPO trade show opens. Tree Care Academy Advanced Courses help employers train employees by offering an intensive, beyond-the-basics learning experience in economical half-day and full-day formats. With longer seat times and lower instructor-to-student ratios than most conference seminars, the Tree Care Academy Advanced Courses are a perfect way to achieve workforce skills development.

TECHNICAL TRACK
1:00 - 5:00 pm
Intensive Resistograph Training
Scott Baker, Tree Solutions, Inc.; Oliver Hein, IML, Inc.

BUSINESS TRACK
9:00 am - 4:00 pm
Strategic Business Planning
John Spence

PESTICIDE CEU TRACK
9:00 am - Noon
Managing Tree Health with TGRs
Tom Prosser, Rainbow Treecare Scientific Advancements

1:00 - 5:00 pm
Practical PHC: Pest Management
Dr. Bruce Fraedrich, F.A. Bartlett Tree Experts; Dr. Mike Raupp, professor, University of Maryland

View the entire TCI EXPO program at www.tcia.org or call 1-800-733-2622 for more information.
Husqvarna’s NASCAR-licensed chain saw

Husqvarna has introduced a NASCAR chain saw, the first outdoor power equipment product to be licensed by NASCAR. The saw features a NASCAR authentication numbered hologram decal on the powerhead. The 18-inch bar has NASCAR logo imprinted in full color, the first time a chain saw bar has been mass produced in full color. The special Husqvarna model 353 has a powerful 53cc engine and an ergonomic design. It features Husqvarna’s exclusive LowVib™ vibration dampening system that isolates the handles from the engine with rubber mounts or steel springs. The rubber suspension reduces vibrations in the carburetor, providing a smoother operation and extended product life. The Smart Start™ system uses a decompression valve to reduce pressure inside the cylinder, resulting in less force required, easier starting and less wear on parts. It has a side-mounted chain tension adjustment, and a snap off cover allows for easy access to the spark plug and air filter. The air injection system removes up to 97 percent of dust before it enters the filter, creating fewer filter. Contact Husqvarna at 1-800-HUSKY62 or via www.usa.husqvarna.com.

Jarraff 8-wheel All-Terrain Tree Trimmer

The new 8-wheel Jarraff All-Terrain Tree Trimmer combines versatility and mobility with more cutting power capability. The new 8-wheel-drive Jarraff provides twice the traction and flotation as a standard 4-wheel-drive model resulting in a smoother, safer, more comfortable ride for operators. The unit also features independent differential locks in front and rear, a 75-foot cutting height and a 360-degree range of motion with a 40-degree lateral tilt. The 24-inch carbide-tip blade operates at 3,200 rpm providing top-of-the-line cutting power. Five models of Jarraff All-Terrain Tree Trimmers are available including a 4-wheel-drive model, an all rubber track model, a steel and rubber track model, an amphibious model and the new 8-wheel-drive model. All models feature a new pilot control system that provides users optimum control over operations. Contact Jarraff Industries Inc. at (507) 934-8688, 1-800-767-7112, or via www.jarraff.com.

Rainbow’s Verdur targets interveinal chlorosis

Verdur is Rainbow Treecare Scientific Advancement’s solution to the problem of interveinal chlorosis in birch and oaks. Chlorosis is a serious condition in which a tree is unable to produce sufficient amounts of chlorophyll. Without chlorophyll a tree’s ability to absorb sunlight is diminished, photosynthetic capacity suffers, sugar production diminishes, and tree health is compromised. Chlorotic trees often show symptoms where leaf color is light green, yellow, reddish, and in severe cases white. Verdur is applied through the process of macro-infusion, ensuring even and complete distribution throughout the canopy. A single treatment in the late summer will provide approximately three years of green-up, restoring important aesthetic qualities and healthy energy production. Contact Rainbow Treecare Scientific Advancement at 1-877-ARBORIST (272-6747) or via www.verdur.com.

Teupen America’s LEO 23GT

Teupen America’s newest spider hyLIFT in the U.S., the LEO 23GT, has a vertical reach of 75 feet and 35 feet of side-reach. Dimensions are 38 inches wide, 78 inches high, 20 feet long and it weighs approximately 6,800 pounds. Both the lower and upper boom telescope and articulate, rotation is 360 degrees continuous and the two-man, 440-pound capacity, corner-mounted basket also rotates 180 degrees. Vertically manually adjustable tracks allow this lift to travel on the side of a 30 percent grade. Designed with the tree industry in mind, this spider lift can either be trailered with a pickup truck, operated from the back of a truck chassis like a normal lift, or raise it up, drive the truck from under it and drive it through a backyard gate. The powerful hydraulic rubber tracks will take you places you never thought possible to take a lift before, virtually eliminating all tree climbing. List price with standard Kubota diesel engine is $112,475. Teupen hyLIFTs are available from 40 feet to 165 feet in vertical reach. Contact Teupen America at 1-800-944-5898 or via www.teupenamerica.com or www.spiderlifts.com.

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NMC-Wollard Swinger articulated 4WD Mower/Mulcher

NMC-Wollard’s new Swinger Model 3K Mower/Mulcher processes standing or piled trees and brush up to 4 inches in diameter in continuous cutting applications – and up to 6 inches diameter in intermittent cycles. Cutting swath is 60 inches. Residual is a fine carpet of mulch. The compact 3K includes a closed loop piston pump high-flow hydraulics system (35gpm/4,500psi) and a dedicated Fecon Bull Hog cutting attachment. The compact 3K features surface-sensitive articulated steering, even-ride 10 degree rear axle oscillation, powerful 85 hp Cummins turbo diesel, elevated operator station for visibility and security, 4WD with limited-slip differentials, dependable planetary reduction drive axles and a 2-speed hydrostatic transmission. Hydraulic system features include “VariStat” control – allows operator to set efficient flow rates for independent control of cutter speed and vehicle speed. Protective features include an impact resistant Lexan windshield and brush guarding. Contact NMC-WOLLARD, Inc. via www.nmc-wollard.com or by calling Bruce Steingart at 1-800-656-6867.

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Events & Seminars

August 4, 2005
Summer Plant Identification - Trees & Shrubs
Matthaei Botanical Gardens, Ann Arbor, MI
Contact: MGIA, (248) 646-4992; www.landscape.org

August 6-10, 2005
ISA's 81st Annual Int. Conference & Tradeshow
Gaylord Opryland Hotel, Nashville, TN
Contact: Jessica Marx, 1-888-472-8733, jmarx@isa-arbor.com; www.isaarbor.com/conference.aspx

August 19-21, 2005
Nursery/Landscape Expo 2005
Texas Nursery & Landscape Association
Dallas Convention Center, Dallas, TX
Contact: www.txnla.org; 1-(800) 880-0343

August 25, 2005
Farwest Show - Oregon Association of Nurserymen
Portland, OR
(503) 682-5089; www.farwestshow.com

September 8-10, 2005
Lake States Logging Congress
Marquette, MI
Contact: (715) 282-5828; www.timberpa.com

September 14, 2005
Midland Park, NJ
Contact: Matt Simons (609) 625-6021; www.njarboristisa.com

September 15-16, 2005
Michigan Forestry & Park Assoc. Arboriculture Conf.
Midland Center for the Arts, Midland, MI
Registration Deadline: August 15
Contact: www.mfpa-isa.org; mfpa@acd.net; (517) 337-4999

September 17, 2005
Michigan Tree Climbing Championship & Kids Climb
Emerson Park, Midland, MI
Registration Deadline: August 15
Contact: www.mfpa-isa.org; mfpa@acd.net; (517) 337-4999

September 21-22, 2005
Multi-State Plant Materials Conference
Oklahoma State University
Holiday Inn, Stillwater, OK
Contact: Mike Schnelle (405) 744-7361, mike.schnelle@okstate.edu

September 25-28, 2005
ISA Pacific Northwest Annual Conference
Victoria, BC
Contact: ISA (503) 874-8263, or Brian Fisher (250) 755-4722; brian.fisher@bchydro.com

September 29, 2005
Southwest Ohio Urban Forestry Seminar
Ohio Chapter ISA & ODMR Division of Forestry
Winton Centre, Cincinnati, OH
Contact: (216) 544-4737; ohiochapterisa.org

September 29-Oct. 1, 2005
ISA/RMC Annual Conference and Workshop
University Park Hilton, Fort Collins, CO
Contact: ISA Office 303) 756-1815

October 6-8, 2005
California Urban Forests Council’s Annual Meeting
Embassy Suites
Lompoc, CA
Contact: Cindy McCall (805)736-8733, cindymcall@hotmail.com

October 6, 2005
Solving Ornamental Plant Problems (not caused by pathogens and insects)
MGIA Office, Bingham Farms, MI
Contact MGIA at (248) 646-4992; www.landscape.org

October 13, 2005
Compliance 2005!
Cannon Equipment, Shelby Twp., MI
Contact MGIA at (248) 646-4992; www.landscape.org

October 13-14, 2005
TN. Urban Forestry Council 14th Annual Conference
Germantown Center, Germantown TN
Contact: Jen Smith (615) 352-8985; tufc@comcast.net
65FT HI-RANGER

83 GMC 7000: 366 gas engine, 5 spd. 28 GVW with 66 ft Hi-Ranger E715 bucket. 2 man basket, joystick cont. $16,000.

88 FORD LNT8000: Cummins 270hp 8 spd. A/C, 48,000 lb GVW. With 93 CORMACH 2000 10 ton crane, 96 ft hook height, 22 ft steel flatbed. $34,900.

97 VOLVO WG64: CAT 3300 hp, 10 speed. A/C, 64,000 lb GVW, with 20 ft steel flatbed / dump. $38,500.

96 INT 4700: DT466, 190 hp, Allison 4 spd auto, A/C, 27,500 lb GVW, 3 ton PALFINGER PK6000 crane, picks 1,200 lb at 23½’ max reach. 98 steel dump w/24” sides, remote controls. $34,500.

88 FORD F900: 7.8L diesel, 13 spd. 46,000 lb GVW, with 12½ ton JLG 1250BT crane, 77 ft hook height, 20 ft steel flatbed. $29,500.

$24,500

87 FORD F800: 429 gas engine, 5 spd + 2 spd rear. 31,000 lb GVW, with 66 ft ALTEC AM900 bucket, joystick controls. 14 ft steel flatbed. $24,500.

$39,500

90 MACK RD690S: 300 hp, 8 spd. CAT, 50,080 lb GVW, with 15 ton 99 NATIONAL 500C crane, 72 ft hook height, 22 ft steel flatbed. $39,500.

99 NATIONAL 500C crane, 72 ft hook height, cap alert / overload shutdown, 22 ft steel flatbed. $39,500.

$39,500

95 FORD LNT8000: 250 hp Cummins, 6 spd. 56 GVW, 23½’ steel flat / dump setup for piggyback fork-lift. $24,500.
October 14, 2005
2005 Perennial Plant Conference
Scott Arboretum of Swarthmore College
Swarthmore, PA
Contact: (610) 388-1000 Ext. 507; www.longwoodgardens.org

October 14-16, 2005
International Lawn, Garden & Power Equipment Expo
Louisville, KY
Contact: 1-800-558-8767 or (812) 949-9200; expo.mow.org

October 15, 2005
Tennessee Urban Forestry Council 7th Annual Tree Climbing Championship
Memphis Botanic Garden, Memphis, TN
Contact: Jennifer Smith (615) 352-8985; tufc@comcast.net

October 16-22, 2005
Plant Biology Workshop
Frogmore, SC
Contact: Kathy Brickley, Northeast Shade Tree (603) 436-4804; 1-800-841-2498.

October 22-23, 2005
NJ Shade Tree Fed. 80th Annual Meeting
Hilton Philadelphia/Cherry Hill, Cherry Hills, NJ
Contact: Bill Porter (732) 246-3210; njshadetree@worldnet.att.net

October 27, 2005
Plant Diagnostics: Case Studies and Timely Updates
Bingham Center, Bingham Farms, MI
Contact: MGIA, (248) 646-4992; www.landscape.org

November 9, 2005
Tree Care Workshop
Oklahoma State University, Stillwater
Contact: Mike Schnelle (405) 744-7361; mike.schnelle@okstate.edu

November 9-11, 2005
TCI EXPO
Tree Care Industry Association
Columbus Convention Center, Columbus, OH
Contact: Deb Cyr 1-800-733-2622, Ext. 106; cyr@treecareindustry.org; or www.tcia.org

November 15-17, 2005
Empire State Green Industry Show
(Formerly NYSTA Turf & Grounds Expo)
Rochester Riverside Convention Center, Rochester, NY
Contact: Jill Cyr, (518) 783-1229; 1-800-873-9973; njshadetreefederation@worldnet.att.net

December 4-7, 2005
2005 ASCA Annual Conference
Palm Springs, CA
Contact: Angela Corio, ASCA (301) 947-0483

December 7, 2005
ISA Cert. Exam & General Membership Meeting
Freelinghysen Arboretum, Morristown, NJ
Contact: Matt Simons (609) 625-6021; www.NJArboristsISA.com

December 8-9, 2005
Autopsy & Dissection Lab with Dr. Alex Shigo
Portsmouth, NH
Contact: Kathy Brickley, Northeast Shade Tree (603) 436-4804; 1-800-841-2498.

January 8-10, 2006
WESTERN 2006 Annual Meeting & Trade Show
Western Nursery & Landscape Association
Overland Park Convention Center, Overland Park, KS
Contact: 1-816-233-1481; info@wnla.org; www.wnla.org

January 9-11, 2006
2006 GLTE Expo & MFPA Winter Conference
Dellos Place, Grand Rapids, MI
Contact: mfpa@acd.net or call (571) 337-4999

January 11, 2006
ISA Cert. Arborist, Utility Specialist, Tree Worker, Municipal exams
During the ISA Winter Conference
Dellos Place, Grand Rapids MI
Contact: (571) 337-4999; mfpa@acd.net; or (217) 335-9411; cert@ise-arbor.com; www.isa-arbor.com

January 30-31, 2006
41st Annual Penn-Del ISA
Shade Tree Symposium & Trade Show
Lancaster Host Resort, Lancaster, PA
Contact: E. Wertz. (215) 795-0411; penndelisa05@comcast.net; www.penndelisa.org

January 31-February 2, 2006
New England Grows!
Boston Convention & Exhibition Ctr, Boston MA
Contact: Mary Simard (508) 653.3009; www.NEGrows.org

February 12-16
2006 Winter Management Conference
Tree Care Industry Association
St. Kitts, West Indies
Contact: Deb Cyr 1-800-733-2622, Ext. 106; cyr@treecareindustry.org; or www.tcia.org

February 21-24, 2006
2006 ASCA Consulting Academy
Atlanta, GA
Contact: Angela Corio, ASCA (301) 947-0483

Send your event information to:
Tree Care Industry, 3 Perimeter Road Unit 1, Manchester, NH 03103
or staruk@treecareindustry.org

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When freshmen from the Stockbridge School at the University of Massachusetts arrive to work at their five-month internship with C.L. Frank and Company in Northampton, Mass., the company president doesn’t need to be sold on their background.

“Some interns have better habits and some are more serious than others,” says Christopher Frank. “But overall, these kids are as good if not better than anybody. We have a lot of friends in the industry who worked for us as interns and are still in this area – and still in the field.”

The Stockbridge School, located on the University of Massachusetts Amherst, Mass., campus, offers a two-year associates degree program in arboriculture that is both part of and distinctly separate from the university. After two years, students may go to work, or choose to continue their education in a four-year program in forestry, with a concentration in urban forestry. Students from the two-year program must apply to the university in order to be accepted into the four-year program.

Frank’s knowledge of the program runs deeper than just hiring newbies from the program. He himself is an alumnus of the Stockbridge School, and he was an intern for the only tree care company he’s ever worked for. The former Marine was hired full time by Frost & Higgins Tree Care Co. following his internship, and moved up the company ladder into a supervisory position and then sales. He was eventually offered the chance to purchase a branch of the company upon the owner’s retirement.

Frank’s sons also attended Stockbridge, and both are still employed by the people who were once their supervisors during their first-year internships. His son David O’Brien is an arborist with Lewis Tree, and son Billy Frank is an assistant golf course superintendent at the Wheatley Hill Golf Club on Long Island, N.Y.

“It’s a great way to learn in-depth, practical information that they can apply in the field,” Frank says. “Particularly with that first year internship, they’ll know by the end of the year if this field is what they want.”

The Stockbridge School of Agriculture hosts one of the most venerable arboriculture programs in the United States, dating back to 1894, when George E. Stone trained future tree wardens. It’s one-day “tree conference” for tree care professionals is held every March, going back to 1900.

Stockbridge is also a school that many will say is one of the most progressive and effective at turning out commercial tree care professionals. Its faculty has run educational seminars for the Tree Care Industry Association, and the school’s program coordinator, Professor H. Dennis Ryan III, has received queries from other institutions interested in the structure of his program for many years.

The curriculum features both the science and specialty programs that make a good arborist, but also requires coursework in business, including a course on commercial tree care. Supporters of the program – and there are many, including a loyal base of alumni – say that not only does the training turn out a better employee, but also an employee better prepared to move ahead in his (or her) career.

Industry surveys, including a Tree Care Industry Association membership survey, consistently point to a demand for, and lack of, qualified labor in U.S. tree care service businesses. Many companies are eager to hire an employee with experience gained through both the internships and in the Stockbridge “labs,” which are trees on the UMass campus in Amherst. With an academic background in business, Stockbridge grads also offer promise that they can grow into supervisory roles, sales jobs, and potentially manage or even own their own companies.

“We teach commercial tree care,” says
Ryan, coordinator of the program for the past 23 years. Ryan added that, while a commercial tree care professional can discuss entomology, pathology, and the fine points of pruning, "he’s also aware that he’s got to pay the bills on Friday.”

That real-world foothold is an important part of the Stockbridge perspective.

“I think our major strength is that we have faculty members who have worked for commercial tree care companies and municipalities,” explains Brian C.P. Kane, associate professor of commercial arboriculture. Kane, who fills the school’s first endowed chair – courtesy of fundraising done by the Massachusetts Arborists Association – has 10 years of experience in commercial tree care, in addition to advanced degrees in urban forestry. “They bring both practical experience and knowledge to the classroom, in addition to academic credentials. That translates to a better perspective in what’s going on in the real world. We do a good job in preparing students for the realities they’ll be facing after two or four years here.”

As mentioned earlier, the Stockbridge School offers a two-year associates degree program in arboriculture that is both part of and distinctly separate from the university. After two years, students may go to work, or choose to continue their education in a four-year program in forestry, with a concentration in urban forestry, offered by UMass at the Stockbridge School. Students from the two-year program must apply to the university in order to be accepted into the four-year program.

Between the two programs, the school graduates about 15 students each year. Several graduates have gone on to get their advanced degree, including some who’ve gotten a masters degree in Business Administration and others who have earned law degrees. “Big firms love somebody with a background in arboriculture and the law,” Ryan says.

Those who complete the two-year program have already received a solid education in commercial tree care, including a five-month paid internship (usually with a commercial tree care company) and a series of business courses, to go along with the technical knowledge of tree care. “They have eight credits in business before they graduate,” Ryan says, “which is pretty good at the two-year level.”

In the second semester, which follows the internship, students take an introductory course in marketing. In the third semester, they take a course in commercial tree care management, and in their final semester they take a course on managing people.

Should the students enter the four-year program, they will take additional courses focused on communication skills (public speaking and writing) along with two business electives.

There is also considerable “lab work,” featuring climbing and pruning of campus trees. In “Introduction to Arboriculture” students are assigned their own personal trees, and will work their way through that tree using only a handsaw (no pole saws).

“This way, they’ll find out real fast whether they like it or not,” Ryan says.

As many have learned over the years, not every arborist is good at or happy running his own company, but having a background in business, a Stockbridge School grad is better suited to start his own enterprise – particularly given new competitive pressures in the industry.

“To be successful, you’ve got to be technically proficient,” Ryan says. “You also have to know things like what it will cost for you to be in business, and you’ve got to have good communication skills.”

Most students will wind up taking jobs with commercial tree care companies, where they may benefit from the training, advancing in their career.

“They can go as far as they want,” Ryan insists. “As a young guy, they can climb trees and make a lot of noise. As they get older they can move into sales and management and make real good money.”

With declining budgets and a loss of open space, the number of forestry and parks jobs has shown a steady decline over several years, according to Department of Labor statistics. Commercial jobs are more abundant, and there are factors in place that lead those in the industry to believe that the business will remain strong as long as there are shrubs and trees in suburban and urban settings, according to Ryan and others. Like Kane, Ryan has an extensive background in commercial tree care, and both men retain working relationships with industry associations and businesses.

As one of the few two-year colleges offering degree credits in commercial arboriculture, the Stockbridge School seems to have set itself apart from other programs
that educate tree care professionals, and gained fans in the industry.

“It is a great program,” says David Landry, plant health care coordinator for Tree Specialists, Inc. in Holliston, Mass., which also employs Stockbridge interns. “The students we’ve gotten from there have all been really good for us. This is a great way for them to learn what’s going on in the real world. They learn things they can apply when they get out into the real world themselves. When they do internships with us, we try to get them some experience in everything the company does, including exposure to business plans. The experience will get them better prepared.”

The two-year program is lauded for providing the kind of education that can benefit the commercial tree care industry by bringing better qualified workers to a field where finding and keeping quality employees is a perennial challenge. Among the Stockbridge boosters is the Tree Care Industry Association. TCIA feels that there is a need for this type of program to be replicated across the country, and is supporting such education efforts in the industry.

Mark Garvin, TCIA vice president of public policy and communications, noted that some European countries offer programs in tree care at vocational schools. However, while technical high schools in the United States may offer training in auto repair, cooking, electrical work, and other fields, very few have programs in arboriculture or forestry. Without programs to interest and train young people, the industry will naturally attract fewer workers—and fewer qualified workers. With programs similar to that at the Stockbridge School, new employees can progress more quickly, and develop work skills and safety habits that will be beneficial to both themselves and their companies.

“People don’t suddenly decide to become tree care workers at 35 or 40,” Garvin says. “We have to attract people to the career path of arboriculture at 16, 18 and 21 years old. To get people interested in an outdoor career, it usually needs to happen when they’re young.”

Citing the TCIA 2004 Wage & Benefit Survey showing that supervisors make an average salary of $42,360, sales people average $56,580 and production/operations managers $62,320, Garvin makes the point that tree care can be a fulfilling career, something young people may never consider if they’re never exposed to it.

“We have to attract people and show them that there is a career path,” Garvin says. “This is not an industry where they’ll be making minimum wage for the rest of their lives, and not an industry where they can outsource your job to another country.”

Ryan agrees. “Commercial tree care is inflation-proof,” he says. “The amount of work may go up and down depending on the economy, but if you’ve got a dead tree in your yard, it’s got to come down. There’ll always be work, because there are trees out there, and we’re the people who have got to do the work on them.”

David Rattigan is a freelance writer living in Peabody, Mass.
## Arboriculture, Urban Forestry and Forestry Degree Programs in U.S. Colleges & Universities

While there are as many as 500 or more college and university programs in this country and around the world that include some arboriculture and urban forestry components, there are relatively few institutions that offer two- or four-year degrees in arboriculture, urban forestry or forestry. The Tree Care Industry Association is in the process of updating its data on these programs so as to have it available to prospective students as well as employers. Listed here is the most current information on these programs. Any institution not listed here that offers these degrees is encouraged to e-mail staruk@tcia.org or waterstrat@tcia.org with the appropriate information.

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<th>College/University by State</th>
<th>Arboriculture 2yr 4yr</th>
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<td>Sarah Crim, dir. of student services</td>
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<td>Dept. of Environ. Science, Policy &amp; Mgt, 137 Mulford Hall</td>
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<td>Berkeley, CA 94720-3114</td>
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<td>Macomb, Illinois 61455-1390</td>
<td>Thomas L. Green, Ph.D., prof. urban/comm. forestry</td>
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<td>(309) 298-1160, <a href="mailto:Tl_Green@wiu.edu">Tl_Green@wiu.edu</a></td>
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<td>West Lafayette, IN 47907-2033</td>
<td>Harvey A. Holt, (765) 494-1585, <a href="mailto:holtth@purdue.edu">holtth@purdue.edu</a></td>
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<td>Rick Tagtow, arboriculture instructor</td>
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<td>Southern University</td>
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<td>Baton Rouge, LA 70811</td>
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<tr>
<td>Contact Dr. Kamran Abdollahi</td>
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<tr>
<td>(225) 771-6291, <a href="mailto:kamrana664@cs.com">kamrana664@cs.com</a></td>
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<td>MAINE</td>
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<td>BS in Forestry</td>
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<tr>
<td>Unity College</td>
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<td>90 Quaker Hill Road</td>
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<td>Unity, Maine 04988</td>
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<td>Grant Estell, prop. coordinator</td>
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<tr>
<td>(207) 948-3131 ext. 217, <a href="mailto:gestell@unity.edu">gestell@unity.edu</a></td>
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<tr>
<td>University of Maine</td>
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<td>Depts. of Forest Ecosystem Science and Forest Mgmt. offers BS degrees in Forestry, Forest Operations Science, Forest Ecosystem Science &amp; Conservation. Also, non-thesis MF degree, an MS in Forestry, and a Ph.D. in Forest Resources</td>
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<td>Department of Forest Management</td>
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<td>Orono, ME 04469-5782</td>
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<td>David B. Field, prof/dept chair</td>
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<tr>
<td><a href="mailto:field.nfa.umaine@apollo.umenfa.maine.edu">field.nfa.umaine@apollo.umenfa.maine.edu</a></td>
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<tr>
<td>(207) 581-3206, 1-877-4UM-ADMIT,</td>
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<td><a href="http://www.forest.umaine.edu">www.forest.umaine.edu</a></td>
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<td>MARYLAND</td>
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<td>AAS in Forestry Technology</td>
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<tr>
<td>Allegany College of Maryland</td>
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<tr>
<td>12402 Willowbrook Road</td>
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<td>Cumberland, MD 21502</td>
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<td>Steve Resh, prog. coord.</td>
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<tr>
<td>(301) 784-5307, <a href="mailto:sresh@allegany.edu">sresh@allegany.edu</a></td>
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<td>John jastrzembski, assoc. prof., <a href="mailto:jjastrzembski@allegany.edu">jjastrzembski@allegany.edu</a></td>
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<td>University of Maryland</td>
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<td>BS in Natural Resource Sciences w/ Urban Forestry as an area of specialization</td>
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<td>College Park, Maryland 20742-4452</td>
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<td>Dr. Joe Sullivan, (301) 405-1626, <a href="mailto:jsull@umd.edu">jsull@umd.edu</a></td>
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<td>MASSACHUSETTS</td>
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<td>Arboriculture and Community Forest Mgt. 2-year degree with articulation agreement to 4-yr. UMass Forestry BS program</td>
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<td>Amherst, Massachusetts 01003</td>
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<tr>
<td>Kathy Conway (413) 545-2222, <a href="mailto:kmconway@ne.umass.edu">kmconway@ne.umass.edu</a></td>
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<tr>
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<td>Arboriculture and Community-Forest Mgt. 4-year degree program w/ articulation agreement from Stockbridge School’s 2-yr. program</td>
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<td>Dr. Dennis Ryan, III</td>
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<tr>
<td>(413) 545-2665, <a href="mailto:hdpryan@forwild.umass.edu">hdpryan@forwild.umass.edu</a></td>
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<td>Dr. Dan Keathley, (517) 355-0093, <a href="mailto:keathley@msu.edu">keathley@msu.edu</a></td>
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<td>MINNESOTA</td>
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<td>Dept. of Forest Resources, College of Natural Resources</td>
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<td>St. Paul, MN 55108-6146</td>
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<td>Alan R. Ek, prof./dept. head, (612) 624-3400, (612) 624-3098, (612) 624-6768, <a href="mailto:forest-resources@umn.edu">forest-resources@umn.edu</a></td>
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<td>BS in Forestry w/ options in Forest Mgt. and Urban Forestry MS in Forestry Ph.D. in Forest Resources</td>
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<td>Mississippi State, MS 39762</td>
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<td>James P. Shepard, prof./dept. head, <a href="mailto:jshepard@cfr.msstate.edu">jshepard@cfr.msstate.edu</a></td>
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<td>Brenda Grebner, (662) 325-2949, <a href="mailto:bgrebner@cfr.msstate.edu">bgrebner@cfr.msstate.edu</a></td>
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<td><strong>MONTANA</strong></td>
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<td>University of Montana</td>
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<tr>
<td>College of Forestry and Conservation, 32 Campus Drive Missoula, MT 59812 (406) 243-5521, (406) 243-4845 Shonna Trowbridge, director of student services (406) 243-4844, <a href="mailto:trow@forestry.umt.edu">trow@forestry.umt.edu</a> <a href="http://www.forestry.umt.edu">www.forestry.umt.edu</a></td>
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<td>BIS in Forestry, emphasis in Forest Resource Mgt. or Range Resource Mgt.</td>
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<td>University of New Hampshire</td>
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<tr>
<td>College of Life Sciences and Agriculture, 215 James Hall Durham, NH 03824 Mark J. Ducey, assoc. prof./forestry prog. coord. (603) 862-4429, <a href="mailto:mjducey@cisunix.unh.edu">mjducey@cisunix.unh.edu</a> <a href="http://www.unh.edu/natural-resources/ug-for.html">www.unh.edu/natural-resources/ug-for.html</a></td>
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<td>SAF-accredited BS in Forestry. Also, SAF-recognized AA in Forest Technology, that includes arboriculture - contact Prof. Matt Chagnon, <a href="mailto:mcc@hopper.unh.edu">mcc@hopper.unh.edu</a></td>
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<td><strong>NEW JERSEY</strong></td>
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<tr>
<td>Rutgers, The State University of New Jersey</td>
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<tr>
<td>Cook College, Dept. of Ecology, Evolution &amp; Natural Resources 14 College Farm Road New Brunswick, NJ 08901 Dr. Michael Sukhdeo, department chair Jason Grabosky, urban forester (732) 932-0050, <a href="mailto:grabosky@aesop.rutgers.edu">grabosky@aesop.rutgers.edu</a> <a href="http://www.cookcollege.rutgers.edu">www.cookcollege.rutgers.edu</a></td>
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<td>New Urban Forestry Program, requisites to be determined. Will have 4-yr. undergrad program, in addition to grad. &amp; doctoral programs</td>
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<td><strong>NEW MEXICO</strong></td>
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<tr>
<td>New Mexico State University</td>
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<tr>
<td>Dept. of Agronomy and Horticulture, MSC 30 Las Cruces, NM 88003 Dr. John Mexal, (505) 646-3335, <a href="mailto:jmexal@nmsu.edu">jmexal@nmsu.edu</a> <a href="http://aghort.nmsu.edu">http://aghort.nmsu.edu</a></td>
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<td>BS in Horticulture w/ Urban Forestry option</td>
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<td><strong>NEW YORK</strong></td>
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<td>Paul Smith’s College</td>
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<td>Forestry, Natural Resources &amp; Recreation Div. P.O. Box 265, Route 86 &amp; 30 Paul Smiths, NY 12970-0265 James A. Allen, dean, (518) 327-6236, <a href="mailto:allirej@paulsmiths.edu">allirej@paulsmiths.edu</a> <a href="http://www.paulsmiths.edu">www.paulsmiths.edu</a></td>
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<td>BS in Forestry w/ Vegetation Management concentration AAS in Urban Tree Mgt - Randall Swanson, program coordinator, (518) 327-3379; <a href="mailto:swansor@paulsmiths.edu">swansor@paulsmiths.edu</a></td>
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<tr>
<td><strong>NORTH CAROLINA</strong></td>
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<td>North Carolina State University</td>
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<td>NCSU Box 8008, Raleigh, NC 27695 Dr. Barry Goldman, dept. head <a href="mailto:barry.goldfarb@ncsu.edu">barry.goldfarb@ncsu.edu</a>, (919) 515-4471 <a href="http://www.ncsu.edu">www.ncsu.edu</a></td>
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<td>BS in Forest Management w/ Urban Forestry concentration. Dept. of Forestry and Environmental Resources. Articulation agreements w/ 4 community colleges offering forest technology: Montgomery CC, Southeastern CC, Wayne CC and Haywood CC</td>
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<td>Ohio State University</td>
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<tr>
<td>The School of Natural Resources 210 Kottman Hall, 2021 Coffey Road Columbus, OH 43210-1085 Davis Sydnor, urban forestry prof. (614) 292-2265, <a href="mailto:sydnor.1@osu.edu">sydnor.1@osu.edu</a> <a href="http://sor.osu.edu">http://sor.osu.edu</a></td>
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<tr>
<td>College of Forestry, 321 Richardson Hall Corvallis OR 97331-5752 Cheryl Alex, (541) 737-2244, <a href="mailto:cheryl.alex@oregonstate.edu">cheryl.alex@oregonstate.edu</a> <a href="http://www.cof.oregonstate.edu">www.cof.oregonstate.edu</a></td>
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<td>Four departments offering undergraduate and graduate level degrees (Forest Resources, Forest Engineering, Wood Science and Engineering, and Forest Science). Dept. of Forest Science offers only graduate degrees, incl. MS, MF and PhD. MS and MF</td>
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<td>School of Forest Resources, College of Agri Science 201 Ferguson Building, University Park PA 16801 Paul Blankenham, assoc. dir. academic programs (814) 865-3505, <a href="mailto:pbl@psu.edu">pbl@psu.edu</a> <a href="http://www.sfr.cas.psu.edu">www.sfr.cas.psu.edu</a></td>
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<td>Urban Forestry option in Forest Science major, leading to BS</td>
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<tr>
<td>Penn State Mont Alto</td>
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<tr>
<td>1 Campus Drive, Mont Alto, PA 17227 Craig T. Houghton, program coordinator (717) 749-6239, <a href="mailto:cth2@psu.edu">cth2@psu.edu</a> <a href="http://www.ma.psu.edu">www.ma.psu.edu</a></td>
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<td>Arboriculture course included in the 2-yr. AS in Forest Technology</td>
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OSHA has proposed changes to standards that affect all arborists who work proximate to overhead conductors and use aerial lifts. The standard addresses much more than just the line clearance tree trimmer in the bucket, but we have chosen to highlight a contradiction concerning fall protection that this proposal establishes.

In a Notice of Proposed Rulemaking in the June 15 Federal Register, OSHA gave notice that it intends to revise the Vertical Standard, 29 CFR 1910.269. These proposed revisions are part of a much larger effort by OSHA to revise all standards relevant to utility line construction and maintenance. Some of the standards affecting utility construction are 30 years old.

Background: TCIA gleaned a summary of changes to 1910.269 from 158 pages of text in the Federal Register, most of which did not pertain to line clearance tree trimming. TCIA e-mailed this summary to members June 17.

Here is the contradiction. The bucket operator within 10 feet of conductors is subject to a different fall protection requirement than the arborist outside the 10-foot radius.

OSHA proposes to make the fall protection requirements for aerial lift operations covered by 1910.269 consistent with fall protection standards for construction in “Subpart M.” Translated, that means that the line clearance arborist aloft in the bucket will have to wear a full body harness and shock-absorbing lanyard, reducing the arresting forces on the body to a level that OSHA accepts. The only alternative that allows the use of a traditional body belt will be a work-positioning system with a lanyard that limits the fall to two feet or less.

By contrast, other arborists will still be subject to 1910.67, which only stipulates the use of a body belt and lanyard of unspecified length.

Other proposed changes in the standard concerning host employer-contract employer relationships, training and job briefing raise additional concerns for arborists regulated by 1910.269.

TCIA plans on responding to OSHA’s request for public comment via a multi-industry coalition established by the Edison Electric Institute (EEI), the pre-eminent trade association representing electric utilities.

Please contact us if you would like to submit your own comments and require guidance on how to do it, or if you need further information about the changes being proposed by OSHA.

Peter Gerstenberger is senior advisor for safety, compliance & standards for the Tree Care Industry Association.
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A Lesson in Proper Shrub Pruning

By Cass Turnbull

Adapted from presentation at TCI EXPO 2004.

Defining good pruning

Good pruning can be defined as “pruning that improves or maintains a plant’s long-term health, beauty and (in the case of trees) safety.” As with trees, shrub pruning is rarely done for the sake of the shrub itself. Pruning is done to please the landscape owner who is finding fault with the existing design. The landscaper is free to manipulate shrubs and trees by pruning, as long as the health and beauty (long term) of the plants is not degraded by doing so.

Three kinds of cuts

It is important to know the three kinds of pruning cuts, their effect on plant health and their aesthetic results. Over the course of years the terminology for these cuts has changed, unfortunately, several times, causing confusion. I still prefer the terms I was taught, and will use them here.

The first kind of a cut is a “non-selective heading cut.” This cut shortens the length of a branch by cutting it back to no place in particular, or internodally. Non-selective heading cuts are the hardest on plant health and aesthetics. Examples of heading cuts are shearing of shrubs, topping trees, and heading used to train young plants to become bushier. This cut can cause dieback and the formation of unwanted stubs on shrubs, as well as trees. And, depending on the species, it could stimulate the growth of water sprouts. Water sprouts are the rapid-growing, unattractive, and numerous new shoots that are the common result of injury to plants, usually mal-pruning. Once stimulated into existence, water sprouts cannot be stopped by removing (pruning) them. Like Hydra, the many-headed snake that Hercules battled, every time a water sprout is cut (cut off completely or cut in half) three or more return in its place. The prevention of water sprout formation should be a primary concern for arborists, as water sprouts ruin the aesthetics of plants, and lock the plant owner into a costly maintenance battle against their shrub. A battle that cannot be won.

The second type of cut is the “selective heading cut.” It is the right way to shorten a branch by cutting it back to a lateral of goodly size. This cut has also been called a “reduction cut” or a “drop crotch cut” on trees. Unfortunately, this cut has also been called a “thinning cut,” causing much confusion in the industry. If the remaining lateral is large enough, there will be no dieback and no water sprout response. The selective heading cut is also a general stress on a plant, though not as hard on health as a non-selective heading cut. Shrubs, far more than trees, can withstand overall size reduction pruning, although their response varies greatly according to their species.

The third kind of cut, the “thinning cut,” removes a lateral branch by cutting it off where it joins the larger, parent stem. This cut is the easiest on the health of the plant. Thinning is used to remove lower limbs of shrubs (skirting, limbing-up). Numerous small thinning cuts can also be used throughout a shrub. A thinned-out shrub is less dense, though not smaller in size. Thinning is often used to highlight the good internal branch structure of those shrubs that have it.

The pruning budget

When pruning trees or shrubs it is useful to think of them as having a pruning budget. Some plants, for example a cherry tree or a witch hazel, have a small pruning budget. If you prune the wrong way, or simply too much, they respond by sending out water sprouts as numerous as the hairs on a dog’s back. Other plants, like a camellia or forsythia, have a large pruning budget. You can remove a lot of branches without stimulating re-growth, and if you do get regrowth, it rather quickly assumes
a natural look.

The pruning budget is made up of three components: the kind of the cut, (non-selective or selective heading, or thinning) the size of the cut, and the total amount of foliage removed. The concept of the pruning budget is useful when explaining the limits of pruning to customers. One can spend the pruning budget in any number of different ways, using a combination of skirting, thinning and reduction. But at a certain point the pruner must stop, since the limiting factor is the pruning budget. Exceed that budget and the plant will look worse, not better, in coming years.

**Mature vs. ultimate size**

Another useful concept is the distinction between the “mature” and “ultimate” size of shrubs. The mature size of a plant is the size listed in plant encyclopedias or found on the plant tag. It represents the average size a plant will be in about 10 years. It is the minimum space needed for the shrub to look good in the landscape, and, given 21 years of pruning experience, I can attest that attempting to keep a shrub smaller than its mature size is, well, doomed to failure. They simply grow faster every year. Pruning is not like cutting hair. With dutiful, regular cutting one can keep one’s hair at any given length. But cutting plants can cause them to increase their growth rate, as well as splitting the growth into more and more (thicker and thicker) branches. If a person’s hair worked like a plant, cutting your hair to ear length would stimulate it to bush out at the ends and re-grow to shoulder length over night.

After reaching its mature size, a tree or shrub does not stop growing. It simply slows down, a little more every year, until it reaches its ultimate size, which is usually about twice the mature size. Having reached its ultimate size, a plant stops growing taller although, like many people I know; it may continue to grow wider. In general, shrubs cannot be kept beneath their mature size, but some kinds (the cane-growers and the mounding-habit shrubs) can be pruned to keep them within their mature size range, thus preventing them from growing to their ultimate size.

**Three plant habits**

Dividing shrubs according to their natural shape or “habit” can help new gardeners and arborists to decide how to best prune them. PlantAmnesty lists common landscape plants according to these three growing habits for many regions of the country, including Hawaii and low desert Arizona. These are available on the PlantAmnesty Web site, free of charge (www.plantamnesty.org).

**Cane growers**

Cane growers are shrubs that readily renew themselves by sending up replacement canes from the base of the shrub. Examples are forsythias, Oregon grape, nandina, panex, croton and ti. These plants can be kept in their mature height range almost indefinitely by cutting out some of the largest, tallest canes, to ground level or an inch or two above, as needed. They can also be thinned-out and made to look less oppressive by this pruning this way as well.

As needed, cane-growers can also be skirted, selectively thinned, or left alone...
entirely. Cane-growers are extremely tough plants and the main concern when pruning them is whether or not they are being improved aesthetically. Up to a third of the foliage can easily be removed; their size can be reduced to about one quarter or more of what it would be otherwise. In some instances, even large, non-selective heading cuts can be utilized to force new growth lower inside the plant, (a leggy nandina for example) or to shorten the plant (staggered heading cuts on an Oregon grape). However, over-all, heading should be avoided on those cane-growers that have a natural fountain shape, as it would subvert their natural beauty. (forsythia, kerria, bamboo)

Mounding-habit shrubs

Mounding-habit shrubs are the easiest to tidy-up and reduce in over-all size (to about one quarter smaller) using the selective-heading cut. Mounding habit shrubs either have small leaves or relatively herbaceous (soft) wood. Examples are spiraea, burning bush (E. alata), evergreen azalea, aucuba, escallonia, and choisya.

The selective pruning process requires that branches are selected in order of the longest or most interfering branch first and hand-pruned it back, cutting the branch off where it meets up with a stem inside the shrub. In the case of very thin branches (like a spiraea) simply cut to a point well below the surface where a bud will break, i.e. a non-selective heading cut. This process, called “grab-and-snip” by some grounds crews, reduces the size of shrubs without creating a water-sprout rebound. Since this is selective pruning, it can be done anytime of year without eliminating the flower display of the shrub. It maintains the natural shape and texture of the plant. It allows light into the shrub, ensuring green branches to cut back to in the future. And, although it takes longer to prune an individual shrub selectively than it does to shear it, the grab-and-snip method only needs to be done once every few years, instead of thrice annually (as with most shearing). Selective pruning is therefore a cheaper way to prune, than shearing. This fact is difficult for typical grounds crews to accept. It is true never-the-less.

In general, one third of the crown of a mounding-habit plant can be removed, and 90 percent of the cuts will be selective heading. If the occasion requires it, alternate methods of pruning can be used. A mounding-habit shrub can be skirted up to allow some one to walk by it. Or some shrubs can be thinned effectively, if to do so will look good. For example a burning bush or an evergreen azalea can be thinned to accentuate their good branch pattern.
There is usually more than one right way to prune a shrub, as there is more than one wrong way. And it can’t be stressed enough that most plants don’t need to be pruned to bloom and look their best. If there is nothing wrong with the shrub in question, and the customer isn’t complaining, leaving it alone is often the cheapest and best way to care for it.

Tree-like shrubs

The third category of shrubs I call “tree-like,” not because they are large or single-trunked but because they have woody and more intricate branch structures than the other two categories. Examples are witch hazel, camellia, and piers. These are the ones that a light hand in pruning is needed. Avoid all non-selective heading, and use relatively few selective heading cuts. Most pruning to be done will utilize true thinning cuts, and most of that is deadwooding. Overall size reduction is discouraged, in that such pruning on these plants is more likely to result in either water sprouts (witch hazels, double file viburnum), or, if not that, it can subvert the key feature of these plants—their naturally beautiful branch structure (rhododendrons, etc.). Therefore, the pruning budget is much smaller, as an average take of less than 1/5 of the live crown. Some shrubs take heavier thinning (pines, thread cypress, camellias) others take far less (witch hazel, double file viburnum, cotoneaster).

When planning a landscape, the tree-like shrubs should be allocated all the room they will ever need to reach their ultimate size. The other two types of shrubs can more readily be “massed” (which is to say, over-planted) without having the landscape self-destruct in 10 years.

The three great secrets

Almost everything about pruning is counter-intuitive. In classes I often tell people the secrets of pruning, and they don’t want those secrets, they want the other secrets. But the things that homeowners want pruning to do are poorly achieved by doing it (disease control, size restriction). However, pruning (when combined with other landscape management solutions) can work wonders to restore order and beauty to gardens that no longer please. Unfortunately, because the are not understood, they are a hard sell to both the novice pruner and the average homeowner.

The three secrets to pruning are: 1) Remove all of the deadwood. Do it first and do it always. 2) Remove some lower limbs (not too many). This adds an important bit of definition, relieves crowding and the lowest limbs are often the ones that head out over pathways, etc. 3) Site plants to allow for mature size.

To this list I would add the fourth great secret – know when to stop pruning. The true test of good pruning is not “do I like how it looks now, just as I’ve finished pruning.” The test of pruning is “Will I like the results of this pruning next year, and in future years as well?”

Rehabilitative pruning

Mal-pruning of shrubbery is as common as mal-pruning (topping) of trees was three decades ago. The greatest challenge to the green industry in the coming decades is to establish plant maintenance as a skilled profession, (We are hired because of what we know) rather than accepting a (lesser paid and lesser respected) role as “non-professional labor” (those who are given instructions by the homeowners).

I would estimate that 80 percent of the pruning done by homeowners and professionals isn’t really pruning at all, but just cutting. The three most common forms of shrub mal-pruning are shearing, over-thinning, and general non-selective heading. According to the definition of good pruning above, mal-pruning works against the natural habit of the plant, it degrades the health (as evidenced by increasing deadwood, such as stubs and die-back of branch ends), decreasing the aesthetic quality of shrubs,
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Radical renovation
Many shrubs can be returned to natural form by cutting them to the ground, or to a low framework. This is usually done in the spring and it is only appropriate for healthy plants. It can take several years for the plant to re-assume its natural form. And, it is rather frightening to behold. I call this hard cutting back of previously mal-pruned shrubs “radical renovation.” It is used most successfully with those plants in the cane-grower category, though it can be used with many of the other shrubs as well. But like surgery, radical renovation is a calculated risk. Serious harm is done to a plant in order to remedy a bad situation.

Other solutions to overgrown gardens
Pruning is only one tool in the arborist or landscaper’s tool kit. Landscape renovation is an integrated discipline which employs many skills and principles that cannot be covered adequately here. Activities can include: enlarging beds, complete removal of some plants, transplanting shrubs to better locations, and the addition of lower story plantings. The more one knows about what can and should be done to improve a landscape, the more valuable we become to our clients.

Cass Turnbull lives in Seattle, Wash., is a professional landscaper, certified arborist, teacher and writer. She worked with the Seattle Parks Department landscape crew for 11 years and has owned her own landscaping business for 18 years. She founded the non-profit organization, PlantAmnesty, whose mission is to promote good pruning, and has written two books, The Complete Guide to Landscape Design, Renovation and Maintenance, and Cass Turnbull’s Guide to Pruning, published last year.
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Vines, popularly known as climbers, are the aristocrats of the plant kingdom. Majestic, elegant, sensuous, graceful vines are integral parts of the landscape in almost all homes. Vines exhibit a high degree of variability in both their growth habits and use in a landscape. Vines come in all different sizes, from one foot to more than 100 feet tall. They may cover one square foot to more than 100 square feet when left unchecked. No landscape is complete without a couple of vines in it.

Almost all vines are grown with some kind of support. In the absence of a physical support, vines trail on the ground serving as excellent ground cover. Vines that climb over stakes, trellises, walls, arches, etc. may or may not have special plant parts such as tendrils, adventitious aerial roots, or hooks. Twining vines usually have slender sensitive stems that first establish contact with supporting structures to twine around them. Stems of twining vines may remain slender (jasmine, aristolochia, honey suckle, morning glory, etc.) or become very thick (wisteria). Climbing roses need the help of gardeners to climb over walls, arches, or trellises.

A large number of climbers are tendril climbers (e.g. sweet peas, gloriaosa, passiflora, parthenocissus, etc.) Tendrils are usually slender, with or without a number of spiral twists (like mattress spring coils). Various plant parts such as leaf stalk (petiole),
leaf tip, stipules, axillary buds, and floral axis are modified to serve as tendrils. Aerial roots or adventitious roots that develop at nodes on the stem (e.g. philodendron, pothos, ivy) help the climber to climb over trees or other supporting structures. Sticky roots of ivy help the plant climb over walls.

Size and geographical location of the yard, climate, seasonal changes, soil conditions, personal preferences, type of landscape (formal or informal), usage, time, energy and money that a homeowner can invest in taking care of vines play significant roles in the choice of vines in a landscape. Include exotic climbers that would make a client’s landscape more interesting and inviting.

**Calico flower**

*Aristolochia* (calico flower or Dutchman’s pipe) has the most exotic flower that any homeowner living in warmer climates would be proud to have in a landscape. *Aristolochia* species are found all over the world. *A. gigantea* and *A. elegans* (both native to Brazil) are two of the popular species of *Aristolochia*. *A. gigantea* and *A. elegans* are hardy to zones 9-10.

*A. gigantea*, as the name implies, is a gigantic vine that grows to a height of 30 feet when planted in a sunny location on the ground. It can tolerate part shade. It is hardy in a mild frost. It can withstand temperatures as low as 27 F. One can easily grow it in a large container. However, to get best results plant it on the ground where it likes to grow and reach its full potential. This is a robust, twisting climber. It needs a sturdy arbor or tree to show off its heart shaped leaves and gigantic flowers of unusual shape and scent. It likes water and fertilizer, grows very quickly during the warm season.

*A. gigantea* blooms August through September. The huge exotic flower (18 inches by 12 inches) with a pleasant citronella scent resembles Dutchman’s pipe. This fragrance serves as an effective means of cross-pollination by attracting flies that take a dive down into the throat of the pipe. The fruits are capsules with hundreds of lightweight seeds.

*Aristolochia elegans* grows to a height of 10 to 15 feet. It has slender woody stems with bright green heart shaped leaves. In summer, it produces truckloads of greenish-white flowers (about 3 inches in diameter).

One can easily propagate both species by germinating seeds or stem cuttings.

**Passion flower**

Passiflora (the passion flower) Passiflora species are mostly natives of tropical rainforests of South America. However, a few species are indigenous to Asia, Australia and the Polynesian Islands.

The vine produces masses of alluring, exotic, colorful flowers during warmer months. The floral morphology reminded 16th century Christian missionaries of the death of Christ. Hence, they gave Passiflora the popular name “passion flower.” The flower with its lovely petals, alluring colorful corona filaments, the androgynophore (the stamens and the pistil are placed in an elevated column that rises above the petals) and the colorful trifid (three branches) stigma, looks simply marvelous. No wonder Jacomo Bosio, a monastic scholar of 17th century considered it a floral marvel. To Bosio, the 72 filaments (corona filaments) represented the number of thorns in the crown of thorns set upon Christ’s head. The five stamens and the three spreading styles with their flattened heads symbolize the wounds and the nails respectively. The vine’s tendrils resemble the whips used to scourge Christ. The abundant and beautiful leaves are shaped like the head of a lance or pike, like the spear that pierced the side of Christ, while the underside of the leaf is marked with dark round spots signifying 30 pieces of silver that Judas was paid to betray Christ. Clearly, people of the 17th century were obsessed with Christ and found religious significance in almost everything.

Passion flower comes in a variety of colors, including white, red and blue, and has edible fruits. The inner pulpy portion with the seeds is tasty, but not the outer skin.

The tropical vine grows best when temperatures are above 60 F. As such it grows wild in southern states in the U.S. It is hardy to zones 9-10. Heavy frost can kill the plant. It prefers well-drained rich soil. Plant passiflora in a sheltered location in full sun or partial shade. Make sure to amend clay soil with organic compost. Water thoroughly twice a week during summer. It requires frequent fertilizing twice a month with a high potash liquid.
Bougainvillea

Bougainvillea, popularly known as paper flower, is a spectacular, colorful vine grown widely throughout the tropical and the subtropical regions of the world. A native of Brazil, Bougainvillea is a hardy vine in tropical and sub-tropical climates (zones 22-24). However, one can easily grow Bougainvillea in cooler climatic zones – 12, 13, 15-17, 19, 21 and even in zones 5, and 6. It is not frost hardy, but given winter protection, the vine will bounce back in spring.

Unlike most ornamental flowers, the corolla of bougainvillea with its white petals is inconspicuous. The attractive part of the flower here is the huge colorful bract. The bract is thin, crisp and papery, hence the popular name, and comes in a wide spectrum of colors. Three huge, colored bracts usually surround a cluster of
Caring for trees with Chlorosis

Chlorosis is a plant health condition defined as a lack of chlorophyll.

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three flowers. However, some cultivars have concentric rows of bracts (‘Cherry Blossom,’ ‘Manila Red’).

There is an unlimited choice with reference to plant size and flower color. A huge number of bougainvillea species and cultivars are available to meet the needs of a gardener anywhere in the world. A number of bougainvillea species grow to a height of 50 feet or more. The thorny vine needs to be trained on supporting structures. It will gracefully climb over walls, trees, trellises and arches. The evergreen shrubby vine with a sprawling habit can easily cover an area of 20 feet in width, in the tropical and subtropical climates. When grown over banks and slopes, they look stunning with their mounds of flowers. One can easily grow any variety as a small shrub or a sprawling shrub with proper pruning.

Where space is the problem, choose from a large selection of bougainvillea species that are ideal for containers. They look lovely in hanging pots or grown on terraces. The green, reddish green or variegated leaves of some varieties as well as flowers of all colors will light up any dark corner. Grow these vines as screens or coverings for arbors and porches outdoors, in tropical and subtropical climates.

Bougainvillea grows well in a rich humus soil with good drainage and in full sunlight. Once the vine establishes itself in the ground, it needs very little watering or fertilizing. However, a container-grown plant needs frequent watering and fertilizing. Fertilize in spring and summer with a well-balanced fertilizer (10-10-10). Prune spent out blooms to promote new growth and extend flowering. Arching and nipping of terminal portions of canes help in the development of lateral flower bearing shoots.

Don’t let cold winters stop you from growing bougainvillea. It is an excellent houseplant. Keep the container in a sunny spot. Soak the plant thoroughly by immersing the container in a basin of water with a few drops of balanced liquid fertilizer every two weeks. When the temperature warms up in spring, move the plant from indoors to outdoors gradually. A sudden exposure to high temperatures may burn it.

Move indoors before the onset of winter in colder climates. It may lose most of its leaves, even when kept indoors. Make sure that the temperature does not fall below 45 F, even indoors. Let it hibernate during winter. Withhold fertilizing and watering. Otherwise, it may not flower when moved outdoors in warm summer. Do not water frequently at the beginning of summer. During the flowering period, bougainvillea needs an increased amount of water. Use a liquid fertilizer every week to 10 days. During flowering, use fertilizers with low nitrogen, high phosphorus and potassium.

Clematis

This spectacular vine is considered to be the queen of all vines. There is no scarcity of clematis varieties to grow from zones 4-1. Clematis species are mostly deciduous woody vines, however a few of them are perennial herbaceous plants. Clematis species show high variability in flower form, color, bloom season, foliage effect and plant height. Sweet autumn clematis (C. terniflora) and anemone clematis (C. montana) grow to 20 to 30 feet. The large-flowered hybrids usually grow to 8 to 12 feet tall, and the small herbaceous species grow to 2 to 5 feet tall.

Hybrid clematis cultivars produce large blooms in white, blue, violet, purple, pink, red and bicolor. Flower forms are variable – small white flowers in loose clusters, bell or urn-shaped flowers, and flat or open flowers. Small-flowered species show a wide range of fragrances, from almond to hot cocoa.

According to the blooming period, clematis cultivars are grouped: Group A: Early-flowering clematis (C. alpina, C. macropetala, C. armandii and C. montana). These bloom in early spring, generally in April and May, from buds produced the previous year. Prune these back as soon as
possible after bloom but no later than the end of July. Do not cut into woody trunks. Group B: Large-flowered cultivars: (‘Nelly Moser,’ ‘Miss Bateman,’ ‘Lasurstern,’ ‘Duchess of Edinburgh,’ ‘Mrs. Cholmondeley,’ etc.). These are large-flowered hybrids that bloom in mid-June on short stems from the previous season’s growth and often again in late summer on new growth. Prune in February or March, remove dead and weak stems, and cut back remaining stems to the topmost pair of large, plump green buds. Do not prune heavily. Group C: Late-flowering clematis (e.g. C. viticella, C. x jackmani, C. terniflora, ‘Perle d’Azur,’ ‘Royal Velours,’ ‘Duchess of Albany,’ etc.). Plants in this group bear flowers on the last 2 to 3 feet of the current season’s growth. Some types begin blooming in mid-June and continue into the fall. In February or March, cut each stem to a height of about 2 to 3 feet.

Clematis twine around trellises, fences or arbors using their petioles (leaf stalks). Keep the roots cool in shade by heavy mulching. Keep the roots moist but not soggy. The plant’s stems and foliage should be in sun, at least six hours of sun to flower best. Use organic fertilizers once in four months.

It is easy to propagate any of the above-mentioned vines by stem cuttings and layering. Late autumn is the right time for propagation by cuttings or layering.

Select pencil-thick stem cuttings. Remove leaves at the bottom of stem cuttings. With or without applying a rooting hormone, insert the lower cut end of cuttings in a moist potting soil. Maintain soil temperature of 65 F to 70 F. Cuttings will root at lower temperatures but may take a little longer. Cover them with a clear polythene bag for a few weeks to maintain soil temperatures. Make some small holes in the bag for ventilation. Transplant the cuttings when once they have developed a good root system.

For layering, select a branch closer to the ground, bend the branch to make contact with the soil, after scraping the bark off the contact region, bury it in the soil and place a brick over it to keep it in place. After a month or so, roots will develop from the scraped stem portion. After a couple of months, sever the connection between the mother plant and the established daughter plant. A container may also be used for layering. With layering, one will most certainly have 100 percent success.

In a landscape, in addition to color and exotic shapes, fragrance is also an important element. Grow jasmine, honeysuckle and sweet pea to fill the landscape with fragrance. Climbing roses and clematis are also good choices to grow over arbors, trellises or pergolas.

Lakshmi Sridharan is a scientist with a Ph.D. in molecular biology, botany and microbiology. She is author of A Practical Guide to Growing Roses Successfully, and can be reached via www.lakshmi-sridharan.com.
Attracting the Best: Recruiting Your Next Employee

By Steven Austin Stovall

Whether the economy is booming or slipping, organizations need highly qualified candidates to fill open positions. Recruiting is the process of attracting talented individuals to the organization, and it’s more than just throwing a broad net across the labor pool.

These days, the recruiting effort is targeted and highly strategic, moving well beyond the Sunday newspaper ad of a bygone era. The Internet, specialized recruiters, billboards, TV, radio, grocery store receipts, job fairs, and a myriad of other tools are used for recruiting. As the competition heats up for “stars” of the labor pool, tree care companies find themselves seeking ever more creative ways to attract candidates.

But recruiting is neither inexpensive nor easy. Sure, a company can place an ad on a leading Internet recruiting site and receive literally thousands of resumes in less than a week. But how many of these applicants actually are qualified for the open position? How many live within commuting distance? How many will get other job offers before you wade through all the resumes?

These are tough questions and challenges facing companies in this age of click-and-send application processes. To be certain you are reaching the appropriate pool of candidates, you must plan your recruiting efforts as strategically as you do for sales, operations, or marketing.

There are numerous ways to attract employees to your business. However, a few stand out as the most common for their effectiveness. For example, you’re not likely to hire a professional recruiter (also known as a headhunter) to identify your hourly workforce. What follows is an assessment of these more common methods.

Word of mouth

Probably the oldest recruiting tool and yet the least expensive is also the most effective. Take a look at your best workers – very likely they have friends that have similar work ethic and values. That’s because it’s human nature to want to be around people who are like us. Some firms offer incentives to existing employees to help with recruitment. For example, one common practice is that when an employee refers a possible candidate, they receive remuneration if that employee remains after 90 days ($50 to $100 is typical). Some take it a step further to ameliorate turnover by offering additional money after the new person reaches six months of employment and again after a year. These small outlays of cash are miniscule compared to the costs of recruiting, training, and keeping a new employee. And don’t forget about your customers, vendors, and so forth. All of these, through networking efforts, can be a source of future employees.

Career Web sites

Last year, companies of all types and sizes spent $800 million on Internet recruitment ads. The biggest reason? Quantity compared to cost. Some firms have received as many as 5,000 resumes or applications from a single ad placed on any of the major recruiting sites such as monster.com, hotjobs.com, careerbuilder.com, etc. Though these sites do have built-in parameters to ensure you receive resumes/applications only from local candidates, it is possible others will slip through. Sheer volume of responses is clearly the biggest draw for this method. In addition, the cost is quite affordable. Depending upon the number of ads you place, you’ll pay between $100 and $400 per ad that runs up to 60 days. Compared with newspaper advertising, where companies pay by the word or column inch, this is a very cost effective technique.

Local newspaper

Traditionally, the local newspaper has been a mainstay in the commercial tree
care industry. It’s targeted to your surrounding community and the ads are easily categorized to make it easy for job-seeking candidates. However, the cost can be quite prohibitive in certain cities. Major U.S. city papers may charge $1,000 or more for a single Sunday advertisement. But despite the cost, it remains a very common tool for attracting applicants. Obviously, the design of your ads is critical because every word becomes a financial investment.

Job fairs

Don’t make the mistake of thinking that job fairs are only for large corporations and colleges. You can garner excellent employees from this source. Check with your local employment agencies, area schools and universities. Ask for a job fair schedule. Also, keep an eye out in your local paper; often, upcoming job fairs are announced in the business section and most will need additional firms to join the list of recruiting organizations.

In addition to the fee for participating (ranging from free to around $1,000), there is an initial investment. For example, you will often need to bring your own table cover, plus brochures on your firm, applications, and a large sign with your company name. Also, expect to spend all of a Saturday and/or Sunday at your table. Potentially thousands of candidates may walk by your table during a single job fair. However, unless they find your company or open positions interesting, they probably will not stop at your table. For those who do, they may take one of your applications or drop off a resume. You may have to attend several job fairs to determine if this is an effective recruiting tool for you.

State/local employment agencies

Some companies have mixed results from local and state agencies. For a few firms, it’s the only method of recruiting they use. For others, they find that they can hire from these agencies very quickly, but understand that high turnover might still be an issue. Still, some discover that it is a technique that does not work for them at all. These governmental agencies’ first order of business is assisting the unemployed to find employment. It is certainly possible to find very good workers through these agencies, but like job fairs, you’ll have to try these agencies several times to know if this method is a good fit for your business.

Temporary firms

Temporary firms are essentially private employment agencies with a goal to match workers to companies while making a profit. For you, they will screen candidates based on the qualifications you supply them, conduct the interviews, and even carry out drug screens. In return, they charge you an hourly rate for each employee you “contractually hire.” In other words, they are not an employee of your tree care company. This way, you can tell the temporary firm you want three people for only one week and they’ll send you three individuals they feel are qualified based on what you’ve told the temporary company. Expect to pay anywhere from 25 percent to 100 percent more per hour than what you would normally pay for those you would personally hire. For some firms, the headaches associated with recruiting disappear through the use of temp firms. For others, they would rather have a traditional employer/employee relationship.

Ultimately, you’ll have to find those recruiting methods that work best for you. There are countless other creative ways you can attract candidates. For example, you might check with your local grocery store or even movie theatre to see if you can print an ad on the back of their receipts or show your ad on a movie screen before the movie begins.

You may find that one traditional method works best for you or that a combination of techniques generates the best response of qualified applicants. Remember to think of your recruiting strategy as you would your marketing strategy. Plan, design, and execute. Then evaluate what works and what doesn’t. Whatever approach you take, the key is obviously selecting the top employees who will be with you for some time to come.

Steven Austin Stovall is a trainer and consultant based in Ohio, and a professor of management at Wilmington College. His fourth book, Cases in Human Resources Management, was published in February. E-mail steven_stovall@wilmington.edu.


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A New Twist to an Old Knot

By Patrick Darius

I have been climbing for 17 years. I am an ISA certified arborist and a Maine certified arborist and own my own business.

When I started climbing, I would tie my friction hitch with a tail that would tie back to the bridge with a single fisherman’s (knot) to mark the bridge for aerial rescue purposes.

I attended ArborMaster training in 1999 in Virginia and in 2003 in Massachusetts. I showed ArborMaster instructors Rip Tompkins and Sean Gere how I tied it and Rip suggested I get it out on the Internet, but I do not know the process to do so. He also said I should name it the Darius knot before someone else took credit for it. And, he asked if he could use it at demos to show another variation of tying this knot.

Another reason I started tying this taut-line hitch like I did was because I did not like the safety knot you tie in the tail to keep the tautline from rolling out, so I added some length to the tail and tied it back to the bridge, and it worked well. Then I realized it marked the bridge for aerial rescue.

It works best tied with a wide bridge and tied in the center of the bridge. A short bridge makes for difficult body thrusting so, since I have very long arms, my bridge tends to be longer. If you tie the safety knot on the bridge too close to your friction hitch it tends to tighten up on the friction hitch a little, so center is best.

I have used this version of a tautline hitch for 17 years and have used others – such as the Blake's hitch – and have always come back to this style. It is not a real world-changing thing but just another style to tie the tautline. To me that's what this business is all about – people trying different ways to make the industry easier...
and safer. Some ideas work, some don’t. Being an arborist has opened a lot of doors other jobs might not have, and I will continue doing it as long as I can.

I’d be interested in hearing what others think of my adaptation.

Patrick Darius is owner of Darius Tree Service in Surry, Maine.

Sean Gere, lead instructor at ArborMaster Training Inc.: “I remember Darius showing us (Rip and me) his taut-line variation. It is hard to tell from the photo, but according to his description it has a “tail that would tie back to the bridge with a single fisherman’s.” This doesn’t seem like a true closed system hitch in that the tail secured that way won’t really take a load when the hitch is loaded. I don’t remember if the tail was further secured to the saddle attachment but this would make a difference.

It looks like a minor variation on the tautline hitch. If the tail is only secured by tying “back to the bridge with a single fisherman’s” that tail will slide along the bridge as the hitch is loaded. I can’t see how this minor variation could change the handling of the hitch. I would assume that this would handle similarly to a standard tautline hitch.

Patrick Darius
TCI EXPO 2005 Exhibitor Listing

By mid July, the following businesses were planning to exhibit at TCI EXPO in Columbus. Exhibitors can sign up through October.

A. M. Leonard, Inc.
Mail order catalog for horticultural supplies.

ACRT, Inc.
Training for beginning and experienced tree trimmers. Emphasis on safety, procedures, and professionalism. English and Spanish. Aerial rescue. Line clearance certification to meet OSHA requirements.

Aerial Lift, Inc.
Manufacturer of Aerial Lifts of Milford, Connecticut since 1958. Lifts range in height from 38 to 80 feet.

Agape Designs
Beautiful copper sculptured trees and custom manufactured wooden belts and jewelry. Uniquely designed Tree Tee Shirts.

AgriChem America
Herbicides, insecticides and fungicides.

All Gear, Inc.

Alliance Equipment Company, Inc.
Fiberglass replacement parts and polyethylene bucket liners for aerial lift trucks.

Altec Industries, Inc.
Altec is exhibiting the LRV Series aerial devices.

Alturnamats, Inc.
Super tough polyethylene drive-on matting system for easy accessibility over lawns and ground that needs to be protected.

American Arborist Supplies Inc.
The professional’s source for everything that makes the job easier and safer. Come by our booth to see the latest in rigging and safety equipment, reference books, diagnostic tools, saws, pruners and power equipment.

Amerisafe
Workers’ Compensation Insurance.

Arborjet, Inc.
The Arborjet Injection System is a tree and plant injection system designed to preserve and protect the natural and urban forest with minimally invasive methods and environmentally safe products. Arborjet currently offers three different closed systems: the hydraulic device for high production, the hand-operated, a simple entry level device for low production, and the Tree I.V. high-volume, low-pressure micro-infusion system. Our methods assure quick, efficient, effective delivery of compounds directly into the functional xylem of the tree with no waiting period for absorption. Arborjet has the smallest wound profile of any current system. Arborjet also now offers efficacious mixable fertilizers to combine with Arborjet pesticides or fungicides to enhance tree health, eliminate mineral deficiencies, and alleviate symptoms of chlorosis while treating for insect pests and disease.

ARBRORMAX Insurance Program
ARBRORMAX provides a comprehensive property and casualty insurance program specifically designed to meet the needs of the tree and landscape industry.

ArborSoftWorx
ArborSoftWorx® suite of business management software specialized for the Commercial Arborist (ArborWare®), and Municipal/Campus Arborist. Manage unlimited customers, work sites, proposals/contracts, work orders, work history, plant/tree inventory, invoicing, receivables, and more. Also includes pest/disease, plant/tree and chemical libraries with application tracking with state reporting, foreign language translation, link to QuickBooks, synchronization with field devices, routing and mapping, comprehensive landscape drawing, link to all external Word processing and Spreadsheet software, and so much more.

ArborSystems
New – ArborSystem’s Tree Injection Gun.

Arbortech
 Arbortech is a leading manufacturer of chip bodies, utility tree vehicles and toolboxes for the professional arborist. With a variety of body sizes and options, one will fit your needs.

Arborwear, LLC
The original tree climbers’ gear. Arborwear clothing designed by tree climbers, for tree climbers. Pants, shirts and belts combine comfort and function.

Asplundh Tree Expert Co.
Our company provides a full range of safe, cost-effective line clearance and vegetation management services to the utility industry.

Bad Dog Tools
Specialty and multi-purpose tools including Biter sheet material cutter, multi-purpose drill bits, Rover Bits for wood, Handi Disk flexible abrasive wheel.

Bandit Industries, Inc.
Bandit is the industry’s leading supplier of hand and loader fed chippers, stump grinders and waste reduction machines. We offer 14 hydraulic feed, disc and drum style hand fed chippers; five stump grinders, towable and self-propelled; and four distinct models of towable and self-propelled whole-tree chippers. We also offer a complete line of Beast Recycler waste reduction machines, four of which range in horsepower from 300-1000, three of which are available self-propelled. All Beasts convert unwanted tree waste into valuable mulch. The Color Critter Colorizer can also be added to one of our Beasts to increase the value of mulch.

Bartlett Arborist Supply & Manufacturing Co.
Bartlett provides tools, climbing, rigging, safety and cabling supplies for the professional arborist. Come see what’s new at Bartlett!

The F. A. Bartlett Tree Expert Company
Bartlett Tree Experts is the world’s leading scientific tree and shrub care company. It has offices in 27 states, Canada, Ireland and Great Britain. Services include pruning, integrated pest and disease management, soil analysis, cabling and bracing, tree lightning protection systems and tree inventories. Guided by the scientists at the Bartlett Tree Research Laboratories in Charlotte, N.C.

Bayer Environmental Science
Turf and ornamental insecticides and fungicides.

BBA Fiberweb
Biobarrier Root Control and Biobarrier II Preemergence Weed Control. Long-term, slow release technology incorporating a proven herbicide with a geotextile fabric.

Bear Cat, a Div. of Terra Marc Ind.
Bear Cat sells a full line of chippers, chipper/shredders, trimmer mowers and power vacs.

Beaver Squeezer Grapple, LLC
Skid-steer rotating grapple attachment with winch.
Bishop Company
Bishop Company presents a complete line of arborist supplies for the professional. Phone 1-800-421-4833 for the newest product innovations and industry catalog.

Buckingham Manufacturing Co., Inc.
Buckingham Manufacturing is the leading manufacturer of climbing equipment and related accessories for the professional arborist. Stop by our booth to see many new innovative products to make your job safer and easier.

Capital Engine Co.
Kubota, Nissan, Hatz, and Robin engine product lines especially for commercial/residential arborists, municipalities, property management and landscape contractors.

Carl Neutzel Services
Silva Hill road legal forest trailer and loader, Peavey and Gransfors Bruks Tools, Timberwolf and TimberharvesterProducts, Mericruiser Reclaiming Equipment, Nokka loaders and grapples, Brush Blazer tree and brush cutter.

Concept Engineering Grp Inc. (CEG)/AIR SPADE®
Manufacturer of the genuine AIR-SPADE® product line, which can uncover roots without damaging valued trees, shrubs and plants. AIR-SPADE® uses powerful supersonic air jets that excavate root area soils.

Concept Products Corp.
Manufacturer of portable equipment for wood waste reduction and recycling.

Corona Clipper
Since 1920 we have manufactured the finest quality tools including hand pruners, hedge shears, loppers, saws, shovels, rakes, brooms, striking tools and specialty utility tools. This is why we have been “First choice for generations.”

Creative Sales, Inc.
ACECAP® & MEDICAP® Systemic Implants for trees. A “closed system” for delivering fertilizers, micronutrients or systemic pesticides directly to the tree being treated.

Cutter’s Choice
Professional’s catalog of arborist supplies – chain saw parts and climbing gear – mail order direct business.

Dave Leonard Consulting Arborist
We manufacture Supersonic Air Knives that are used to safely excavate tree root collars for diagnosis and treatment. The tool also performs vertical mulching and radial trenching, preferred methods of compacted soil remediation.

Davey Tree Expert Co.
ArborGreen Tree & Shrub Fertilizer, tree industry consulting and software services.

DICA Marketing Co.
Outrigger pads, ground cover mats and wheel chocks.

Doggett Corporation
Manufacturer of specialty tree fertilizers, soil amendments and supplements. Slow release specialty formulations, trace elements for specific deficiencies, pH correctors, organics for soil injection and vertical mulch. Doggett is also a clearing house for information and research dealing with tree health and nutrition.

DuraTech Industries Int’l., Inc.
DuraTech Industries manufactures a complete line of reclamation and green waste reduction equipment including tub and horizontal grinders, trommel screens and compost turners.

Dynamic Manufacturing Corp.
Cone-Head wood chippers; Stumpro self-propelled riding stump grinders.

ECHO Incorporated
Hand held power equipment manufacturer of chain saws, power pruners, trimmers, blowers, shred-n-vac and other arborist equipment.

Electronic Solutions of Harrison, LLC
Provider of high-quality, reliable electronic controls to the tree care, construction, commercial and forest industries.

Ellet
Manufacturer of commercial lawn and garden equipment: shredders, de-thatchers, edge dresser, edge cutter, blowers, overseeder, truck loaders, lawn combi seeders. Innovative technology and highest quality!

Enginaire
Enginaire precleaners save on engine maintenance, lower cost, extend air filter life; full line of air pre-cleaners to meet full line of engines.

Engine Center
Gas and diesel industrial engines

Envirometrics Systems, Inc.
BugBarrier Tree Protection System – New non-pesticide method of protecting trees against insect infestation. Operates against a variety of insect species.

FAE USA, Inc.
FAE Forestry Mowers for the commercial residential tree care company, municipality, landscape contractor and property management.

Fanno Saw Works
Manufacturers of the world famous Fanno Pruning Saws since 1921. Made in the USA. Also featuring Fanno International “Tri-Edge” saws. Quality and unique saws for the professional.

Fecon, Inc.
FECON, INC. is a leading manufacture of wood waste recycling equipment and systems. Product line includes: the Bull Hog® wood shredder, Horizontal Grinders, Mulch Coloring Systems’ Satellite Screens™ and Track Carriers for land clearing, ROW and forest restoration.

Florian Ratchet-Cut
Inventor and manufacturer of the Original Florian Ratchet-Cut Pruning Tools since 1965.

Our high quality product line includes hand pruners, loppers, pole pruners, saws, and accessories to make all of your pruning jobs easier. The unique ratchet-cut design increases your power by up to 700 percent – stop by our booth and see for yourself.

Foley Enterprises
Non-immigrant labor certification for H-2B work permits. We also process H-2A work permits.

Forestry Equipment of Virginia
Seller of forestry equipment such as bucket trucks, chip dump trucks, wood chippers etc.

Forestry Suppliers, Inc.
Climbing and rigging equipment and supplies, climinometers, tree corers, soil penetrometers, diameter tapes, pH meters, sprayers, GPS, laser-pointers, soil testing suppliers, tree/log scale sticks. Free 648-page catalog.

Fred Marvin Associates
Manufacturers of pole pruners and pole saws since 1943.

Fresco Arborist Supplies
Supplier of high quality arborist supplies for the modern arborist including a wide variety of climbing equipment and rigging supplies. Shop online at www.frescorborist.com.

Future Forestry Products Inc.
Manufacturer of equipment for safe and ergonomic high pruning, selective forestry harvesting and virtually zero impact log moving.

G & A Equipment, Inc.
Used bucket trucks, cranes, chip trucks and chippers.

Giuffre Brothers Cranes
Giuffre Bros. Cranes is a leader in the boom truck industry with over 40 years of experience. We offer a wide range of boom trucks from 8- to 40-ton capacities and 50- to 165-foot reach. These boom trucks can also be equipped with man baskets and remote controls. A unique tool for the professional.

Good Tree Care Company
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Green Manufacturing, Inc.
Manufacturer: GREENTEETH stump cutter teeth and pockets. For orders call 1-888-814-7336 or Greenteeth.net. Call 734-753-5200 for technical information.

Green Pro Services, Inc.
Sprayer Units – Sprayer Parts and Services

Growtech, Inc.
Featuring “Smooth Operators” – easy-to-use, lightweight, professional pruning tools. Folding and arborist straight saws, pole saws, long reach pruners, loppers, hedge shears, horticultural and flower knives, scissors, accessories.

The Hartford
The Hartford provides business insurance solu-
tions specifically for the tree care industry. With more than a decade of underwriting experience, our in-depth knowledge enables us to offer key coverages such as pesticide & herbicide application, tools & equipment, and workmanship error. To find out more, stop by our booth or visit mh.thehartford.com/arborist.

**Hill Manufacturing**

Marshall Tree Saw – three tools in one, only better! Replaces Shars, Grinders & Grapples; save thousands in cost. Fits all skid loaders. Skilled operators cut 400 or more trees per hour, cuts at or below ground level. Non-spinning blade – Safe to work around. Costs dollars a day to own.

**Husqvarna**

Chain saws, safety apparel, trimmers and blowers.

**IML - Instrument Mechanic Labor, Inc.**

Featuring the Resistograph – a mechanical drilling instrument providing a true picture of the defect zones within a tree. Fractometer measuring bending movement, angle of fracture and compressive strength.

**Impiex Equipment Co., Inc.**

Join the other successful arborists who’ve benefitted from the tremendous cost savings, increased safety, and better profitability from IMX grapples. Take the “work” out of tree work by mechanizing the task of handling debris.

**Independent Protection Company**

Lightning protection equipment and systems for trees. Also for golf-related structures, recreational areas and buildings.

**International Society of Arboriculture**

Brochures, publications, videos and services available through ISA, including membership and certification information. The latest books, manuals and videos on tree care will also be available for purchase at the show. Preview us at www.ag.uiuc.edu/nisa.

**J. J. Mauget Company**

The time-proven micro-injection system that promotes tree health and protects the environment. Mauget’s Pharmacy of cures includes three fungicides, four insecticides, seven fertilizers, two combinations, and one antibiotic.

**J. P. Carlton Company, Div. DAF Inc.**

Professional stump grinders – ranging from 25 hp self-propelled to 125 hp turbo diesel – highest quality, most advanced machines available today.

**Jameson**

Tree Care Tools – Poles, Pruners, Pole Saws, Boom Mount Tool Holders

**Jarraff Industries Inc.**

For over 20 years Jarraff Industries has been manufacturing the tallest and fastest mechanical tree trimmer. Stop by and see what we are all about and check out the latest in brush mowers as well.

**John Bean Sprayers**

High pressure sprayers and accessories suitable for all tree spraying needs. 50- to 1,000-gallon, capable of spraying 100 foot trees. Compartment tanks. Skid-mounted or DOT approved axle assemblies.

**Karl Kuehmerling, Inc.**

Mitts & Merrill Brush Chippers, Bean Sprayers, Timberwolf Wood Splitters and Conveyors, climbing ropes, safety saddles, pruners, band saws, chain saws, cabling supplies, etc., and outdoor work clothing.

**Kershaw**

Kershaw has been involved in tree care related to the utility industry for over 25 years. Kershaw manufactures the SkyTrim Tree Trimmer and the Klearway 800 and 1200 Model Brushcutters as well as the Klipper Tree Trimmer for sale, lease, or rent. Demo units can be made available for serious inquiries.

**The KnifeSource, LLC**

Manufacturer of Brush Chipper Knives

**Lemco Tool Corporation**

Manufacturer of professional-grade tools

**Leonardi Manufacturing**

3 new items: Tomahawk™ Teeth, Ultimate Pocket™, Bolts with newly-designed head and threads. All built to give you the highest performance on the market.

**Liberty Financial Group, Inc.**

Providing commercial lease financing alternatives to the tree care industry who are purchasing new and/or used business equipment and offers a variety of programs and services.

**Loader Div. of NMC- Wollard**

NMC-Wollard, Inc. designs, manufacturers, and markets Swinger articulated loaders/tool carriers. Swingar turn without creating ruts – ideal for work in yards, turf, and other sensitive surfaces. Our products carry a reputation of high quality, durability, versatility and dependability.

**Loftness/US Attachments**

Loftness/US Attachments provides a full line of Tractor 3-point Mounted or Skid-steer Mounted Tree and Brush Shredders, Orchard and Vineyard Shredders, Flail Mowers, Rock Pickers, Snow Blowers and Crop Shredders. The product line is known for state-of-the-art design, durability and workmanship. Web site includes complete listings of product pricing, product videos, literature, by state listing of dealers and sales representatives.

**Logan Clutch Corp.**

Logan Clutch, a leader in SAE PTO Clutches for auxiliary and direct drive applications, introduces a self-adjusting, heavy-duty Power Take Off assembly for diesel and gasoline engines. Clutch is fluid or air actuated; mounting to a gasoline or diesel engine’s flywheel. Retrofit with existing Twin Disc and Rockford Style PTO. Visit our booth for product Demo.

**Magnum Systems, Inc.**

Skid steer attachments.

**MAT-3, Inc.**

Manufacturer of aerial devices for the arborist industry, featuring the unique extendable upper boom for easy access to the work area.

**Midwest Arborist Supplies**

Tree care equipment, micro-injection and fertilizer supplies.

**Mills Truck Sales**

Trucks for arborists – new and used equipment.

**Minnesota Wanner Company**

Manufacturer/distributor for IPM/Plant Health Care sprayers, pumps and accessories.

**Moose River Publishing/Tree Services magazine**

Tree Services magazine is for professionals who are maintaining, restoring trees and who are interested in leading edge arborist techniques and technologies. Subscriptions are FREE.

**Morbark, Inc.**

Morbark delivers heavy-duty equipment solutions, including professional grade brush chippers, grinders, coloring systems, bagging units and more – all designed to process and add value to the waste wood stream.

**Nationwide Auction Systems**

Nationwide specializes in the sale of used forestry and aerial equipment on behalf of tree service companies, utilities, contractors, distributors and manufacturers throughout the United States.

**New England Ropes, Inc.**

Rope manufacturer – spliced goods, braided and three stranded climbing and bull ropes for the professional arborist. Available at finer dealers.

**NiftyLift, Inc**

Manufacturer of a complete line of trailer mounted aerial lifts. Range is from 24-foot platform height to 63-foot platform height.

**Northeast Arborist Supply**

Carrying a complete line of professional tree and turf equipment such as climbing gear, saws, ropes, safety supplies and brush chippers. Inventory includes the latest in rigging supports and lowering devices. Also manufactures custom and standard built tree and turf supplies designed to suit your company’s FHC needs.

**Ohio Lawn Care Association**

The Ohio Lawn Care Association (OLCA) serves the lawn care and affiliated industries by providing essential agronomic, business, education and legislative resources.

**Payeur Distributions Inc.**

Distributor of “The Wheeler” log loaders and “The Forester” – all to help arborists be more efficient in the operation of their commercial tree care business. Stop by our booth today.

**Performance Capital**

Performance Capital Corporation is a full service lending institution offering leases and loans geared to the Arbor Industry. We have 10 years of dedicated industry experience. PCC can put you in the equipment you need today and be there for your needs in the future. Whether it is new or used equipment, seasonal or skip payments to meet your cash flow requirements, or if you need money to buy out a competitor – whatever you need, we can do it.

**Petzl America**

Rope, climbing gear and everything needed for successful, safe operation in a tree.
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Unbeatable Value!

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At A Used Truck Price!

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Plant Health Care, Inc.
Plant Health Care, Inc. is the world technology leader in research and commercial development of products using beneficial mycorrhizal fungi and rhizosphere bacteria, and has developed over 30 proprietary products for improving plant, soil and water quality.

Plastic Composites Company
Replacement booms, buckets, bucket liners and bucket and boom guards for most bucket trucks. Also, safety and efficiency accessories for bucket truck tree workers, including saw holders, floor mats and bucket covers.

Practical Solutions, Inc.
The Service Solution – Software designed for the lawn, landscape and tree care companies. Includes marketing, billing, routing, scheduling, service timing, estimates, work orders, statements, contract renewals and much more!

Preformed Line Products
Specialized cabling & bracing equipment for the tree care industry: TREE-GRIP™ dead-end, TREE-CROTCH™ grip & safety guy-wire dispenser.

Rainbow Treecare Scientific Advancements
Scientifically proven treatments for Oak Wilt, Dutch Elm Disease and tree growth regulator Cambistat.

Rayco Manufacturing, Inc.
RAYCO® is dedicated to designing and producing the world’s most innovative and complete line of Stump Cutters, Brush Chippers, Compact Crawlers, and Environmental Equipment.

ReachMaster, Inc.
Compact aerial work platforms.

Redmax/Komatsu Zenoah America Inc.
Komatsu Zenoah manufactures a complete line of RedMax trimmers, brushcutters, handheld and backpack blowers, edgers, short and long reach hedge trimmers, as well as top handle, rear handle and pole chain saws, and an exclusive gas powered scissors called a reciprocator. The quality, durability and workmanship of all RedMax products are field proven in the green industry, and are sold only through sales and servicing dealerships nationwide. Many RedMax products are equipped with lightweight RedMax strato-charged engines, which meet all CARB Tier II and EPA Phase II regulations without the need for a catalytic converter.

Rotochopper, Inc.
Rotochopper Inc. is an international manufacturer of wood waste grinders, mobile bagging systems and wood chip processor/colorizers. Rotochopper Inc. is unique in that it is the only U.S. company that markets a mobile bagging system and the only wood waste grinder that can grind and color mulch in one pass.

Salsco, Inc.
Manufacturer of 3- to 18-inch capacity Wood/Brush Chippers, 8 hp to 200 hp, gas, diesel, electric and PTO. Chipper/Shredder/Vacuum – 25 hp gas.

Samson
By applying the latest fiber technology to the design and manufacture of our arborist lines, we produce ropes that increase safety and enhance productivity. For more information contact samsonrope.com for a product guide and a dealer near you.

SavATree
SavATree has been providing environmentally sensible tree, shrub and lawn care to residents, communities, businesses and historic properties for over 20 years. They currently operate in Connecticut, Massachusetts, New Jersey, New York, Pennsylvania and Virginia. SavATree specializes in Plant Health Care, General Tree Care and Lawn Care services that include artistic and maintenance pruning, historic tree preservation, construction damage prevention, storm damage prevention, organic lawn care and integrated lawn care. By cultivating a productive growing environment for your trees, shrubs and lawn, SavATree enhance their ability to tolerate stress and live a healthy, productive existence.

Schodorf Truck Body & Equipment Co.
Manufacturer of Silver Knight forestry body for over 50 years. Get the advantage of DRS
"Perfect In One Pass"™

Wood chip disposal problems driving you NUTS?
Tired of making ten calls and driving all over town only to pay someone else so you can dump those chips?

STOP!
- Colored mulch is HOT!
- Why not let consumers pay you for every load of chips you generate?

The Rotochopper CP-118 will re-grind and color those chips making perfect colored mulch in one pass.

It's completely mobile
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- Loads with a skid steer

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The Wire Stop eliminates the need for the “J”, “lag”, “eye”, hooks, thimbles, “through bolts”, “pre-formed wraps”, “wire clips”, or other terminal hardware. It is lighter to carry, easier & faster to use and makes a stronger and better looking cable installation.

For more information call
RIGGUY, Inc. 706.208.8009 or
visit us on the Web at Rigguy.com

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Trucks & Parts of Tampa
New and used grapple boom trucks and dump trucks always in stock. An excellent selection immediately available for both sale or rent. Visit us at www.trucks.com and see our entire inventory of trucks as well as our large selection of new, rebuilt and used truck parts.

U.S. Rigging Supply/Pelican Rope Works
U.S. Rigging Supply has been manufacturing wire rope assemblies and accessories for over 29 years. Recently, U.S. Rigging was appointed the exclusive U.S. importer of KONG carabiners and accessories. Our sister company, Pelican Rope Works, has been manufacturing superior quality braided synthetic ropes for over 23 years. Together, both companies provide the Arborist and Landscaping Trades with an unbeatable combination of service, safety lanyards, fliplines, carabiners, fittings and attachments.

V & H Inc.
New Sterling & Western Star trucks, used trucks, new Prentice & Rotobec Loaders, used loaders, new and used grapples, log racks, new Brandon Tree Service boxes. Specializing in custom tree service trucks. Delivery and financing available.

Vermeer Manufacturing Company
Vermeer Manufacturing Company is scheduled to display several environmental innovations from our proven line of brush chippers, stump cutters, horizontal and tub grinders, and tree spades.

Tree Tech Microinjection Systems
Pesticides and fertilizers for tree health care administered by plastic microinjection units.

VERSALIFT, TIME Manufacturing Co.
The complete line of VERSALIFT truck-mounted aerial devices, from 29 feet to 65 feet, includes articulated overcenter and articulated non-overcenter aerial devices, telescopic and telescopic/articulated aerial devices.

Wall Industries
Manufacturer of the most complete line of braided tree ropes. Plus safety lanyards, tree saddles, blocks, rope brakes, fliplines, sewn bags, rigging and sidelline kits. A subsidiary of Wall Industries.

Waste Handling Equipment News
Monthly trade publication for the wood work, composting, aggregate recycling and scrap industries. Sponsor of the WHEN Recycling Expo in York, PA, August 2006.

Weaver Leather, Inc.
Arborist supplies including positioning saddles, climber pads, straps, guards, pruner pouches, sheaths, holsters, scabbards, axe guards, replacement pads and more.

Wood/Chuck Chipper Corporation
Superior chippers since 1969. Wood/Chuck combines years of manufacturing experience with the latest technology to produce quality equipment for the tree care industry. Come see us in booth 810!

Woodsman Chippers
Complete line of professional Woodsman Brush Chippers – whole tree and hand-fed; durable, safe and highly productive.

Yale Cordage, Inc.
Manufacturer of XTC – Rope products for X-pert Tree Care. Double Esterlon, XTC, Wire Core Flip-lines, Prussik cords, Slings of all sizes. Supplier of spliced rope tools for the demanding arborist. Come see what makes our rope fabrications second to none.

Zenith Cutter Co.
Chipper knives for all makes and models of brush chippers and other industrial knives.

See you at TCI EXPO!
Help Wanted

Tree climbers/sales reps

Enjoy working yearround with fellow easy-going skilled employees. Be financially appreciated for what you can produce while working in a Virginia ocean front community. Call (757) 425-1995.

Climb High, not just in our trees, but also in our organization. Come join us on the beautiful Emerald Coast in the Florida Panhandle. Fritz Bros. Tree Service is currently hiring for experienced crew leaders & climbers to join our team. ISA certification a plus, but not required. Please contact Les Fritz at (850) 651-3182.

Forest Care


ValleyCrest Companies has many opportunities available in our national tree care division due to growth in our operations in the Western U.S. Currently, we are seeking professionals from the tree care industry who pride themselves on high-quality work, outstanding customer service and leadership capabilities. Positions include:

- Sales and Marketing
- Production, Field and Operations Management
- Senior Level Management
- Customer Service & Client Management

Please send your resume, salary and geographic requirements to be considered for full-time opportunities in our fast growing division. Fax to (818) 225-6835 or email to recruit@valleycrest.com

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Tools for Healthy Growth.

Ideal for landscaping trees and shrubs as well as forestry applications, DIERHARD™ Mycorrhizal Inoculants promote rapid root development by colonizing roots.

When your job is the outdoors, your work is only as good as the tools you use. That’s why Forestry Suppliers features more than 9,000 top-quality products geared especially to outdoor professionals from agriculture to zoology—and just about all points in-between. Every product we sell comes with the best technical support and customer service in the business, and each is backed by a 100% Satisfaction Guarantee!

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Forestry Suppliers, Inc.

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Catalog Request: 800-360-7788

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Landscape Architect

Hutcheson Horticultural Co., an established design and build firm located in Centerton Woodstock, Ga., is seeking a Landscape Architect. The majority of our work focuses on builder production work, residential construction, and high-end residential design. Our designs include irrigation, lighting, hardscapes, planting design, and water features.

Hutcheson Horticultural Co. is looking for someone highly motivated and creative who is willing to grow with our team and work in a fast-paced environment. Strong planting design background as well as graphics and design skills are key to meeting with our clients and communicating their needs into a design. After selling the design, the designer must then communicate the design intent to the production department. Then work closely with the landscape supervisors to ensure proper installation and customer satisfaction.

We offer a competitive salary, complete health, dental, life and disability insurance plan (Completely paid for the employee, with family coverage available), paid vacation, IRA investment with a 3 percent match after standard waiting period and commission/bonus plan. Hutcheson Horticultural, 400 Arnold Mill Way, Woodstock GA 30188; or fax/m-e mail resume with salary requirements to (770) 926-1855; Tammi@hutchhort.com

TCI Magazine and Web Ad Rates

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<th>TCI Magazine Only</th>
<th>Website Only</th>
<th>Website Only + Photo</th>
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Ads running for six consecutive months receive $5/month discount. Pricing based on 250 characters per pricing unit.

Tree Serviceman • Est. Landscape Cont. in Phila., PA suburbs seeks experienced & certified applicator/diagnostician for res. & commercial props. Self-starter, detail oriented & good communicator. Good benefits & year round work. Phone (610) 896-0815 or fax (610) 896-0916.

Superior Landscaping & Lawn Service, Inc. is one of the leading Landscape Contractors in South Florid. Established for over 25 years, we are on the cutting edge of our industry. Our arbor service division is currently hiring certified arborists, managers, supervisors and groundmen. Call Sal Rassi at (305) 634-0717.

Advanced Tree Care, McKinney, Texas Entry Level Arborist

Learn how to become an arborist and introduce yourself to all facets of tree care and tree remediation. Train under a registered degree and licensed arborist. Bachelor degree in forestry, arboriculture or other horticulture related fields. An individual with a passion for trees, a drive to learn and a “can do” attitude. Also looking for PHC technicians, foreman and climbers. Fax resumes to the following Telephone: (214) 544-TREE (8733) Fax: (972) 589-8370 Mail: Advanced Tree Care, 590 N. Meandering Way, Fairview, TX 75069

Get Your FREE Report Today

“Double Your Tree Service’s Profits In Six Months Or Less’ Even in a Tough Economy’”!

Introducing one of the ONLY Truly PROVEN SYSTEMS For Turning Your Tree Service Business Into A Mega-Profit Money Machine

If you intend to stay in the Tree Service business, this will be the most important Report you will ever read.

Listen: There is a “dirty little secret” about making good money in the Tree Care Service business... and... it doesn’t have a whole lot to do with how good of a job you do. You can be, technically, the very best Tree Care Service in your area, use only the highest quality products, know more about tree removal and pruning than anybody else, always do a super job... and still starve to death! You’re busy one week and lonely the next, and always worrying about where your next job is coming from. DREAMING YOUR BILLS! I know... because... at one time, I nearly starved myself right out of the business by stubbornly believing that... being good ought to be good enough; that by getting better and better at the technical aspects, I’d automatically make more money. Wrong!

I nearly went broke copying the ways everybody else seemed to get customers... plus... wasting money on all kinds of dumb advertising... plus... trying the “cheapest price approach”... which is actually the worst thing you can do. The only way I was able to survive was by begging for jobs from just about anyone... plus... doing cold call prospecting which I literally hate!

Then a few discoveries (and a lot of money spent learning) changed my life. They can change your life, too. In fact, if you order my special report...

How To Make More Profit Each Week Than You Now Struggle To Earn In Your Best Month... And... Do It Easier Than You Can Imagine... And... You Will Even Start To Enjoy Being In The Tree Service Business!

Why should you respond and ask for this report? Hopefully, for these six very important and brutally honest reasons:
1. You are very unhappy (disgusted?) with the money you get to take home from your tree service.
2. You would be thrilled to do LESS work, especially LESS hard work but make more money.
3. You detest “cheapest price competition” and would prefer to promote your tree service differently.
4. You do an outstanding job of operating a tree service, but you know you lack the knowledge, skills, savvy, and experience to properly market your tree service.
5. You are sick and tired of all the so-called advertising experts that sell advertising to tree services that never work.
6. The thought of another “slow time” with no work makes you sick to your stomach.

If you know in your heart you should be making more money, I’ve got the PROVEN, very different, marketing secrets that can blow the lid off your income almost overnight.

P.S. It doesn’t matter if you’re a “little guy” dragging a trailer around (that used to be me), working from a pickup... a one-man or one-person operation... or a good-sized company. These systems have helped mom-and-pop operations as much as triple their incomes in just a couple of months. It’s also worked with many big companies to dramatically improve profits. My system is valuable even if you’re a franchise. It works anytime, anywhere, for anybody. Period.

If you know in your heart you should be making more money, I’ve got the PROVEN, very different, marketing secrets that can blow the lid off your income almost overnight.

Call (817) 222-9494 ask for Cindy, or Fax 817-222-2174 or e-mail jpdavis@flash.net

Thanks, John P. Davis

RENEGADE Marketing. “Customer Getting Systems for the Tree Care Industry”
HAWAII

UTILITY LINE CLEARANCE BUCKET OPERATORS: CDL required. Must have 4+ years' utility line clearance experience. Pay starts at $16.00 per hour, based on experience.

CLIMBERS Must have 5 years' climbing experience (including pruning and rigging take-downs and removals). Current driver's license required (CDL preferred). Pay starts at $18.00 per hour, based on experience.

WORKING FOREMAN. Must be a Certified Arborist (with knowledge of disease diagnosis and fertilization). Must have 5 years' climbing experience (including pruning and rigging take-downs and removals), 5 years' utility line clearance experience, and experience working with cranes. Current driver's license required (CDL preferred). Pay starts at $19.00 per hour, based on experience.

Benefits include paid medical/dental insurance, paid federal holidays, vacation pay, 401(k) and profit sharing plan.

References required Contact: Jacunski's Complete Tree Service, P.O. Box 4513, Hilo, Hawaii 96720, Phone: (808) 959-5868 / Fax (808) 959-0597, or email: jacunskis001@hawaii.rr.com

Wanted experienced climber/bucket person.

Experienced climber/bucket person, minimum one year experience. See www.langtontreeservice.com for more information on our company. Call Bill Langton if interested. (352) 221-0412.

Community Forestry Program Leader

The Nebraska Forest Service is seeking a Community Forestry Program Leader. Responsibilities include: developing and implementing programs that improve community forest establishment and management; and working with many partners to accomplish program objectives. Requires a B.S. or M.S. degree in forestry or a related degree from a SAF accredited professional degree program, and five years experience in community forestry programs. An M.S. degree in an urban and community forestry specialization is preferred. The position is located at the University of Nebraska-Lincoln. More information is available at www.nfs.unl.edu/NSFPositions.htm or call (402) 472-2944.

Applicants should go to http://employment.unl.edu and complete the faculty administrative information form. Then submit a letter of application; detailed curriculum vitae of education, including transcripts; experience, and qualifications; and the names, addresses, telephone numbers, and e-mail addresses of three professional references to: Mark Harrell, Nebraska Forest Service, 103 Plant Industry Blvd, University of Nebraska-Lincoln, Lincoln, NE 68583-0815. Review of applications will begin September 12, 2005, and continue until the position is filled or the search is closed. The University of Nebraska is committed to a pluralistic campus community through affirmative action and equal opportunity. We assure accommodation under the Americans with Disabilities Act. Contact Sandy Lineberry at (402) 472-2944 for assistance.

The Presidio Trust is a Federal government corporation that manages and protects the Presidio of San Francisco as part of the National Park System. The Trust is now accepting applications for the following Federal excepted service position.

Treeworker Arborist (2 positions)

This is a journey level tree climber/pruner position, maintaining and removing trees and other vegetation and performing related duties. The Treeworker Arborist climbs trees often without the use of climbing gear in order to remove dead, damaged or hazardous limbs or co-dominant stems with a chainsaw or other pruning equipment; uses rigging and knots for the safe removal of limbs or entire trees; rig trees for removal when cranes and other heavy equipment are used; drives and operates aerial lifts (Hi Ranger) devices, articulating loaders, tower truck and chippers, stump grinders, and log trucks; and prepares brush for chipping and chips or brush or prepares it for cleanup with heavy equipment. The work requires knowledge of ANSI andISA pruning standards, knowledge of and experience with cabling techniques, as well as considerable physical effort, manual dexterity, and exposure to arduous working conditions. Requires possession of or ability to obtain (within 90 days of appointment) a valid Class A California Driver License, and possession of or ability to obtain (within 1 year of appointment) a Certified Tree Worker accreditation from the International Society of Arboriculture. Requires a minimum of 3 years of verifiable experience as a tree climber/pruner which includes climbing and trimming trees over 100 feet high. This is a full time position with benefits. The Presidio Trust is an equal opportunity employer offering competitive benefits package. To apply call (415) 561-5300 (Monday-Friday, 8 am – 5 pm) to request an application packet. OR download the application from our website, www.presidiotrust.gov, and mail the application to Human Resources, Presidio Trust, P.O. Box 29052, San Francisco, CA 94129-0052.

For People Who Love Trees

Arbor/Tree Specialists, with offices in Atlanta, Georgia; Augusta, Georgia; Greensboro, South Carolina; and Charlotte, North Carolina, seeks experienced sales arborists, crew leaders, and climbers who possess a passion for excellence. Our crews enjoy year-round work with a company that recognizes the importance of safety, training, and exemplary service. We offer excellent benefits, including health insurance, 401(k), a Drug-Free Workplace, and relocation assistance. A clean, valid driver’s license is required. A CDL is a plus. As is ISA Certification. Dennis Tourangeau welcomes your call to discuss your future with the Southeast’s premiere tree care company. Toll Free: 1-866-887-5555 Fax (404) 294-0090 PO Box 477, Avondale Estates, GA 30002 e-mail: dotourageu@arborguard.com www.arborguard.com.
**Vermeer**

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Part No.</th>
<th>Knife Description &amp; Size</th>
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<tr>
<td>BC1000</td>
<td>KCH20109</td>
<td>Double Edge 9&quot; x 4-1/2&quot; x 5/8&quot;</td>
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<td>DC1800XL</td>
<td>KCH20112</td>
<td>Double Edge 10&quot; x 5&quot; x 5/8&quot;</td>
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<td>BC1220-BC1250</td>
<td>KCH20002</td>
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<td>BC1400</td>
<td>KCH20110</td>
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<td>BC1800-BC2000</td>
<td>KCH20103</td>
<td>Double Edge 10&quot; x 5-1/2&quot; x 5/8&quot;</td>
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**Morbark**

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<td>100, 200, 250</td>
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<td>10, 13, 17, 2050</td>
<td>KCH40001</td>
<td>Double Edge 10-1/2&quot; x 5&quot; x 1/2&quot;</td>
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**Brush Bandit**

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<td>90XP, 280XP</td>
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<td>Double Edge 5-3/32&quot; x 4&quot; x 1/2&quot;</td>
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<td>100XP-250XP</td>
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<td>Double Edge 7-1/4&quot; x 4&quot; x 1/2&quot;</td>
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<td>250XP, 254XP after '01</td>
<td>KCH10101</td>
<td>Double Edge 7-1/4&quot; x 4-1/2&quot; x 1/2&quot;</td>
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<tr>
<td>1690 Intimidator</td>
<td>KCH20103</td>
<td>Double Edge 10&quot; x 5-1/2&quot; x 5/8&quot;</td>
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**Asplundh**

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<td>12&quot; Drum</td>
<td>KCH30001</td>
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<td>16&quot; Drum</td>
<td>KCH30002</td>
<td>Single Edge 16&quot; x 3&quot; x 3/8&quot;</td>
<td>$21.95</td>
</tr>
</tbody>
</table>

To receive this special pricing, you must use this code: 08395

Offer ends August 31, 2005

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**Arborist Accessories**

- **Stump Cutter Teeth**
- **Pruning Saws**

Zenith now carries 1/2" square stump cutter teeth for most models! Zenith now offers Samurai pruning saws, the #1 pruning saw chosen by tree care professionals. Zenith Cutter Co. is your one stop source for chipper blades, stump cutter teeth and pruning saws!

**ORDER online at www.zenithcutter.com**
Where Is Your Career Headed?

Swingle Lawn, Tree and Landscape Care has been a leader in the Denver landscape market since 1947 and experiencing tremendous growth in recent years. We are preparing for our future journey to greater heights and looking to add key positions to our already outstanding team:

- Sales Representatives ($45K+ DOE)
- Trim Field Supervisor ($40K-$55K)
- Certified Arborists with Removal Experience ($38K-$50K+)
- PHC Qualified Supervisors ($28K-$45K)
- Other outdoor production positions also available

We offer year round employment plus top industry wages and benefits including 401(k) with company match.

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Starting a Portable Sawmill Business: Part II - Milling fees

By George Tremblay

How does the beginner know what to charge for his services? Portable sawmill rates are generally higher than those of a stationary sawmill. The customer is paying you to transport your mill to the logs, rather than paying a trucker to haul the logs to a mill. Also, there is a premium attached to working with smaller volumes, as is the case with most portable mill jobs. In my area (Rhode Island), base rates for portable sawmill work are $0.20 per board foot for softwoods and $0.22 per board foot for hardwoods. Be sure to investigate the going rates in your area. In one of my first jobs, I unknowingly underbid a sawyer who depended on his portable sawmill business for his livelihood. When I became aware of it, I withdrew that bid and lost the job. I’m not apologetic about landing work as a part-timer, but I won’t underbid regional rates to do it.

In addition to the above rates, I charge a $25 set-up fee, $15 per blade damaged, and $25 per blade destroyed by hardware in the log. The surcharge of about $7.50 per blade over my costs reflects the downtime for a change of blades. These fees are given on my price list, which I go over with the customer before work begins. The list also specifies job-site conditions and responsibility for waste disposal.

Charging by the board foot

Charging by the board foot is the best way to start; the customer pays for the lumber generated, without stress over the time it takes the sawyer to do the job. Upon the advice of a more experienced sawyer, I attached a 25 percent surcharge for logs shorter than 8 feet, longer than 16 feet, smaller than a 9-inch diameter on the narrow end, and larger than a 30-inch diameter on the wide end. I also charged higher rates for grade-sawing and quartersawing hardwoods. These surcharges reflect the added time it takes to manipulate such logs for the lumber produced.

Table 1.

Example of Fee Breakdown for Mill Services

<table>
<thead>
<tr>
<th>Service</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milling charges</td>
<td>based on yield of lumber, not on estimates from scaling of logs.</td>
</tr>
<tr>
<td>Setup fee</td>
<td>$25</td>
</tr>
<tr>
<td>Damage fee for each blade:</td>
<td>$15 per blade damaged, and $25 per blade destroyed by hardware in log</td>
</tr>
<tr>
<td>Damage fee for each blade:</td>
<td>$15 per blade damaged, and $25 per blade destroyed by hardware in log</td>
</tr>
<tr>
<td>Softwoods:</td>
<td>$0.20 per board foot to mill logs; to lumber of standard dimensions.</td>
</tr>
<tr>
<td>Hardwoods:</td>
<td>$0.20 per square foot to mill logs; to lumber less than 1-inch thickness.</td>
</tr>
</tbody>
</table>

Charging by the hour

Once experience tells you you’ve hit your stride, it’s time to consider the advantages of charging an appropriate hourly rate. Recently, I determined my hourly rate by keeping track of the time it took me to mill 25 logs typically encountered in my current work. I calculated the milling fee based on board feet of lumber produced, and divided that fee by the hours it took me to do the job. Working alone at my pace and site conditions, my rate calculated out at $35/hour. Now, when I encounter non-conforming logs or do custom cutting such as grade-sawing, quartersawing, or resawing, I charge this hourly rate (see Table 1).

To be treated fairly, the customer should end up with the same bill whether charged by the board foot, with surcharges as specified for nonconforming logs and custom cutting, or by the hour. That is, the surcharges reflect the fee adjustment necessary to achieve the hourly rate established by milling conforming logs. The hourly rate simply avoids the need to specify a tedious set of surcharges for logs that are more work to mill. I also offer the hourly rate for small jobs because it encourages the customer to arrange for a more efficient operation, and to help with the milling. The customer gets his money’s worth with higher production rates, and I get better working conditions at my standard wage.

It is also important to take into account time spent preparing the job site. Work done to clear the site for the mill operation,
to get logs into position, or to prepare a suitable bed to stack lumber all takes time, and if I have to commit more than 15 to 20 minutes to do it, I charge my hourly rate for the work. Similarly, if milling is delayed significantly in order to remove hardware to salvage a log, I charge by the hour. When I reviewed bills submitted over the past two years, I found that an average of 9 percent of the amount due was charged to customers often appreciate a copy of this inventory at billing.

**Business expenses and net income**

Business expenses fall into two categories: those that accrue from running the sawmill (operating expenses), and those that accrue whether or not the sawmill is working (fixed expenses). My operating expenses for the past two tax years are given as a percentage of gross sawmill income in Table 4. Fixed expenses are given in the legend to Table 4. Taking all these expenses into account, my rate of $35/hour translates to a net income of $21.25/hour. Bear in mind that I bill no time for looking for work during this period, a luxury that could change tomorrow. If I had to spend a third of my time looking for work, my net income would fall below $14/hour. Also, my income-generating hobby is subsidized; as a retiree, the government pays my health insurance. If I had to add health insurance to my business expenses, I would be working more for Blue Cross than for myself. With an awareness of these variables, the data shown should provide the reader with useful information from which to estimate potential income from a small sawmill business. And with a greater commitment to marketing lumber, the earnings potential would no doubt improve (below).

**How it turned out**

We started out with the expectation that lumber sales would supplement sawmill income, and I thought that the sawmill operation would fuel my attempt at establishing a woodworking business—the idyllic arrangement alluded to earlier. I don’t doubt that some folks with a bit more energy could make this work. But in both cases my interests are still focused on the technical aspects of the work, at the expense of marketing. The neglect shown for marketing lumber carried over to marketing products from my woodworking shop, so I had to redefine my concept of an idyllic retirement. I turned my attention to

---

**Table 2. A Sample Invoice**

<table>
<thead>
<tr>
<th>Customer:</th>
<th>Name</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invoice for Lumber Milled</td>
<td>from</td>
<td>to</td>
</tr>
<tr>
<td>Sit-up Fee</td>
<td>$25.00</td>
<td></td>
</tr>
<tr>
<td>5043 boardfeet of softwood @ $0.20/bdft:</td>
<td>$1,008.60</td>
<td></td>
</tr>
<tr>
<td>3820 boardfeet of hardwood @ $0.22/bdft:</td>
<td>$840.40</td>
<td></td>
</tr>
<tr>
<td>Labor @ $35/hr:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 1/2 hours for log/longer than 16 ft./larger than 30 in. diameter</td>
<td>$78.75</td>
<td></td>
</tr>
<tr>
<td>10 hours for grade sawing/hardwood</td>
<td>$350.00</td>
<td></td>
</tr>
<tr>
<td>0 hours for custom cutting or resawing:</td>
<td>$0.00</td>
<td></td>
</tr>
<tr>
<td>2 1/2 hours for salvaging logs with hardware</td>
<td>$86.25</td>
<td></td>
</tr>
<tr>
<td>3 1/2 hours for yard work</td>
<td>$222.50</td>
<td></td>
</tr>
<tr>
<td>8 blades damaged by hardware in logs @ $15 each</td>
<td>$120.00</td>
<td></td>
</tr>
<tr>
<td>2 blades destroyed by hardware in logs @ $25 each</td>
<td>$50.00</td>
<td></td>
</tr>
<tr>
<td>Other Charges:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel for yard machine</td>
<td>$20.00</td>
<td></td>
</tr>
<tr>
<td>Total Amount Due</td>
<td>$2,711.50</td>
<td></td>
</tr>
</tbody>
</table>

---

**Table 3. Lumber Tally**

<table>
<thead>
<tr>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ft.</td>
</tr>
<tr>
<td>-----</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>14</td>
</tr>
<tr>
<td>16</td>
</tr>
<tr>
<td>-----</td>
</tr>
<tr>
<td>2x6</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>12</td>
</tr>
<tr>
<td>14</td>
</tr>
<tr>
<td>16</td>
</tr>
<tr>
<td>-----</td>
</tr>
<tr>
<td>Blades damaged</td>
</tr>
</tbody>
</table>

---

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building the sawmilling service. When we realized some three years ago that production rates didn’t justify working as a team, we worked at sharing the sawmill to build separate businesses about 70 miles apart.

For the past 2½ years I have been employed on alternating months, primarily milling logs to dimensional lumber, timbers, and sheathing for a local post-and-beam builder of barns and sheds. Since the smaller buildings are constructed on the builder’s premises, and materials for larger buildings are often precut there, my sawmill is set up at that single location. I run the sawmill alone. Heavy timbers are easily transferred by raising them above the mill bed with the hydraulically operated toe boards and sliding the timbers down an inclined plane of three removable oak two-by-fours, secured to the mill with cleats. When the pile of timbers parallel to the sawmill rises to the point that the plane is no longer inclined, the pile is transferred to a storage site with a Bobcat forklift. The forklift is also used to move logs to the mill site, and is made available by the builder-customer.

Recently, through our collaboration, the builder expanded his construction business to include marketing of lumber as a sideline. His customer base of woodworkers derive from clients and suppliers for his barns and sheds, some of whom have watched the sawmill operate and sought particular products. Most of the interest has been in grade-sawn hardwoods, primarily red oak, cherry and black walnut. Although it is too early to say with precision, it appears he can sell lumber in this market at more than double his costs for the logs and milling. He has shown that marketing lumber can bring a hefty supplement to the income of a small sawmill business.

The variety of the cut-list and milling objectives keeps the work interesting, and there is also satisfaction drawn from having my work integrated with that of a small team of good-natured craftsmen. I recently bought my partner out, and on the months away from the builder’s job site, I can now take on more of the small milling jobs in keeping with the niche described above. The steep learning curve and broad mix of people that I encounter have been rejuvenating. I haven’t had an unpleasant experience with a customer yet. Instead, I find customers make an effort to maintain contact, sometimes through repeat business, and other times through referrals. The “do-it-yourself” crowd has been a pleasure to accommodate. Working out-of-doors has the stronger pull in all but the worst of weather, and I spend much less time woodworking than initially anticipated. I mostly give away the stuff I make in my shop to family, hoping it is received with greater enthusiasm than the Christmas fruitcake.

George Tremblay taught biochemistry and was active in biomedical research at the University of Rhode Island for 34 years before retiring as professor of biochemistry in December 2000. He lives with his wife and two dogs on 28 acres of woodlot in Charlestown, R.I., near enough to the ocean to dig his own clams and satisfy the family’s penchant for fresh seafood.

This article originally appeared in the Aug/Sept 2004 issue of Independent Sawmill & Woodlot Management magazine.
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Early Expansion

In the early years, the company mostly served to give John a platform to demonstrate his tree surgery practices. His book, The Tree Doctor, self-published in 1901, helped spread the word about his new scientific techniques for tree care. However, it wasn’t until he recruited his son Martin in 1906 that the company really began to grow as a business.

As president of the company, Martin marketed the company by pursuing highly visible clients such as New York’s Central Park, securing Will Rogers as the speaker at the company’s 1934 anniversary celebration, planting trees in Philadelphia for each of the original 13 colonies during the U.S. Sesquicentennial and sponsoring a nationally broadcast radio program.

While his involvement in the company grew, Martin also pursued politics, eventually becoming mayor of the city of Kent, a four-term member of Congress and a two-term governor of Ohio.

One of the early struggles for the fledgling company was how to keep its field force employed during the slower winter months. Establishing The Davey Institute of Tree Surgery in 1909 allowed for a consistent field force while teaching them new techniques and horticultural practices.

In 1921, the company began its first utility contract. Utility lines required year-round care, and by 1960 the service would account for 60 percent of the company’s business.

The reciprocal nature of loyalty between the company and its employees was demonstrated during the economic tough times. In 1934, the company forgave the debt owed by salesmen who had been advanced funds against future commissions. And employees accepted partial payment of wages when the same economic downturn interrupted the company’s cash flow.

Invention and Innovation

At the end of World War II, the company experienced a shift in leadership as Martin Davey Sr. died and was replaced by his son, Martin (Brub) Davey Jr. In addition to the leadership change, the period following WWII was marked by remarkable changes in equipment in the industry and to Davey crews. Chemical brush control was conceived by Homer L. “Red” Jacobs when he concluded that a DuPont-made chemical was effective against brush. The company realized the potential success of the service, and offered it to Davey’s utility customers. Within a few years, the chemical brush control service reached a million dollars.

The first power saw, introduced after WWII, was cumbersome, difficult to repair and operate, but as it became lighter and more dependable, the power saw became an essential tool for tree surgery crews. By 1957, Davey Tree had 430 power saws in use in the field. Photos courtesy of Davey Tree Experts.

The brush chipper, introduced in 1949, could be towed behind the Davey truck and grind limbs and brush quickly and cleanly. Today, it is an essential piece of field equipment.
The aerial bucket truck also revolutionized the way trees could be pruned. By the mid-1950s, Davey crews were using the bucket trucks to trim trees around power lines and at residences, including the Henry Ford estate in Dearborn, Michigan.

Employee Ownership and Opportunity

In the late 1960s and 1970s, the company’s leadership changed hands between Brub Davey, Paul Hershey, Joe Myers and Alexander Smith. Finally in early 1977, the family announced its intention to sell the company. This announcement started a domino effect among employees that ultimately led to employee ownership. After four offers and countless hours of negotiations, ownership transferred to the employees of the company in 1979.

Over the ensuing months and years, employees worked diligently to ensure that their investment paid off. During that time, the number of employees working at the company doubled, the revenues increased eight-fold and the number of employee shareholders increased from 113 to more than 2,000.

The company also experienced incredible growth through more than 40 acquisitions, including High Tree services, the largest line-clearing contractor in Western Canada; numerous grounds care operations; and a large residential operation, the B.D. Wilhelm Company of Denver, Colo.

At the 10-year anniversary of employee ownership, the company offered a second stock subscription. When the company offered its third stock subscription in 2002, 365 employees subscribed for more than 800,000 shares for a total subscription amount of more than $10 million.

In the 1990s, the company reorganized around customer groups, launched Davey Resource Group, the technical consulting division, and the Commercial Service group, the grounds management division. At the turn of the century, the company’s acquisition of National Shade, Ltd., established a national presence and capability in the large tree moving market. With the addition of the golf and sports turf division, Davey’s host of offerings included everything from urban forestry to vegetation management and from commercial grounds management to large tree moving.

“Over the past 125 years, Davey Tree has changed from a regional tree care operation to a North American company providing complete horticultural services in the residential, utility, commercial and governmental markets,” says R. Douglas Cowan, chairman and CEO. “I think ‘Father John’ would be impressed with our growth. I know I’m proud of our accomplishments and am certain that the next 125 years will be as impressive as the last.”

And the next 20 years?

“We are not going to be able to anticipate all the successes and opportunities to come,” said Cowan. “I don’t have any doubts that we’ll be a different company in 2025; we’re a different company today than what we were in 2000. But I also don’t doubt that we’ll continue to be the most respected and successful company in the green industry.”
Erich Schneider, owner of Schneider Tree Care in Taylors, S.C., was appointed to the TCIA Board of Directors at the June board meeting to fill the vacancy created by the election of Jeannie Houser to senior director. Schneider was nominated to fill one of the two board vacancies that will come open in February, but when a vacancy developed earlier he accepted an immediate appointment.

Schneider Tree Care opened for business nine years ago, but Schneider began working with trees and power equipment long before that.

“Growing up in northern New York, my father owned a chain saw sales and repair shop,” recalls Schneider. “He was an outdoor power equipment dealer for Stihl and Husqvarna. I went to service schools for both to learn the mechanics of chain saws. We cut firewood every year, too, out of necessity.”

After high school he went into the Air Force for four years. After the service, he started a franchising business with a friend, I.B. Nuts and Fruit Too, which sold dried fruits and nuts, and sold franchise rights to set up specialty stores of their products. They sold 12 franchises, and in those five years were named Small Business of the Year in Missouri and Small Business of the Year in Columbia, Mo.

After five years he moved on to become a stay-at-home dad. “The hardest job I ever had,” he says. Eventually, he moved to South Carolina and started a tree business with his younger brother, Kurt, that consisted of “a chain saw, a Toyota Forerunner and a borrowed pickup bed trailer.”

“We learned very quickly that wasn’t the right way to do business,” he recalls. “The early years were tough. The first year we did $90,000. The second almost $200,000.”

Today, Schneider Tree has 29 employees, with a business that reaches out into the upper part of South Carolina and into North Carolina. “We grew because business is not brain surgery,” he insists. “Serve the client well and learn how to reproduce yourself in others. People are truly our most valuable resource. We invest in our people so we can grow. I think most small companies stay small because they don’t find the right people and invest in them. You need to believe the best in people. Some won’t respond, but many will. We have built a solid team and moved forward.”

According to Schneider, his company is known in the area (and among potential employees) as a company that invests in employee education, quality of service and the desire to move forward.

“We spend a lot of money on training and equipment,” says Schneider. “Our biggest challenge is finding the time to develop our people. The business is there, the ability to borrow money is there, but you can't grow in a sustainable way by taking on more business than you can handle.”
Schneider Tree joined the Tree Care Industry Association almost immediately after setting up shop. The desire for more information prompted Schneider to write that first membership check to TCIA, even though money was tight in the early years.

“I knew that somebody had done this before and I thought TCIA would be able to help me with the learning curve,” he says. “The Management Guides were phenomenal in helping to run a business.”

Now that TCIA has helped Schneider expand his business, he is stepping forward to volunteer his time to expand the industry in the minds of the consumer. “The No. 1 thing we need to do is promote our industry to the public,” he stresses. “We need to promote the fact that there is an organization for professional tree care companies that can effectively serve the public’s tree care needs – the right way. I want to see TCIA push to have us recognized as professionals. We have to differentiate ourselves as an industry from loggers and landscapers. If we can raise that awareness among the public, the dollars will follow to our companies for employee education and safety programs. If tree care companies aren’t making money, they can’t hire a full-time safety professional.”

One of the ways he seeks to separate his company from the part-time timber fallers is through Accreditation. Schneider is an enthusiastic advocate for TCIA Accreditation, and Schneider Tree Care is the first Accredited company in South Carolina. The Accreditation process was more difficult than he thought it would be, but he believes it was well worth the effort. Accreditation forced him to ask the questions that needed to be answered – especially for regulatory compliance.

“When my workers’ comp carrier came out for an audit, I could answer yes when he asked, “Do you have a safety program in place?” … “Do you do on-site job inspections?” … ‘Do you do weekly safety training?’ All of these things were driven by going through the Accreditation process,” he notes.

Schneider has already seen the effect of Accreditation on his workers’ comp rates, which have dropped almost in half from the rate he paid before Accreditation.

In addition to being an early supporter of Accreditation, Schneider was one of the first to recognize the need for a political action committee for the industry. He has volunteered and contributed to the Voice for Trees PAC, and was scheduled to lead the South Carolina delegation to the joint green industry Legislative Conference in Washington in July. “There is a real value to political action,” he says, “and I hope to see a lot of TCIA members at the conference.”
Jeanne Houser elected senior director

The tree care industry has a way of drawing people in and never letting them go. So it has been with Jeanne Houser, vice president and treasurer of McFarland Landscape Services in Philadelphia. What started as a part-time temporary job in 1976 turned into a rewarding 30-year career.

“Back then we had about 20 employees and I started as the part-time secretary while attending college in the evenings for accounting and business administration,” she says.

McFarland employs approximately 45 employees today, with a mix of business that averages 50 percent general tree work, 25 percent plant health care and 25 percent landscaping and lawn maintenance. About 98 percent of the work is for residential clients.

Houser was originally appointed to the TCIA Board of Directors in 2000 to serve out the remainder of a vacant board position. In 2002 and 2005, she was elected to full three-year terms, and last month was elected to fill the senior director position vacated by Scott Jamieson.

Houser had the choice of rotating off the board after five years but chose to commit to three more as a TCIA officer. Her reasons were twofold. “During my time on the board I have been able to affirm how important the work of TCIA is for tree care businesses,” she says. “It’s also been a wonderful personal and professional growth experience, working with the members of the board and learning new things to take back to our business.”

Despite the heavy homework component of serving on the board of a national trade association, Houser insists service is rewarding. “It’s actually fun too, including attending the meetings that are required,” she stresses. “Being on the board has allowed me to establish a number of relationships with people in the industry. Also, the amount of information we receive about broader trends in the industry has been extremely helpful for our business. It’s kind of like going from high school to college in terms of learning how to operate an organization,” she says.

“Serving on the board has put me in a continuing education mode,” says Houser. “It’s given me the opportunity to look up from the tunnel vision of my own company and take a broader view of the industry. I can take that view back to my company and use the knowledge gained to help my company as well as the members of TCIA.”

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American chestnut returns to Washington D.C.

The American Chestnut Foundation’s (TACF) partnership with the U.S. Forest Service to restore the American chestnut tree to its native eastern US woodlands was featured in the 39th annual Smithsonian Folklife Festival, held on the National Mall in Washington, D.C., in June and July.

The USFS was invited by the Smithsonian Institution to participate in a program on the occupational culture of forest management in the United States. The Festival coincided with the Forest Service Centennial Commemoration, a combination of nationally promoted events and locally sponsored opportunities to recognize its accomplishments and validate the importance of its partnerships and collaborations. TACF is headquartered in Bennington, Vt.

TACF provided six American chestnut trees from its research farms in Meadowview, Va., in cooperation with the USDA Forest Service, to be a part of the Festival’s Interactive Forest exhibit.

TACF recently marked 100 years since the emergence of a fungal infection that almost eliminated the American chestnut tree from eastern U.S. forests. With more than 5,000 members and 13 state chapters, TACF is nearing the realization of what has been its goal since its incorporation in 1983 - to develop a blight-resistant American chestnut tree using a scientific research and breeding program developed by its founders, and to restore the tree to its native range, from northern Alabama to Maine, and west to the Ohio valley.

The seeds for introducing a highly blight-resistant tree into the wild are expected to be ready for initial test-planting by 2010. An agreement signed by TACF and the USFS in October, 2004 establishes a framework for the two organizations to work together to test-plant these seeds on public forest lands.

Boy Scouts learn ROW planting, conservation

A troop of Boy Scouts of America in Martinsville, Ind., planted low-growing trees and bushes with South Central Indiana Rural Electric Membership Cooperative’s (SCI) arborists and biologists earlier this year.

The boys spent the day on a right of way with internationally certified SCI arborists Larry Terrell and Randy Brumfield, and Dave Neu, a National Wild Turkey Federation regional biologist. The industry experts taught the troop why wildlife need the plants and how the right of way would become prime wildlife habitat after it was planted with persimmon trees, serviceberry bushes, black chokeberry bushes, hawthorn trees and paw paw trees.

During the day, the troop planted 240 trees and bushes on the SCI right of way on the Ravinia Woods portion of the Yellowwood/Morgan Monroe State Forest.

The SCI arborists teamed up with the NWTF’s Energy for Wildlife for the project. Energy for Wildlife is a membership-based certification program for all energy companies with the primary goal of enhancing wildlife habitat on company-managed, -owned or -influenced lands. These lands include power line and gas rights of ways, plant sites, forestlands and other properties. NWTF’s Energy for Wildlife program staff works directly with energy companies to integrate wildlife management activities into their land management programs. When participating companies have implemented the wildlife component of their management plans, they will become a certified member of the program.

For more info on this program, visit www.nwtf.org/conservation/energy_for_wildlife.html.

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The roar of the chain saw obliterated any other sound but I could see their flowing tears. It was Frances’ turn to do the removal while I did the grief counseling.

“I don’t understand,” Mrs. Client said again. “We loved that tree. We worked hard to convince our neighbors to join us in a community planting. Of the 75 trees we planted that day, ours is the only one that has failed. We took care of it like it was our child. How could it split in half?”

This 10-year-old purple-leaf plum was a popular choice up and down the street but it had a classic flaw – branches coming out of the same place resulting in a “vase” shape. Two leaders had grown fat competing with each other for dominance. Included bark was the result and a weak attachment was formed. This weak attachment broke apart in a winter storm and the Clients had wired the tree together in an attempt to save it. This “solution” lasted about a year, but the split increased rapidly this winter. A permit for removal was granted and we were called in to do the dirty work.

“This is so tragic. The tree’s structure was unsound from the beginning,” I explained. “That double leader should have been attended to when the tree was young.” That opened a can of worms.

“We’re going to call that nonprofit that planted this tree,” said Mr. Client, his wet eyes and masculine demeanor at war with one another. “They should have known.

“Don’t be too hard on them,” I explained, “Back then the funding was all about planting and not about early maintenance and training. Even today, some high-priced contractors are planting trees with structural problems and not returning to train the tree properly. Fortunately, nurseries are beginning to change their growing standards, training a central leader while a tree is still in the pot.” I went on, “The best thing you could do for the cause is to volunteer for a group like Friends of the Urban Forest. This nonprofit now visits all trees it plants at least three times in the first three years, to prune out structural flaws early and easily. They also inspect with a more practiced eye at the nursery and reject trees that are untrainable. You can help to educate others to prevent them from going through this painful process.”

The chain saw continued whining as the tree was laid out on the sidewalk. It was a sad sight. However, after the split, this ornamental plum had produced hundreds of fruits in a swan song effort. Many of these bounces on the ground and I picked up a handful.

“Here, Mr. Client, plant these and perhaps your tree can live on.”

“Do you think we could grow new trees from these?” Mr. Client asked.

“It’s worth a try,” I answered. They would probably make some fine jam too, but I decided not to go there.

“Just be sure to take a free pruning class from the tree friends at Friends of the Urban Forest or a similar group and train those trees correctly in the first three years after planting. A tree with an upright central leader and well-attached scaffold branches will weather the storms much better.”

Mr. Client put a handful of plums in each of his front shirt pockets. The Clients were still grieving, but they remained on the sidewalk determined to witness the removal process until the very end.

Ellyn Shea is a certified arborist in San Francisco, Calif., and tree care coordinator for Friends of the Urban Forest (www.fuf.net) in San Francisco.
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