Ready or Not: California Oaks Under Attack by Goldspotted Oak Borer

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I
n December 2010, our elected officials offered up an early Christmas present, extending
the Bush era tax cuts for another two years. They also extended other tax cuts established
during the recent recession. Now, they are trying to figure out how to fill the massive
deficit hole created by the tax cuts, and almost every program is likely to take a whack or two.

After two recent visits to Washington, it is clear the mood and operating ethos have changed
dramatically. It’s no longer a question of how large an increase is possible but how deeply will
favored programs be cut. For those who sometimes wonder whether voting matters, it is obvi-
ous today that elections do indeed matter.

Looking at one program is indicative. YouthBuild USA is a program that prepares youth who
have dropped out of school for productive careers through hands-on construction training, high
school completion and General Educational Development programs. In 2010, its budget was
$127 million. The president proposed a cut to $120 million in 2011, the Senate voted for a deeper
cut to $80 million, and the House voted zero, eliminating the program altogether.

The nation faces serious issues, from rising energy prices to environmental degradation to a
seemingly out of control health care expense spiral. Everyone is looking for ways to tackle
those issues, and more, in the most affordable ways. What does this new mood mean for the
tree care industry? An opportunity perhaps.

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Trees reduce health care costs by intercepting airborne particles and absorbing carbon
monoxide, sulfur dioxide, and nitrogen dioxide. Nationwide, asthma was the third leading
cause of hospitalization among children 15 years and younger. Healthier air, cleansed by trees,
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sewage treatment plants and rivers prone to floods.

Urban forests are vital to creating and maintaining healthy, livable communities of all sizes.
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for rapid growth. Urban forests are integral to any community striving to reinvest in itself,
encourage active, healthy citizens, and create a healthier and more sustainable environment
with smart green infrastructure.

As the attention in Washington and state capitals turns to budget cutting, the evidence is
straightforward: trees provide affordable solutions to many of the expensive issues we face. It’s
up to us to make their case. Speak for the trees in your neighborhoods.

Mark Garvin
Publisher
Don’t kid yourself,

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In cultures around the world, the oak tree is the symbol of strength, fortitude and endurance. Despite this status as a stalwart of forest and city alike, the oak trees in our native and urban ecosystems face tremendous challenges from pathogens, insects and abiotic disorders.

No matter what area of the country they are growing in, oaks enjoy a special reverence from humans. Their high visibility and the high value bestowed upon them makes an awareness of their common ailments and treatment protocols critical. Oak trees are not only significant trees for their diversity and utility in the urban forest, oaks are also a species highly valued by homeowners and other green industry stakeholders, so knowledge of their proper management should be foremost on the mind of all tree care professionals.

Highlighted here are some common ailments of oak trees, but this is certainly not a comprehensive listing.

**Disease: Oak wilt (Ceratocystis fagacearum)**

One of the better known oak diseases is oak wilt, caused by the fungus *Ceratocystis fagacearum*. As a vascular wilt pathogen, it inhabits the xylem of the current year and disrupts the flow of water to the crown, which causes a characteristic wilting. Oak wilt was first identified in 1944 in Wisconsin, but now has been confirmed in more than 20 states in the upper eastern half of the U.S. as well as Texas. There is some debate about whether this disease is native to the U.S., but the fungus has never been discovered in another country.

Approximately 20 different species of oaks have been found diseased in the field. Among the most significant are: live oak, pin, northern pin, northern red, black, blackjack, bur, scarlet, shingle and white. Additionally, all other species of oaks test inoculated have shown susceptibility, but resistance to the disease varies by different oak families. The red oak group shows little resistance and trees usually die within two to six weeks of initial symptom expression, while the white oak group and live oak group show the most tolerance and some trees may live indefinitely or take years to succumb.

Approximately 90 percent of the trees with oak wilt become infected when the fungus travels from an infected tree into a healthy tree through a root graft. Root grafts are underground connections of the vascular tissue that occur between trees of the same species growing in close proximity to each other. This pattern of transmission leads to an ever-expanding circle of diseased trees and requires a management approach that physically disrupts the root grafts while protecting valuable trees with macro-infused fungicides.

The management protocol for oak wilt focuses on two aspects: protection and isolation. First, healthy oak trees that are within root-grafting distance of an infected tree can be treated with propiconazole, a broad spectrum systemic fungicide, via macro-infusion root flare injections. Specific treatment protocols depend on the oak species that is being treated.

**Red oak group:** Treat only asymptomatic red oaks that are within root-grafting distance (50 feet) to an infected red oak. Propiconazole does not provide predictable results on red oaks that are showing symptoms.

**White oak group:** Treat high-value asymptomatic white oaks that are within root-grafting distance of infected white oaks. Symptomatic white oaks that display less than 30 percent canopy loss from oak wilt can also be treated successfully with propiconazole. Treating trees with greater than 30 percent crown loss may reduce the success rate of a propiconazole treatment. White oaks are more tolerant than red oaks and may survive for several years after becoming infected. Research has demonstrated that therapeutic treatments on white oaks are effective. Symptomatic trees can take longer to treat because xylem vessels may be occluded.

**Live oak group:** Treat asymptomatic live oaks that are within root-grafting distance (75-200 feet) of infected live oaks. Treat symptomatic live oaks that display less than 30 percent canopy loss from oak wilt. Treating trees with greater than 30 percent...
crown loss may reduce the efficacy of propiconazole. Symptomatic trees may take longer to treat because xylem vessels may be occluded.

After treatment, trenching with a vibratory plow or rock saw takes place between the healthy and infected trees and infected trees are removed from the area.

Disease: Bacterial leaf scorch (*Xylella fastidiosa*)

Another vascular wilt disease, bacterial leaf scorch (BLS) is an important disease of many different species of shade trees that is caused by a bacteria, *Xylella fastidiosa*. This disease is vectored by a variety of xylem-feeding insects including leafhoppers and treehoppers. Known to infect many different tree species, BLS has proven to be especially devastating to pin and red oaks and can have a significant impact on mature trees in particular.

It has been reported as far north on the eastern seaboard as New York and is prevalent in the southeast, Texas, and extends northward to Illinois. After being discovered in the early 1990s in New Jersey, the disease has been documented to infect more than 40 percent of the red and pin oaks located in Camden, Gloucester and Burlington counties. This disease is also common in Southern California on liquidambar and landscape olive.

Bacterial leaf scorch is a frustrating problem for arborists because there is no known cure and mature infected trees die prematurely and their appearance deteriorates over their lifespan. A variety of management practices are aimed at extending the longevity of infected trees. These include treatment with antibiotics and water stress reduction through mulching, irrigation and growth regulation. Trees killed by bacterial leaf scorch should be replaced with species that are not susceptible to the disease.

Disease: Bur oak blight (*Tubakia* spp.)

Bur oak blight (aka “BOB”) is not a vascular wilt, but is a fungal disease specific to bur oaks that lately has been increasing in diagnosis. BOB has been documented since the late 1990s/early 2000s in the upper Midwest and has been documented in Southern Minnesota, Wisconsin, Eastern Nebraska and Iowa. Although scientists are learning more about the specific pathogen or pathogens responsible for this disease, it appears to be associated with a number of *Tubakia* species, which normally only cause leaf spots. The disease causes leaves to curl and turn brown late in the growing season and in some cases entire canopies can have brown, curled leaves.

While it is not clear if other abiotic agents increase the severity of this disease, it is clear that individual trees infected with BOB typically increase in severity from year to year. Trees subjected to drought and infected with BOB will be more susceptible to two-lined chestnut borer, which may result in crown dieback and decline. Thankfully, this disease appears to spread slowly and at this point is confined to the aforementioned locations in the Midwest.

Previously, diseases caused by *Tubakia* spp. have been managed by spraying foliar fungicides in the spring of the year. Recent research results suggest that bur oak blight may be successfully managed with macroinfusion treatments of propiconazole. This is promising as spraying mature bur oaks can be challenging, especially in urban settings. Although more research is needed, this may provide practitioners with an improved method for treating this disease in the future.

Insect: Two-lined chestnut borer (*Agrilus bilineatus*)

Two-lined chestnut borer (TLCB) is an opportunistic insect pest that attacks a variety of species. It was given the name “chestnut” borer in recognition of its status as a primary pest of the American chestnut tree. The chestnut has been almost completely wiped out by chestnut blight, yet the insect has retained its name to this day even though there are few chestnut trees for it to attack. A pair of faint white to gold-colored lines on the main body and wings of adults are useful identifiers.

In mid-July, the first visible symptoms of TLCB infestation occur. Drought stress seems to have a direct correlation to the susceptibility of a given oak to TLCB as the trees’ natural defenses to this native
insect are greatly inhibited by drought. Infested oaks may be recognized by the sparse, small and discolored foliage, which is followed by the dieback of branches. Leaves of infested branches turn uniformly red-brown. The leaves on non-infested branches remain green. Infested oaks have a distinctive pattern of dead and live leaves on them. Branches in the upper crown are dead and leafless; branches in the middle crown are dying and have red-brown wilted leaves; branches in the lower crown are alive and have green leaves. In other words, TLCB infested oaks have a “dead, red and green” pattern from the top of the tree down its branches.

Management can be done preventively using soil applied insecticides on oaks that are stressed from drought or root damaged, which tend to be predisposing factors of susceptibility. A soil drench of imidacloprid in the fall or early spring will provide season long protection. Additional protection can be obtained through cover sprays of insecticides to the trunk and main limbs. Trees infested with TLCB may be similarly treated, although trees with serious decline are unlikely to be saved.

Insect: Goldspotted oak borer (Agrilus coxalis)

A close relative of the two-lined chestnut borer, the goldspotted oak borer (GSOB) has become an emerging pest of increasing concern in Southern California. (For more on its spread, see related story, page 14)

Affecting primarily coast live oak, California black oak and canyon live oak, the recent growth of goldspotted oak borer incidents are likely directly related to a new introduction coupled with drought conditions. As with TLCB, when an oak tree is suffering from drought stress, its inherent ability to fend off invading insects like GSOB is greatly reduced. Once a tree becomes infested, the larvae consume the tree’s xylem tissue and the tree begins a spiral of decline until it finally dies. Unchecked, the GSOB may continue to draw comparisons to the emerald ash borer epidemic in the eastern U.S., presenting tree owners and municipalities with difficult and significant economic decisions in the coming years.

Although not as much is known about GSOB management compared to other Agrilus species such as two-lined chestnut borer, bronze birch borer and emerald ash borer, arborists have been attempting similar management techniques: treat susceptible trees preventively or therapeutically and prune out branches that have died. Irrigating high value trees during periods of drought can help reduce an oak’s chances of being infested in the first place, which is always the preferred method of management.

Abiotic: Chlorosis

Chlorosis is a serious issue commonly affecting several species of oak where the tree is unable to properly manufacture chlorophyll. Chlorophyll is an important leaf component that is responsible for energy absorption for the entire tree. Trees without enough chlorophyll will not be able to grow and live. If this condition is not corrected, the tree will eventually die.

The causes of chlorosis are complex and not entirely understood. As a general rule, it is caused by the lack of a micro-nutrient.
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or combination of micro-nutrients that a tree needs to manufacture chlorophyll. Iron and manganese are the common micro-nutrient deficiencies that cause chlorosis in shade trees. These minerals are often not lacking in the soil, rather a condition exists where the tree’s root system is unable to obtain them in usable forms.

Since chlorophyll is what causes the tree to be green, chlorotic trees will often show symptoms where the color of the tree is light green, yellow, reddish and, in severe cases, white. Pin oaks and northern pin oaks are particularly susceptible to chlorotic symptoms in urban environments. Manganese (Mn) and iron (Fe) deficiencies are often difficult to distinguish from each other without foliar chemical analysis. Some researchers suggest the fine veins in the leaves will become chlorotic with Mn deficiency, while they remain green on Fe deficient trees. In practice, this is difficult to determine in the field, so most Mn and Fe deficiencies are diagnosed by commonly affected species. Oaks and birch tend to suffer from Fe deficiencies while maples are more prone to Mn stresses. Trees that are severely affected may exhibit tip dieback and decline and become more susceptible to other insect, fungal and abiotic stresses.

The treatment protocol for chlorosis should focus on two things: treating the symptoms in the short term and attempting to correct the problem for the long term. Yellowed, chlorotic trees can be “greened-up” for several years by a trunk injection treatment of iron (Fe) or manganese (Mn), however, the practitioner must address the underlying factors that cause chlorosis in the overall management strategy. If the cause is related to a compromised root system, performing management techniques aimed at improving the soil and enhancing the tree’s root system should be done. For example, using pneumatic air tools to physically improve the soil structure and reduce compaction will provide a more suitable soil environment for root growth.

Conclusions
For tree health care professionals, it is important to be up to date on the latest issues and treatment protocols affecting the trees in your area. As oaks, in particular, are so highly valued by municipalities and homeowners, it is doubly important to know what affects them and what can be done about it. Staying updated on information about caring for these beloved trees is important not only for keeping your clients’ trees healthy and protected, but for ensuring that oaks remain a significant contributor to the urban forest and an enduring symbol of strength.

Shawn Bernick is director of research for Rainbow Tree care Scientific Advancements in Minnetonka, Minnesota. Brandon Gallagher Watson is director of communications for Rainbow, and an ISA Certified Arborist.
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An eerie feeling encapsulates towns devastated by an oak killing beetle. The oak tree, once covering most of southern California’s rural communities, has now vanished from much of eastern San Diego County. The culprit of oak mortality and the newest insect threat is the goldspotted oak borer beetle (*Agrilus auroguttatus*), or GSOB.

Nation wide, forest pests have fostered wide scale concern (i.e. emerald ash borer and Asian longhorned beetle). As with those similar insects, if GSOB is not contained quickly, it poses the risk of a large range expansion and attack. Already, the goldspotted oak borer beetle has killed or irreparably damaged more than 95 percent of oaks in several woodlands in less than 10 years. Brown, dead landscapes have become all too familiar in the rural communities of Alpine, Descanso, Campo, Crest, Cuyamaca, Guatay, Jamul, Julian, Laguna, Lake Henshaw, Pine Valley, Santa Ysabel and Ramona since 2002.

GSOB was first found in 2004, and later linked to oak damage in 2008. To date, it is responsible for at least tens of thousands of oak mortalities in San Diego County. GSOB is native to Arizona, Mexico and Guatemala, and was most likely introduced to California in the mid 1990s in firewood. The adult beetle is about ½ inch long, with gold spots on its dark green iridescent back. It is known to attack mature coast live oak (*Quercus agrifolia*), canyon live oak (*Quercus chrysolepis*), and California black oak (*Quercus kelloggii*).

During late summer, beetle larvae emerge from eggs laid in bark crevices and begin boring into the wood. Larvae feed between the sapwood and phloem under the bark, essentially starving the tree of nutrients and killing it within one to three years. Evidence of GSOB injury include D-shaped exit holes, twig die-back, crown thinning, and staining and oozing on the bark surface.

Goldspotted oak borer beetle is easily transported long distances. Oak firewood brought from infested areas has a high probability of containing GSOB, and could devastate oaks.
around any location where the firewood is stored. Currently, there are no known treatments to eradicate GSOB once it becomes established, and a GSOB outbreak is likely to kill many of the coast live oaks and black oaks in an area. This could cost a community millions of dollars in removal and restoration costs. To stop this insect from spreading to other parts of California, residents are being encouraged to purchase firewood locally and not to move oak firewood.

This effort alone is not enough. With more than one million acres of oaks in southern California, it is nearly impossible for agencies to monitor all woodlands for signs of infestation. So, the University of California Cooperative Extension, UC Agriculture and Natural Resources, the U.S. Forest Service and others engaged in the fight against GSOB are asking for local arborists’ help in creating an early warning system by keeping an eye out for GSOB damage.

Visit their website, www.gsob.org, to learn more about the outbreak, to report any suspicious signs of GSOB activity, or to find out how you can become involved in the early warning system.

For more information, contact Tara Piraneo or Tom Scott, University of California, Riverside, at (951) 313-4193, or email tpiraneo@ucr.edu.

Tara Piraneo is program coordinator of the Goldspotted Oak Borer (GSOB) Early Warning System (EWS) at the University of California Riverside. Tom Scott is an adjunct professor in the Department of Earth Sciences at University of California, Riverside.
Does emerald ash borer present increased risk to arborists and users of community green spaces? This has become a very relevant issue in certain areas of the country, especially when EAB-killed trees are left standing years after infestation.

Emerald ash borer, an invasive, metallic-looking, tree-boring insect first discovered infesting ash trees in Michigan in 2002, now occurs in several regions in mainland North America. For example, the Ohio Department of Natural Resources estimates that more than one billion trees could be affected in Ohio and 10 percent of the forest cover of Ohio could be lost.

EAB adults emerge in early to mid-summer and tend to peak in the Ohio/Michigan area around mid June. Larvae tunnel into the cambium layer, which may ultimately compromise new wood development and may impact the structural integrity of the main trunk and large branches. The speed with which affected trees may degenerate structurally is, for now, unknown.

A risk management study into tree strength evaluation related to EAB damage across visually unaffected trees and two stages of EAB infested trees was conducted by researchers at the Davey Institute in 2009/2010.

We selected three groups of ash trees based on the age of EAB infestation in the greater Toledo area. Some of these trees were on community green spaces including golf courses and parks. The three groups of trees consisted of:

- **Group 1**: visually unaffected trees
- **Group 2**: trees that had symptoms of EAB infestation for 1-2 years, and
- **Group 3**: trees after EAB infestation that were in severe decline and had no new terminal bud growth (some may have had epicormic growth at the base).

Two standard tests for evaluating tree strength were utilized in this trial:

- **Static loading**: A dynamometer was used to register external forces that were applied by winching a rope attached to the approximate center of gravity of selected branches.
- **Resistograph evaluations**

The element of risk becomes foremost in Group 3 trees because branches of trees in this group and those in severe decline appear to fail closer to the branch union than expected. The study attempted to shed some light on the EAB-ash wood complex structurally with the main goal of trying to quantify risk for the climbing arborist. The idea was that there should be some time frame after an initial EAB infestation when advice can be given to an arborist as to potential risk associated with EAB-ash wood decline.

**Static loading**

Load was applied by pulling down on the branch at the approximate center of gravity with a “load” rope that was attached to a dynamometer; a Good Rigging Control System provided force for branch breakage. The force applied from the Good winch was also measured with a dynamometer, which essentially registers the force upon breaking. The winch was set on a custom built receiver plate that was hitch-mounted on the rear hitch of a Ford F150 truck. Pre-branch breaking data collected included trunk diameter, branch length and diameter, distance to actual center of gravity from the branch union and

Moisture levels in EAB infested trees are lower and wood in those trees, upon breaking, has significantly more cracking.
distance of center of gravity and load point. Post-branch-breaking data included the length of the fracture zone and detailed examination of the critical zone of failure.

Resistograph evaluations

Resistograph evaluations were carried out in Group 1 trees (the healthy trees) and the Group 3 trees, which allowed an evaluation of wood degeneration across the spectrum. The trees were excavated with a pneumatic air tool to locate the basal area of the trunk that was at or just below the soil line, to standardize the region drilled among the trees, and measurements were taken at the base and at one meter above the base.

Summary

The data collection process continues for static loading evaluations. Thus far, from post-branch-breaking assessments, we have found that moisture levels in EAB infested trees are lower and wood in those trees, upon breaking, has significantly more cracking. From our Resistograph evaluations we have found significant divergence of resistance at readings taken at the basal levels in healthy trees versus trees that have recently died from EAB activity and are still standing.

What risk do these trees pose?

How do we quantify risk? Biological entities sometimes may not follow set guidelines and risk in this sense may have to be broadly defined yet maintain focus on relatively rapid wood degeneration. Arborists and indeed any user in a community green spaces that have ash that may be infested with EAB should be aware of potential issues. Hazard trees are normally gauged on visual hazards or suspected internal decay manifested mostly by the presence of certain decay fungi. With EAB there is the cryptic nature of the insect and special attention should be paid to the fact that wood degeneration is occurring even though the tree appears to be risk free.

One of the main questions that the climbing arborist should consider is whether the tie-in branches are safe to support loading? If there is EAB activity to the point of sloughing off bark, then care should be exercised and precautions taken. Basal areas of the trunk should be thoroughly examined, especially if EAB activity is advanced.

Anand Persad is a landscape entomologist specializing in pest management with Davey Tree Expert Company. This article was based on his presentation at TCI EXPO 2010 in Pittsburgh on the same subject.
Expanded label for ZeroTol Algaecide/Fungicide

BioSafe Systems, LLC’s ZeroTol Broad Spectrum Algaecide/Fungicide has a newly updated label in California that includes new applications for treatment of hard surfaces, tools and equipment to prevent the spread of algal and fungal growth. In addition, ZeroTol is now labeled to treat several new organisms, including black spot, downy and powdery mildew, leaf spot, Pseudomonas, and Xanthomonas, among others. ZeroTol is an environmentally-responsible disease control solution utilizing peroxygen chemistry to eliminate plant pathogens on contact. Because the peroxygen chemistry breaks down into water and oxygen after reacting, ZeroTol has a zero-hour REI (restricted entry interval) and no run-off concerns. It is available in 2.5, 30, 55 and 275 gallon sizes.

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IML MD300 Resistograph

IML Distribution’s new lightweight MD300 Resistograph manual drill is designed for preliminary testing for decay in trees by measuring the remaining amount of solid wall/wood. Though just 3 pounds – very light weight compared to other IML Resistograph models – the MD300 will still provide a scale 1:1 measurement. It can be used before climbing a tree or just for initial testing for structural integrity. Just attach the drill, push the bit through the wood and as the drill bit penetrates the wood fibers, the operator can feel the resistance. If there is any decay or hollow, the instrument will “fall through” and provide a measurement of how much good wood remains. Made of aluminum and stainless steel, the MD300 fits any standard drill as long as the opening is greater than ½-inch.

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Stihl MS 271 Wood Boss chain saw

Stihl’s new MS 271 Wood Boss chain saw is designed with improved ergonomics and equipped with a low-emission, fuel-efficient engine. The MS 271 produces 50 percent lower emissions, reduces fuel consumption, and delivers 20 percent longer running times as compared to similar traditional 2-stroke Stihl chain saws. Designed with comfort in mind, the MS 271 utilizes a compact design with an advanced anti-vibration system to help reduce operator fatigue while providing optimum control. A side-access chain tensioner makes for easy chain adjustment, and the pre-separation air filtration system offers greater cleaning efficiency and longer filter life.

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Jarraff Tier III engine option

Jarraff Industries All-Terrain Tree Trimmer will now be available with a Tier III Cummins liquid cooled, 130 hp, electronic-controlled engine. The increased horsepower will improve the unit’s grade climbing abilities and current emissions rating. Customers will also benefit from an increased service network for the Cummins product. The Tier III engine option is available in the 4x4 wheeled Jarraff configuration only. A Tier II engine option 97 hp Deutz diesel, is still available in both wheeled and track configurations. A track Jarraff with a Cummins engine will be available later this summer. The Jarraff All-Terrain Tree Trimmer provides ROW maintenance contractors a dynamic field of operation, offering a 360-degree range of motion, 40-degree lateral tilt and 75-foot cutting height. Two four-way joysticks and fingertip controls offer optimal precision. In addition, the Jarraff’s cab is completely ROPS, FOPS and OPS certified. Full panel, tinted lexan windows prevent distortion and provide a clear view of operations. The cab also comes with a heating and air conditioning option.

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**Echo Bear Cat SG340 Stump Grinder**

The compact design and the carbide steel cutting teeth of Echo Bear Cat’s new SG340 stump grinder makes getting rid of tree stumps a breeze! The 12 hardened carbide steel cutting teeth rotate at engine speed for fast grinding, smooth cutting and smaller chips and debris. With a compact body width at only 23 inches, getting close to buildings or fitting through gate openings to access stumps is quick and easy. Other features on the SG340 Stump Grinder include a 340cc Honda OHV engine; 22-inch, 4-ply pneumatic tires; double-banded belt drive and a fully enclosed housing.

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**Morbark Advantage 3 Drum**

Morbark’s new Advantage 3 high performance chipping drum is designed to significantly improve chip quality in large volume wood chipping equipment. It is made to reduce recurring-wear part and maintenance costs, by approximately 70 percent, to just a fraction of the cost of those items for conventional chipping drums. Most changes were made to the pocket, knife and knife-holding assembly, where the chips are formed and cut and where the maintenance and wear costs are incurred. The new design includes increased clamping force and more durable knives – extending the time and production in between each sharpening. To increase momentum and drum performance, changes were also made to the drum shaft to reduce stress and increase durability. The Advantage 3 drum creates more uniform chips, reduces operating and maintenance costs and comes with a three year warranty. It is available on all new Morbark drum chippers and can be ordered as a retrofit to any existing Morbark drum chipper.

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TREE CARE INDUSTRY – MAY 2011
Events & Seminars

May 10-11, 2011
Basic Tree Climbing
White Lake, MI
Contact: (810) 338-6531; www.victoriangardenstree.com

May 10-13, 2011
Western Chapter ISA 77th Annual Conference
La Jolla, CA
Contact: www.wcisa.net

May 11-13, 2011
Arborist Short Course
University Park Forest Resources Building
Pennsylvania State University, University Park, PA
Contact: David Harry (814) 865-7541; Scott Sjolander

May 13, 2011
Biodiversity and the Influence of Native and Exotic Plants in Landscapes
Morris Arboretum, Philadelphia, PA
Contact: (215) 247-5777 x144; www.morrisarboretum.org

May 19-21, 2011
2011 Texas Tree Climbing Championship & Workshop
Trinity Park, Fort Worth, TX
Contact: www.isatexas.com

May 20, 2011
Seeing the Forest and the Trees: Using the Plant Stewardship Index
Morris Arboretum, Philadelphia, PA
Contact: (215) 247-5777 x144; www.morrisarboretum.org

June 12-14, 2011
Trees Florida 2011
Wyndham Jacksonville Riverwalk
Jacksonville, FL
Contact: (941) 342-0153; www.treesflorida.com

July 8-9, 2011
L1 Precision Felling & Chain Saw Handling hands-on training
Haddam, CT
www.ArborMaster.com or call (860) 429-5028

July 11-13, 2011
L1 Tree Climbing Methods & Work Positioning hands-on training
Haddam, CT
www.ArborMaster.com or call (860) 429-5028

July 14-15, 2011
L1 Arborist Rigging Applications hands-on training
Haddam, CT
www.ArborMaster.com or call (860) 429-5028

July 21, 2011
ISA Certified Arborist Examinations
San Antonio, TX
Contact: www.isa-arbor.com/certification/tests

July 24-26, 2011
TCIA/PLANET Legislative Day on the Hill
Washington, D.C.
Contact: Deb Cyr cyr@tcia.org; 1-800-733-2622; www.tcia.org

August 9-10, 2011
L1 Precision Felling & Chain Saw Handling hands-on training
Attleboro, MA
www.ArborMaster.com or call (860) 429-5028

August 11-13, 2011
L1 Tree Climbing Methods & Work Positioning
Attleboro, MA
www.ArborMaster.com or call (860) 429-5028

August 25, 2011
ISA Certified Arborist Examinations
Round Rock, TX
Contact: www.isa-arbor.com/certification/tests

October 5-7, 2011
2011 Texas Tree Conference & Trade Show
Waco Convention Center
Waco, TX
Contact: www.isatexas.com

October 7, 2011
ISA Certified Arborist Examinations
Waco, TX
Contact: www.isa-arbor.com/certification/tests

October 25-26, 2011
Illinois Arborist Assoc. Annual Conference & Trade Show
Holiday Inn Select, Tinley Park, IL
Contact: www.illinoisarborist.org

November 3-5, 2011
TCI EXPO 2011
Preconference workshops Nov. 1-2
Hartford, CT
Contact: Deb Cyr cyr@tcia.org; 1-800-733-2622; www.tcia.org

February 12-16, 2012
Winter Management Conference 2012
Curacao
Contact: Deb Cyr cyr@tcia.org; 1-800-733-2622; www.tcia.org

* Indicates that TCIA staff will be in attendance

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Davey names Richard Foote VP

The Davey Tree Expert Company has named Richard Foote vice president of business development and client services for its residential/commercial services division. Foote joined Davey, a TCIA member company, in 1976 as a lawn technician and has held such positions as district manager, operations manager and most recently as vice president of acquisitions and integration for residential/commercial services.

He has a bachelor’s degree in conservation and an MBA from Kent State University. He is a past member of Davey’s President’s Council.

Terex appoints Saxelby

Terex Aerial Work Platforms, a business segment of Terex Corporation and a TCIA associate member, appointed Tom Saxelby vice president, North American Sales, Terex AWP. He reports directly to Matt Fearon, vice president and general manager, Terex AWP Americas.

“Saxelby’s proven track record in sales makes him an essential addition to the executive team,” said Fearon.

Saxelby will assume the primary sales leadership role with customers for the Genie brand and Terex.

Saxelby joined then Genie Industries in 1998 as a sales representative and went on to become the regional VP. He has a bachelor’s degree in journalism from the University of Wisconsin, Eau Claire.

HMI launches service warranty for storm work

HMI’s new treeShield service warranty program enables HMI’s Authorized Member (AM) network partners to sell clients coverage for the costs of fallen tree and debris removal and restorative services – such as hazardous tree and limb removal and restorative pruning and cabling – required as a result of storm-related damage.

According to Doug Cowles, president and CEO of HMI, treeShield offers a comprehensive storm recovery solution that eliminates the stress and expense that can follow a storm. The service was developed by HMI, a TCIA member, with leading tree care and insurance companies. For AMs’ clients, it is an opportunity to avoid substantial and unexpected expenditures and ensure their trees are professionally cared for when storm damage occurs, says Cowles.

“treeShield enables our AMs to offer a higher level of support to their clients who suffer storm damage to their valuable trees. Not only does it cover a range of necessary post-storm services, but it also addresses a substantial financial burden that property owners often face following a storm when insurance coverage can be very limited. We believe treeShield will not only help promote brand loyalty for our AMs, but it will also offer another reason for property owners to work only with a professional tree care provider.”

New Larger

11 ft. Dump Body from Southco Industries

Now

11 ft 6 in. long x 66 in. high (14.5 cu. yd. capacity)

Chassis Cabs Available to complete the package

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The Philosophy of Splicing Rope

By Chris Girard, with Mark Przekurat

The intent of “Fids and Fibers by the Fireside,” a winter rope-splicing workshop held at Renaissance Acres Tree Care, in Weare, New Hampshire, was to instill confidence in participants and to enable them to create safe splices for work as well as enjoyment. By all accounts, it was successful.

Instructors for the February 25-26 workshop were Mark Przekurat, Renaissance Acres owner/operator, and myself, Chris Girard, owner/operator of Girard Tree Service, LLC in Gilmanon N.H. (The original splicing instructor canceled, but we opted to forge ahead.) The title of the workshop was appropriate as Weare received 14 to 18 inches of new snow, along with a blast of arctic air, during the event. The woodstoves were going and the heat was on for a fabulous two days of splicing!

One thing we wanted to emphasize from the start was the attitude of professionalism in doing your own splices. Just for taking the time out of their own schedules to attend, participants are leaders in the industry.

Day one started off with Mark giving an opening presentation on what it means to be a leader and professional in the tree care industry. He started with a quote from a recent presentation then shifted to an article published by Carl and Deb Potter (www.safetyinstitute.com) entitled “Professionalism and Safety: Are You a Top Hand?” We discussed at length the meaning of the phrase “Top Hand,” and focused on the leadership roles and responsibilities that a tree care professional can take ownership of. We stressed that although each participant may not consider themselves as a leader, they could begin the mental process of seeing how they might grow into seeing themselves for taking the time to absorb these skills, and then urge and support them to go out and share it with others.

In this case, we hoped to serve the participants by sharing the knowledge that others have shared with us. While we’re not professional splicers with years of splicing experience, we’ve been mentored by those who are. Michael “House” Tain, Rich Hattier, John Hartenberg, Octavius Benton, Nick Araya and Odis Sisk have all taken the time to sit down, teach and answer questions over the phone, via e-mail or by participating in splicing forums (such as TreeBuzz.com).

There is no central repository for this accumulated wisdom; some of it is stored in the TreeBuzz archives, other websites and on YouTube. Some lives on in those who teach splicing for a living (witness Brion Toss), some has been lost with those who have gone before us (as is the case with dearly missed Stanley Longstaff), and some knowledge resides in books, CDs and handwritten instructions that we all hold dear.

What matters here are two things:

► One: that when we learn and enhance our skills via any of these repositories of knowledge, we then Serve, Share and Support our peers by sharing it; and,

► Two: That we constantly and consistently encourage those we share it with to recognize the leadership qualities in themselves for taking the time to absorb these skills, and then urge and support them to go out and share it with others.

Each person who shows up at a splicing or other skills-based class must be commended and encouraged to then become an ambassador to their peers to also become more involved. This is vital if we ever expect to reduce the number of injuries and fatalities in our beloved industry. I believe that this is the answer to the question of how we differentiate ourselves from the “chain saw & a pickup truck” tree cutting bandits out there. Our passion, training, professionalism and willingness to Serve, Share and Support is what will set us apart – head and shoulders above the competition.

The Saturday morning presentation then shifted to an article published by Carl and Deb Potter (www.safetyinstitute.com) entitled “Professionalism and Safety: Are You a Top Hand?” We discussed at length the meaning of the phrase “Top Hand,” and focused on the leadership roles and responsibilities that a tree care professional can take ownership of. We stressed that although each participant may not consider themselves as a leader, they could begin the mental process of seeing how they might grow into seeing themselves as leaders. The thrust of this article boils down to these three key points: Always do high quality work; be known as a productive contributor; and focus on safety. These three ideas taken together will enable a professional to really show up for success.
So with the wisdom of Scott Prophett and Carl Potter in mind, we embarked on a journey to Serve, Share and Support a dozen splicers hungry to learn new skills and have some fun figuring out ways to become more productive, more professional and safer in the trees.

Before we turned our attention to tools, tape measures and fibers, we clarified that we are not so much teaching “how to splice” but teaching how to read the manufacturers’ “recipe” for splicing specific products. In this case, we used Samson splicing manuals that were graciously donated by Jim Cass of Samson rope. Beginning splicers have a lot to learn about rope construction, splicing tools, rope identification, inspection and splicing terminology. Before splicing anything it is vitally important that you confirm exactly what it is and what it is made of.

With the formalities out of the way, it was time to get our hands busy!

We started off with Mark showing the participants how to splice a friction hitch out of 12-strand Tenex hollow braid. The fibers and characteristics of Tenex were discussed and locking brummels provided hours of frustration, then fascination and finally pride as everyone began to master them. This was a great splice to start with, as everyone could wrap their minds around the finished product, which was labeled and collected to be sent out for break-testing. To promote better understanding and muscle memory, we all did three Tenex hitch cord splices. Everyone was beginning to smile!

The participants took a break to eat a hearty lunch and to message their fingers and then proceeded into the afternoon session of splicing 16-strand climbing line. Everyone was really excited for this one. Mark presented the splicing with an ease that made the participants feel very comfortable in accomplishing their splices. The pride and joy that you saw on their faces was very satisfying for both instructors.

After a long, but enjoyable afternoon of splicing, everyone was famished, so they proceeded down to the local family restaurant, where their favorite waitress, Madison, patiently waited on a room full of hungry (and thirsty) splicers. Afterward, it was back to the workshop where Mark showed how to reuse the locking brummel splice learned earlier, to splice the ends of throw line. When that was mastered, we created a nifty little friction saver removal tool that can hang off your throw-line bag or cube. Afterward, a period of free splicing ensued, until one by one everyone took their sore little fingers and palms off to dreamland.

Day two started off first with a good breakfast to fuel up for another fun filled day of splicing. Chukkki Andersen, BCMA and staff arborist with TCIA, stopped by to check out the splicing activity and was gracious enough to take pictures and notes. I then demonstrated the first splice of the day, which was the classic 3-strand splice.

The history of this splice goes back thousands of years, and we explained the differences in 3-strand versus the other types of ropes spliced the previous day, as well as some the uses for 3-strand that arborists still employ. I told them how good it was to see people easily pick up on the weaving form of this splice, which is so different than a standard tuck-and-bury splice. The lesson for this splice went well enough that the room went quiet for the first time as splicers were contentedly tucking, dressing and setting 3-strand fibers. The scene reminded us of Santa’s workshop.

After a much needed lunch break to fuel and power the group on, I began the afternoon session by going over the double braid splice. We covered the rope’s characteristics as before and then showed a method of splicing and burying double braid that made it understandable for a splice that can sometimes be difficult to finish. Double braid is my favorite rope to splice. It was very satisfying to see everyone be able to turn out lines that can be put to work in their everyday needs. I did expose my maritime interests while teaching this splice in illustrating a technique learned from Brion Toss, which proved ultimately elegant and efficient. Finally a double braid splice without sweat and blisters – heaven!

After another long afternoon of practice splicing, the participants went out for dinner one last time as a group. Everyone shared not only a wonderful meal, but also expressed what they considered high points of the two-day workshop. Some had to say their goodbyes afterward while others went back to the workshop where we spliced until tomorrow came and people reluctantly crawled back into their sleeping bags and slept by the light of the dancing flames in the woodstove.

Splicing may have been the reason for getting together, but new friends were made and old friendships renewed. Before the weekend was over, the universal question was “When can we do this again?” Mark and I were both amazed that the seemingly simple splices and knowledge we’d shared with the group kept a dozen knowledge-hungry splicers occupied and interested for two long days. We were amazed as well by the amount that we had learned from every person in the group. We are both honored and grateful for the chance to share knowledge that others have so graciously shared with us. Thanks to everyone who attended! For those who couldn’t make it this time, we’re already planning for the next time!

We’ll leave the light on for ya’!
By Peter Gerstenberger

There is good news for arborists in Virginia. With the industry’s help, the Department of Labor and Industry’s Virginia Occupational Safety and Health (VOSH) Program and the Virginia Safety and Health Codes Board have adopted a final regulation for tree trimming operations.

Referred to as 16 VAC 25-73, the final regulation was set to take effect April 27, 2011. The text of the final regulation, along with free downloadable training and information materials, can be found on the Department’s web site: www.doli.virginia.gov.

The rule, based closely on ANSI Z133.1-2006, was published in the Virginia Register of Regulations on March 28, 2011. See: http://legis.state.va.us/codecomm/register/vol27/Welcome.htm

Since 1993, Virginia has had 59 non-logging, tree trimming/cutting/felling fatalities – representing 7 percent of all fatalities. VOSH calculates that there are four fatal tree trimming accidents every year that can be prevented if arborists comply with this final regulation.

TCIA approached VOSH about the possibility of adopting a comprehensive regulation addressing tree trimming in 2001. They requested a regulation based on the then ANSI Z133.1-2000. Discussions with the Department resulted in a commitment from the industry to make significant changes to the ANSI standard, which culminated in the adoption of the revised ANSI Z133.1-2006, referenced above. VOSH initiated this rulemaking in 2007 with the assistance of a regulatory work group composed of private and public sector representatives. The following individuals participated in the Department’s regulatory work group:

- Peter Gerstenberger, senior advisor for safety, compliance & standards, TCIA
- Bryan Giere, CTSP, Northern Virginia Tree Experts, Inc., an accredited company
- Andrew T. Ross, CTSP, president, RTEC Treecare, an accredited company
- Sten Compe, Big “O” Tree & Lawn Service, Inc., an accredited company
- M. Scott Turner, CTSP, president, TrueTimber Tree Service, Inc., an accredited company
- David G. Marren, vice president of regulatory affairs, F. A. Bartlett Tree Expert Co., an accredited company
- Peter Girardi, TrueTimber Tree Service, Inc., an accredited company
- Kristina Villaire, City of Virginia Beach
- Thomas R. Scallorn, CSP, Virginia DOT

Significantly, with the exception of Ms. Villaire and Mr. Scallorn, this work group was comprised of a coalition of members assembled by TCIA.

Virginia DOLI Commissioner Courtney Malveaux expressed the hope that the new regulation will help to eliminate deaths and serious injuries associated with tree trimming operations through the institution of safer work procedures, as well as by raising awareness among employers and employees of the hazards associated with tree work.

Provisions in the regulation include:
- General safety requirements (traffic control around the jobsite, emergency procedures and readiness, personal protective equipment, fire protection);
- Electrical hazards (working in proximity to electrical hazards, storm work and emergency conditions, line-clearance);
- Safe use of vehicles and mobile equipment used in arboriculture (aerial devices, brush chippers, sprayers and related equipment, stump cutters, vehicles, log loaders, knucklebooms, cranes and related hoists, specialized units, equipment-mounted winches);
- Portable power hand tools (portable electric power tools for cutting and trimming).

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tools, chain saws, powered pole tools and backpack power units); 

**Hand tools and ladders** (cant hooks, cant dogs, peaveys and tongs, wedges, chisels, gouges, chopping tools, ladders); **Work procedures** (ropes and arborist climbing equipment, prUNing and trimming, cabling, rigging, tree removal, bush removal and chipping, limbing and bucking, pesticide application); and **Training for employees.**

**Outreach and phased enforcement**

To provide employers and employees with sufficient time to familiarize themselves with the requirements of the comprehensive new Tree Trimming Operations regulation, the VOSH Program will use a phased enforcement approach:

1. VOSH Inspectors/Consultants were to be provided with handouts on the new regulation to distribute to employers and employees in the weeks leading up to the effective date of April 27, 2011. A training program will be posted on the Department’s website. Articles on the new regulation will be sent out for publication to organizations with newsletters. “Quick cards” will be available for download from the Department’s website to briefly explain requirements of the regulation, and will be translated into Spanish as well. A VOSH Directive with enforcement procedures and interpretations will be posted on the Department’s website.

2. For the first month after the effective date of the regulation, April 27 to May 26, 2011, VOSH will primarily operate in a non-enforcement mode with regard to the new regulation, performing outreach activities with employers and employees. However, current protections for employees will remain in place during the outreach period. If during an onsite inspection violations of the new regulation are noted, VOSH inspectors will give one “warning” to the employer for any noted violations at the specific worksite, but not cite the violation. The VOSH inspector will verify that the violation is corrected, and note the violation and corrective action taken in field notes. The warning and handout materials need to be provided to an on-site supervisor, foreman or lead person. If the VOSH inspector returns the next day and finds the same violation recurring, or if the employer refuses to correct the violation, the employer can be cited under the new regulation.

3. For the second month after the effective date of the regulation, May 27 to June 26, 2011, VOSH will discontinue enforcement of existing federal identical regulations that are superseded by the new regulation and fully enforce the following sections of the Tree Trimming Operations regulation:

- §10, Scope;
- §20, Definitions;
- §40, General Safety Requirements;
- §50, Electrical Hazards;
- §60, Safe Use of Equipment and Vehicles in Arboriculture;
- §70, Portable Power Hand Tools;
- §80, Hand Tools and Ladders; and
- §90, Work Procedures

4. Section 30, which contains the training requirements, will not be cited during the second month after the effective date May 27 to June 26, 2011). This extra time period will give employers and employees time to access the training materials that are being provided.

5. All sections of the regulation will be fully enforced starting June 27, 2011.

Peter Gerstenberger is senior advisor for safety, compliance & standards for the Tree Care Industry Association.
Herbicides cause leaf tatters

Samtani, Appleby and Masiunas’ article about leaf tatters (“Common Farm Herbicides May Cause Leaf Tatters On Oaks,” TCI, February 2011) was far too conservative. “May cause” should be replaced with “causes and eventually kills oaks.”

Susceptible white oaks that have had tatters two or three years will die. Pathology tests of recently dead oaks at Iowa State University could not culture oak wilt. Nor is it armillaria, hypoxylon, two-lined chestnut borers or some other malady. It’s chloroacetimide herbicides. I watched it for 27 years as an Iowa DNR forester and printed the tatters/chemical connection in May of 2000.

Robert H. Hibbs
Hibbs Forestry LLC
Marshalltown, Iowa

Have a heart for animals

If you are reading this article, you are most likely a leader or owner of a tree service business. This is about something that is overlooked, and now that this is a new season, it’s a good time to bring it up. It’s about the animals in the trees.

I’ve been in the tree service business for more than 25 years. I have always had the respect to take the extra time to get the raccoons and squirrels out of the tree I’m removing whenever I come across them.

A few years ago, I decided to go into the crane business. Now I do work for several tree companies and I’ve noticed that there is always someone on a tree crew who shows no respect for the animals that live in the trees. These animals are often maimed or killed with chain saws or by falling limbs. There is no squirrel hospital, so the ones that do live suffer and die slowly.

I’m reaching out to the more compassionate leaders in the industry to teach the teachable to have a little compassion. Take the extra time to get the tree down without killing or maiming the animals that made the tree their home. I’m asking that tree people take extra time to get the animals out of the tree.

This can sometimes be challenging. You might rope down a log, or figure out where the nest is in a hollow tree before cutting through it. There are many different scenarios. I encourage my fellow workers in this industry to take the challenge – see if you can get the critters out unharmed. They will find a new home.

Jim Dahl
Wayne Crane LLC
Wayne, New Jersey

I’ve seen that tree!

Tom Dunlap’s before-and-after pruning pictures, at the head of Cass Turnbull’s article (“Do All Roads Lead to Drop-Crotch Pruning?”) in the March 2011 TCI issue, hit me with deja-voodoo. I’d seen that tree nine years back, when Tom was helping me prune some old oaks after a big storm. First came crown cleaning, by reducing ice-broken upper branches back to the first good node. The storm exposed the sprawling lower branches, but removing back to origins would have exposed them all the more. Tom’s pictured limb also had a narrow attachment, and was over the house. We reduced overextended branches back to laterals – we did not have to use nodes without laterals. These cuts sustained a more stable and symmetrical crown outline. Tom’s pictures show this quite well, with only the Carolina-blue sky in the background.

When I find that tree, and take nine-years-after pics, I think they’ll show a healthy specimen. I forget which of us pruned it, but these branch reduction cuts were not part of an overall “crown reduction” strategy. Thankfully, some parts of those damaged crowns did not need any pruning.

Turnbull’s concerns about over-reducing crowns are real – too many big wounds are being made, coast to coast, in the name of crown/risk reduction. Each of our cuts fit the job’s objectives and specifications, which Tom and I spelled out per ANSI A300 (Part 1), and refined as the job evolved.

Turnbull’s call for independent and qualified tree risk assessments should be answered. When assessors clearly communicate mitigation options, the owner and the arborist know what to do. The A300 format makes it easy, or at least easier:

A300 Storm Pruning Specifications
Objective: Storm-damaged trees on property
Maximize structural stability and health. Minimize decay, weak attachments and heavy ends.
Specifications: General: All pruning shall be completed in compliance with A300 and Z133.1 Standards.

Methods:
Remove all dead branches.
Reduce all broken branches back to the first node that can close the wound, or support stable regrowth.

Detail: Nodes shall be identified as growth points with lateral branches, visible buds (use hand lens), change in taper, wrinkled bulges like branch collars, and other structures indicating bud protection zones.
Reduce or remove rubbing or decayed or cracked or crowded branches to restore symmetry, minimize friction, and maximize collection of sunlight.
Reduce undamaged branches if they are newly exposed to loading. Retain upright laterals and remove downward laterals.

**Retain as many active buds as possible. Remove no healthy tissue without a good reason.**
Paint newly exposed, thin bark with white latex. Mulch as wide as possible. Keep the trunk flare visible.

By bouncing the options back and forth between us, Tom and I got very clear on our methods. That took the pressure off the whole process of managing some big old trees, and we had fun doing it. Our patients that I’ve seen are doing well nine years later, some of them despite getting no pruning since.

Guy Meilleur, BCMA, TCIA member
Better Tree Care Associates
Apex, North Carolina

Skidder vs. skid steer

I noticed in the March 2011 edition of TCI Magazine that the cover article is titled “Skidders and Compact Loaders Leverage Versatility for Profitability.” The article (certainly an informative one) uses the terms “skidder” and “skid steer” interchangeably as if to mean the same type of machine. I think the author, Rick Howland, means to say “skid steer” or “skid steer loader” throughout the article rather than the term “skidder.”

Wikipedia defines a skid steer (and skid steer loader) as a “small rigid frame, engine-powered machine with lift arms to attach a wide variety of labor-saving...
tools or attachments.” It goes on to say that “skid steer loaders are capable of zero-radius turning, which makes them extremely maneuverable and valuable for applications that require a compact, agile loader,” thus the term “skid steer.” The Bobcat Company of North Dakota is certainly famous for its line of skid steer loaders.

On the other hand, Wikipedia defines a “skidder” as “any type of heavy vehicle used in a logging operation for pulling cut trees out of a forest in a process called skidding, in which logs are transported from the cutting site to a landing.” The Tigercat Company of Ontario, Canada, is famous for its line of skidders, which weigh in as high as 47,250 pounds for its 635D 6-wheel drive grapple skidder.

I have noticed the term “skidder” misused quite often outside of the logging world. Hopefully, this will clear things up for some. Long live the true “skidder!”

**Allen Hedeen, Certified Arborist**
**Hedeen Logging and Tree Care**
**Lebanon, Indiana**

### Dedicated ground man would help climber safety

Here’s a letter I wrote to Dr. John Ball after reading the article on ground worker safety published in the March 2010 issue of TCI. I actually just found that issue when cleaning out my office.

“Dr. Ball: After reading your ground worker safety article in TCI Magazine, it occurred to me that one very simple recommendation would have great safety benefits for both climbers and the ground crew. Though it may not always be practical, whenever possible, have one dedicated ground man paying attention to the climber at all times. This dedicated groundie runs the ropes and is responsible for any entry in the LZ by other ground crew, etc. When climbers are fast, it also improves productivity in that the climber never has to wait for a ground man to come over to run the lowering line or tie something on. I also prefer to chip with a minimum of two men, though again that may not always be practical.

“I know of one climber who fell 25 feet and broke his wrist and his back. This would not have happened if he had had a ground man available to tend his lowering system. This was a ridiculously dangerous system. He would set the pull line before descending from the topped tree, then tie in around the trunk above the choked pull line with his climbing line, then have the ground man step back from the tree and hold tension on the pull line, so his climbing line wouldn’t slip down the trunk. Of course he could have descended on the pull line with a münter or used a friction saver and his climbing line, if he had the training and equipment. That is the real challenge in creating safety recommendations for this industry. There is such a variation in levels of knowledge and training, it’s hard to make rules that apply well to everyone. I believe that keeping a dedicated ground man with the climber is one rule that would work well to improve safety across the board.”

**Daniel Murphy**
**Murphy’s Tree Service**
**Wayne, Pennsylvania**
At Heartwood Tree Service in Charlotte, North Carolina, they go out on a limb to save trees – figuratively and literally.

“There were 21 Yoshino cherry trees about 50 years old in Freedom Park,” says Patrick George, owner of Heartwood. “They’d suffered through Hurricane Hugo and ice storms and they’d been beat up. The county was afraid of the liability and wanted to plant all new ones.”

George came up with a test: Heartwood climbers climbed every limb of every tree and took photos of the entire process. They reduced some limbs, and Heartwood took full liability for the trees for three years. In that time there were no incidents and only two trees were removed. When the three-year period ended, liability reverted back to the city.

“In a healthy forest, you’re going to have damaged and even dying trees,” he says. “We need to preserve trees that may have lost their individual dignity but still provide services – habitat, shade, food for organisms. These are necessary for a healthy urban forest. Even if a tree is disfigured, it can still provide tremendous value.”

On the other hand, he says, “We understand we need to manage these trees, especially for safety and liability. Every tree that is up is going to come down. For us, it comes down under our direction.”

George started the company in 1979 with a partner who handled the sales, but the partner left a few months later. “It galvanized me,” he says. “I knew this was where I wanted to be. I loved being up in trees. I figured I just had to learn to talk to people.”

Roughly 80 percent of all their work is pruning, 15 percent removals and 5 percent Plant Health Care (PHC), which is completely organic.

About 90 percent of their clients are residential. Their client base tends to be people who value their trees and consider them part of the family, he says, so educating people about trees and tree care is an important part of their business – and the key to their expansion in the future. The more people understand about their trees, the more they appreciate them, and the more they’re willing to spend because they know the value of what they have. They’re also better equipped to make more informed choices when they choose a tree care company.

“You want to encourage dialog,” George says. “Customers need to ask companies, ‘How do you do the pruning? What kinds of coverage do you have?’”

Ninety-five percent of all the company’s business comes from current clients and referrals – often from clients selling their homes to the new owners. “We’re relationship-oriented,” he says. “There are plenty of trees we’ve cared for through three or four owners.”

Heartwood has won Angie’s List Super Service Award every year from 1999 to the present. They donate to public radio and even have manned the phones during a pledge drive. They participate in silent auctions and install tree swings for the winners. They also do some keyword advertising on the Internet.

As part of Heartwood’s quest to foster the appreciation of trees in the city, they’ve partnered with the Charlotte Public Tree Fund, a nonprofit that’s focused on tree planting and preservation, and created Caretakers of the Queen’s Crown to identify significant trees in the area, or jewels of the crown.

“Charlotte’s known for its tree canopy, and it’s really a source of pride for some people. But (the nonprofit conservation organization) American Forests did a study in 2010 that showed that the city had lost almost 40 percent of its tree canopy since 2001. Caretakers of the Queen’s Crown is a touchpoint where people can say they’re contributing to the canopy. The cherry trees in Freedom Park are truly one of the jewels of the crown here.”

The company has 23 employees, 18 to 20 in the field. Thirteen are ISA-certified, and two are Board Certified Master Arborists, the highest certification in the industry. Seven employees are Certified Tree Worker/Climber Specialists and four are Certified Tree Care Safety Professionals (CTSPs).

In 2005, Heartwood won TCIA’s Safety Award. “When it comes to safety, we don’t believe in accidents,” George says. “We believe in mistakes.” Every other month, they practice aerial rescue with “Cranker, the
injured climber,” their practice dummy. They also practice rescuing injured workers from the bucket trucks, and keep all employees current with their Red Cross CPR and First Aid certifications.

They have weekly safety meetings where they discuss seasonal topics, the accidents that occur the most frequently in the industry, and any close calls a Heartwood employee has had the previous week. “We promote the attitude of preventing these mistakes,” he says. “If we suss out all our actions, we can avoid these mistakes. If the situation ever comes about again, they’ll know exactly what to do.”

Heartwood was accredited in July 2005, the first accredited company in North Carolina. “We looked at what was involved and realized that outside of the business plan, we were moving toward everything Accreditation required. It wasn’t so difficult.”

They hired someone from outside the company to do the business plan. Employee Jeff Fabian, CTSP, certified arborist and certified tree worker, ran with it for two months and they were ready.

The biggest change they made was adopting TCIA’s definitions and descriptions. It was difficult at first, but having everyone in the company use standardized language on work orders helps avoid misunderstandings with customers, George says. It’s also easier to get the work done. Another change they made was adding to work orders the information that they follow ANSI standards and the TCIA code of ethics.

Recordkeeping had been a challenge, but Accreditation has made George more disciplined about it. “Accreditation instills discipline from the outside. You have to answer to someone. If you’ve been in business for more than a year, record-keeping is important. We’ve been looking after some trees for 25 years. Understanding what’s been done in the past helps you going forward.”

Accreditation also helps direct companies, he says. “If you’re monitoring the business for where to improve, it gives you benchmarks and tells you to take care of the basics, and then you can get to the fun stuff.”

Being accredited automatically sets Heartwood above tree care companies that aren’t accredited, he says, but more companies in the state need to be accredited to establish a standard. Then they can encourage local governments to accept bids from companies that hold themselves to this standard. Ultimately, though, George did it for the company – and himself.

“This is your life,” he says. “This is the business you’re doing for your life. And if that’s the case, certainly you want lifelong improvement. You can’t avoid that when you’re accredited.”

Injured Climber’s Practice Dummy
Man electrocuted trimming tree

A 50-year-old man was electrocuted March 2, 2011, as he trimmed a neighbor’s tree in St. Petersburg, Florida.

George Arthur Ball, of St. Petersburg, was using a gas-powered pole saw with one foot on an extension ladder and his other foot in the tree. When he cut the limb, the momentum took him forward and the pole saw made contact with an electrical line carrying 7,200 volts of electricity.

Ball fell to a lower branch where he remained suspended until emergency crews arrived. He was pronounced dead at the scene.

A woman who lives at the home where Ball was electrocuted had been paying him to cut her lawn for more than a year. She said Ball was trimming an elm tree in the backyard when the incident happened.

Ball’s family said he had worked in the construction field. When he was laid off, he started mowing lawns in the neighborhood, according to The Tampa Tribune article.

Trimmer rescued from bucket after fire

A tree trimmer was rescued from an aerial lift bucket March 3, 2011, in Concord Township, Elkhart County, Indiana, after the vehicle caught fire.

According to The Elkhart Truth, the operator was stuck about 50 feet in the air, working on a nearby tree. Fire crews arrived to find the truck’s cab in flames and had to extinguish the fire before rescuing the worker.

Crews were eventually able to retrieve the worker safely using a ladder truck and rope.

Fire officials say the truck’s hydraulic pump overheated, resulting in the fire, according to WNDU in South Bend, Ind.

Man treated for injuries in chain saw accident

A White Hall, Illinois, man was injured March 3, 2011, while using a chain saw to trim a tree in South Jacksonville, Ill.

Chris Wallace, 24, a tree care company employee, cut his right arm in the accident after he allegedly lost control of his chain saw, according to a report in The Jacksonville Journal-Courier. He was treated at the scene before being taken to Passavant Area Hospital, where he was treated and released.

Trimmer rescued from bucket after fire

A 44-year-old man died March 6, 2011, while trying to help his friend cut down a tree in Rostraver Township, Pennsylvania.

Milton Lebe, 44, was cutting firewood on a farm owned by his girlfriend’s family when he was killed by a falling tree. Lebe, a volunteer firefighter, died from blunt force trauma to the head, according to WTAE ABC Channel 4.

Tree worker killed in struck-by

A Charles County, Maryland, man died March 9, 2011, after a tree fell on him while he and two other workers were clearing a wooded lot.

Kenny Lee Staley Jr., 24, and the two other workers were part of a tree service crew that had been in that area for a week or more. At the time of the accident, one worker was cutting the tree and one was chipping the wood or using another piece of equipment. Staley was attempting to get a rake when the tree came down. Staley died from head injuries, according to a report on www.somdnews.com.

Climber killed when tree splinters

A Westminster, Maryland, man died March 12, 2011, from injuries sustained while trimming the top of a large tree in Manchester, Md.

Sidney Wayne Diehl, 59, of Westminster, had been assisting friends with trimming the top of a large tree when the tree splintered and caused him to fall nearly 10 feet before his safety harness stopped the fall. Although the harness stopped Diehl’s fall, the tree continued to separate above him as he hung nearly 20 feet from the ground. Pieces of the tree fell on and around Diehl.

Sheriff’s deputies responded to reports of a critically injured man at the residence. Rescue workers found Diehl dead when they attempted to free him, according to the Carroll County Times.

Diehl, an experienced tree trimmer who was wearing all the recommended safety equipment, was apparently pinned against the tree, according to The Baltimore Sun.

(Continued on page 52)
CTSP CEU Quiz #2011-3: May, 2011

1. Emerald ash borer is a tree-boring insect that was first discovered infesting maple trees in Michigan in:
   a. 2001
   b. 2002
   c. 2003
   d. none of the above

2. Tree branches infested with EAB that are in severe decline tend to:
   a. fail under load farther from the branch union than expected
   b. fail after the tree has been felled
   c. fail under load closer to the branch union than expected

3. The tree risk associated with EAB is:
   a. loss of foliage due to adult feeding
   b. loss of tree value
   c. loss of foliage due to scavenging ahead of time
   d. loss of structural integrity of the trunk and branches

4. The wood in infested EAB trees:
   a. reveals more cracking during post-breaking assessments
   b. has lower moisture levels than uninfested trees
   c. can be degenerating even though it appears risk-free
   d. all of the above

5. Climbers should question if the tie-in points are safe when:
   a. trees in EAB areas are asymptomatic
   b. climbing trees in early to mid-summer
   c. there is noticeable bark sloughing off the tree
   d. All of the above

6. Discuss the standing hazard trees that you have seen in your area. If they have been standing dead for some time, what would you look for to help determine the remaining strength? If a tree is deemed too hazardous to climb, what other methods could be used to reduce the risks to the property and crew?

Your Full Name: ___________________________________________ CTSP#: __________________________

To obtain CEU credit, you may either copy this page, answer the questions and fax the answer sheet to TCIA at (603) 314-5386, mail to TCIA - CTSP, 136 Harvey Road - Ste 101, Londonderry, NH 03053, or you may go to www.tcia.org, click on the Safety tab, and click on the CTSP page to complete the answer sheet online.

1 Only current CTSPs in good standing who qualify for professional development CEUs may obtain CEUs for this quiz. Other readers are encouraged to use TCIA’s safety articles for training and may wish to use this quiz to test comprehension.
By Rick Howland

I

f you think the biomass/green move-

ment that turns green waste into usable

and valuable products such as wood

chips, mulch and pellets for heating and

electricity generation is a passing fad, try

this. Take a dollar, and tear it in half. Walk

into the woods and leave one of your dol-

lar halves on the ground – and walk away.

Sound ridiculous? The metaphor may

be, but that’s essentially what’s happening

today with respect to tree waste. Half is

going to waste.

According to a statement by the Federal

Energy Management Program (an initia-

tive of the U.S. Department of Energy’s

department of Energy Efficiency and

Renewable Energy), in today’s market, less

than 50 percent of a harvested tree ends up

as a final product (lumber, firewood,

mulch, etc.) with the balance representing

an underutilized resource.

With the world energy markets in tur-

moil, gas clawing toward $4 a gallon, fuel

oil not far behind and the memories of a

nasty winter all too fresh in our minds, it is

no wonder that the U.S. energy market is

looking at this “underutilized resource” as

a way of filling the energy gap as a renew-

able, carbon-neutral product.

And let’s not forget the mulch factor,
either. That is the fact that, long before its

recent popularity as biofuel for energy pro-
duction, green waste had already found

markets in garden mulch, the manufacture

of playground mulch and in animal bed-
ding. So, while less than a decade ago our

challenge with respect to green waste was

to find ways to simply reduce the mass of

tree debris for the dump or for composting,

now it is a sought after commodity.

(Moreover, the same grinders used to

make mulch and biomass products are

being used to grind up composite asphalt

shingles, with the resultant ground-up

material used beneath parking lots and pri-

vate driveways. Construction companies

pay to dump shingles, and the re-processors

get paid a second time for the aggregate

material. In Indiana, one company has three

grinders devoted just to shingles.)

But, before sending you running out to

buy a chipper or grinder and having you

diversify your business model to account

for all your new green-waste revenues, let’s

consider the general U.S. economy. Why?

Because the kind and scope of equipment it
takes to produce a quality energy chip,
grind product or mulch product can be quite

expensive – a quarter million dollars and

up. So, unless the economy is picking up, it

matters little how much of the underutilized

tree is on the ground.

And that economic news appears to be
good, if not very good, with tremendous

short-term growth for the U.S. economy

and our industry, according to those we
talked with for this article. Almost univer-
sally, it appears that the national and

regional economies are past the poised-for-
growth stage; in fact, business for large

grinders (tub and horizontal) as well as the

larger chippers is rather brisk. And folks

would be reluctant to make a major capital

purchase, going along with the manufac-
turers’ reasoning, unless the promise of a

return on investment was good.

Despite a lagging economy, last year

was a good one for grinders and whole tree

chippers, even with a flagging housing
market, due primarily to the biomass market, says Jason Morey, marketing manager for Bandit Industries. “Now, land clearing and construction are coming back a bit, and it’s starting to get very busy for us as companies add to their grinder and chipper fleets. The outlook is very positive,” Morey says.

Similarly with the mulch companies, “They are also coming back; not where they used to be, but the outlook is positive,” he says, “as the housing markets improve.”

It is interesting to note that all of our contacts say the market for processed green waste is about evenly split between demand for energy use and for mulch. “Biomass will play an increasingly important role, especially with fuel prices going up,” Morey says. “The next few months will determine to what extent.”

He refers to a USDA Farm Service Agency program called the Biomass Crop Assistance Program, which provides financial assistance to owners and operators of agricultural and non-industrial private forest land who wish to establish, produce and deliver biomass feed stocks (chips or wood grinds to be used directly for or further processed for energy use).

The feds provide matching payments for the delivery of eligible material (ground up trees) to qualified biomass conversion facilities by eligible material owners.

These qualified biomass conversion facilities produce heat, power, bio-based products or advanced biofuels from biomass feedstocks. The biomass assistance program also establishes annual payments to producers who enter into contracts to produce eligible biomass crops on contract acres.

What does that mean? It means that there is a new and growing government establishment to encourage and help underwrite the new biomass market. Bandit’s Morey warns that the criteria and money keep shifting, which makes it sometimes difficult to justify exact return on investment for grinder or chipper purchases. Issues revolve around the classification of wood waste as meeting biomass criteria and also prices per ton.

While all of that is important to the story, the bottom line is that there is an established and growing and potentially huge market for green waste products just in the biomass market. “This is especially important for smaller companies looking to get into this market,” Morey adds. Think “opportunity to diversify.”

One of the questions to ask yourself, if...
you are thinking of mulch or biomass product manufacture, is whether or not you need a grinder (and what type of grinder) or chipper – perhaps a whole tree chipper.

The latter can be faster, and speed is of the essence in processing green waster. A tub grinder goes a great and fast job for reducing huge quantities of material and thus producing material for mulch, but cannot be fitted to produce biomass starter material. Many horizontal grinders, however, can be set up to produce either a grind for a variety of mulches or a chip for biomass.

For that conversion, typically we find it costs about another 10 percent or so on top of the initial cost of the horizontal grinder and takes about a half day to convert a machine from biomass to mulch production. But the issue is versatility and the ability to quickly address shifting demands of the market.

Like most manufacturers, Morey says, “We offer chipper knives for our grinders to allow users to make a very fine end-product Bandit calls bio sawdust, which is required for production of pellets for pellet stoves. We see this as a great market going forward.” Requirements for this product are for at least 98 percent of the material to be a quarter inch in size or less, he says.

One of the issues impacting the grinder/large chipper market right now is federal requirements for cleaner-burning, Tier 4 diesel engines. While a nice thought on the surface, the cleaned up engines are larger due to items such as catalytic
“Perfect In One Pass” TM

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devices to clean unburned fuel. This requires modifying machines to accommodate the added bulk. So, between the much higher cost for a Tier 4 engine and the re-engineering required to adapt them to the chipper/grinder technology, costs are being driven up fast, in fact, according to our research as much as 20-40 percent.

For the time being, a limited number of Tier 3 engines remain legal to operate and salable by manufacturers. According to Morey, his company can sell about 100 of the old Tier 3 styles in the 174- to 751-horsepower range (large hand-fed chippers, horizontal, whole-tree, and forestry grinders).

With respect to biomass, Morbark’s Ed Dodak, midwest sales manager, concurs with the overall assessment and says, “The major thing we have going right now in the biomass area is among customers who rely on waste wood left over from loggers and forestry-related operations.”

“One of the advantages of top-brand grinders like Morbark is that they can be hauled right into the woods and take tree waste or whole trees and convert them in one pass into biomass or mulch material. The screening on the grinder can produce material from 1 to 8 inches, which is important since each facility has unique specifications for the size of the materials they will accept and work with.”

If you read between the lines you can conclude that sourcing wood products will become an issue as demand for value-added green waste increases. That’s where the opportunity for the mid to large tree care company comes in.

When asked about the average cost of a grinder, Dodak says the company builds six different horizontal grinders starting at about $400,000. That’s what the company sees as a sweet spot for users who do not want to have to worry about special permitting or licensing and who want sufficient volume and speed to give them a high rate of return on their investment in a mid-size grinder.

“It used to be that the drum chipper ruled the market, but now it seems that many are going to the horizontal machines, which grind for mulch or go into woods and make a fuel chip with same machine. Middle-of-the-road cost for a conversion kit might be in the $30,000 range,” he says.

“These grinders are definitely profitable from the time they are first turned on. Most buyers have contracts in place well before they make a purchase and the profitability is such that they can amortize a good chunk of the grinder at about the three-year mark.”

Dotak also discussed a hydraulic thrower option for Morbark machines, which throws chips into a truck or trailer, versus simply letting them fall off the conveyor. The value for this is that the velocity of the chips more densely packs the bed so operators get more tonnage per trip, up to 6 to 8 tons more, and save labor and fuel costs, he claims.

J. R. Bowling, vice president with Rayco, says his company is a relatively new entry into this environment and that one place they can really compete is in the horizontal grinder category. Rayco’s size and price point, Bowling says, “give the smaller tree care pro or logger the ability to create a biomass product on a smaller yet

Rotochopper’s new MP-2 compact grinder is relatively low-powered, 275 hp diesel engine, with a 56-inch-wide, 18-inch-high opening that can process a variety of materials. Here it is grinding and coloring wood chips.
competitive scale. The objective is to get the smaller guy into the business at a fraction of the cost of a large operator.”

“In the past to be cost-effective it was required that operators have a lot of raw material and a larger grinder or chipper plus significant investment in support equipment, like a loader and medium duty truck to haul with. What we did is to come up with a smaller horizontal grinder to allow economics to make sense for smaller operator.”

Rayco’s RH1754 horizontal, which can accept up to a 240 hp engine and can be towable or on tracks, costs from $130,000 to $185,000. “Screen choices and cutter tooth options deliver the material you or your customer want,” he adds.

“Because it is lightweight, it can be moved with smaller trucks and can be fed by a skid steer, equipment most small to mid-size tree care professionals have. It does not require a large loader like the big machines.”

A very early entry into this business was Rotochopper, which serves many niche markets, says Monte Hight, marketing manager. The company’s new MP2 is a compact grinder and relatively low-powered for what it can do with a 275 hp diesel engine.

“Together with a 56-inch-wide, 18-inch-high opening this unit can process a variety of materials and is being promoted to arborists because it is a smaller one but still much like our original CP118. These units can grind down to a specific size and even add colorizers in one pass. You can put the material in at one end and get custom-colored mulch out the other,” he says.

Despite its size, he says, the MP2 is a true horizontal grinder capable of accepting large material to include limbs, round wood such as tree trunks, and odd materials such as pallets, and process it into colored landscape material.

“If you are processing construction material or pallets, the machine can be fitted with a magnetic head pulley to separate materials with metals in them, like nails.”

Morbark’s Dodac brought up an interesting angle related to the ever-evolving biomass market. In discussing the niche markets that are adopting grinders, he says those markets can include grinding hay for cellulose, which can be turned into ethanol for fuel; even wood can be ground down into a starter product for ethanol, he says. These markets are emerging as costs go down. The issue is not on the grinding/chipping/processing end but rather on the chemical/enzyme end, which needs to be more cost effective before being more broadly adopted.

Tom Kuiper is an applications specialist at Vermeer and addresses what the others said by boiling down the marketplace to one word: versatility.

“It’s all about different challenges for customers. We find that our customers need versatility to accommodate their customers. The biomass industry is very different because of the varying specification requirements, for example the differences in chip size. If they are making mulch one day, they may need to be making chips for biomass production (the next). It’s always about where the money is.”

Vermeer offers what it calls its FCA, or...
Twins Cities a Model for Urban Wood Waste Utilization

Ple nty of growth potential remains to increase urban wood debris usage across the United States, one recent federally-funded study noted.

Each year an estimated 16 million tons or more of wood is removed from urban lands as a result of pests, wind storms, construction, hazard trees and other factors. That amount is comparable to the total annual harvests from national forests each year. Much of this wood ends up in landfills, wasting potential resources.

The case study, “Using Industrial Clusters to Build an Urban Wood Utilization Program: A Twin Cities Case Study,” shows that opportunities exist to improve the amount of wood utilization in urban areas.

“In the Twin Cities, recycling is a big issue. Urban wood recycling is supported here. There may be certain cities that could adopt these practices,” said Steve Bratkovich, author of the report, adding, “The Twin Cities — Minneapolis and St. Paul — are kind of on the cutting edge of communities around the nation in terms of wood utilization.”

“St. Paul has a [cogeneration] plant [District Energy] that uses about 300,000 tons of wood chips each year,” he said. Cogeneration plants generate heat and electricity from the same fuel source.

“Most of those wood chips for the cogeneration plant come from urban wood waste. It is illegal to landfill trees in Minnesota, so virtually all of the wood waste from this urban forest is used. District Energy serves as an anchor industry for our growing urban wood business cluster.”

Bratkovich said other municipalities could adopt similar practices to increase urban waste wood utilization, saving time, money, resources and landfill space.

“As far ahead as the Twin Cities are compared to most other urban areas, it still has not perfected wood waste utilization, he says. “The urban wood cluster of the Twin Cities is evolving and expanding, but it’s not the end game yet.”

Some of the benefits of increasing utilization of urban wood debris include:

- Developing strong markets for urban wood recycling and utilization
- Converting urban “waste” wood into useful and locally-produced products
- Increasing environmental consciousness
- Bratkovich said some other municipalities have small businesses doing wood utilization. He thinks some of them can benefit by adopting an urban wood business cluster model.

“They need more of an infrastructure in place. They need public and private support and market development. They need leadership and supporting organizations including financial assistance. Arborist groups, urban forestry research and ongoing training and education are all very important.”

Urban land area makes up about 3.1 percent of the total land area in the Lower 48 States, equivalent in size to Vermont and New Hampshire combined.

The U.S. Forest Service Northeastern Area State & Private Forestry Wood Education Resource Center funded the study, which can be found at: www.na.fs.fed.us/ss/10/industrial_clusters_wood_utilization.pdf.

fuel chip attachment, which essentially allows the operator to turn the Vermeer grinder into a chipper. Kuiper says the cost is about $20,000 and it takes several hours to switch over, but at about 10 percent of the cost of the alternate machine, it’s a great investment.

Kuiper brings up an example of a niche market we might not necessarily think much about, that is playground mulch. It is far different from garden mulch, he explains, so even if an operator is making one mulch one day, he can easily convert to make the other the next.

“Playground mulch is much different from garden mulch. For example, the chips have to lay flatter to pass what’s called a wheelchair test, and for that you have to start with whole logs, no brush. For this, it is more efficient to use a knife to cut, not shred. And the Vermeer FCA has the versatility to adjust the end product for its intended use with the depth of a cut or different-sized knives.”

Right now, he says, the FCA is offered only on the HG6000 grinder.

“We also recently came out with a whole-tree chipper, the WD2300, which for an operator engaged in full-time chipping may be a better avenue,” he says. As the name implies, it will accept materials up to complete trees and can be quite versatile with the end product, given the depth of cuts and selection of trommel screens with which to size material.

“A lot of plants want clean material, and these screens separate dirt or other materials from the wood,” Kuiper says.

At the end of the day, there are two things we found doubly fascinating about the large chippers and grinders. Where once they were merely for reducing the volume of waste, they now have become portable manufacturing facilities. And, where only a year or two ago they were being pressed into service to meet the nation’s demand for alternative fuels, they now are versatile enough to accommodate the latest trends in turning green waste into a responsible consumer product, whatever that may be.
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Today, more than ever, your accounting system has to work for you. That’s obvious, but just what does “work for you” mean?

We tend to think of “accounting system” as the mechanics, particularly the software. But an accounting system also encompasses:
- bookkeeping and accounting employees;
- employees responsible for recording information;
- the flow of information;
- processes; and perhaps most importantly
- Comprehension.

Questions of effectiveness and efficiency enter into every component.

An accounting system tends to evolve as a business evolves. As the business changes, grows, shifts focus, finds new markets, becomes a more mature business, there’s an assumption that the accounting system is changing and growing right along with the business.

This often is more wishful thinking than reality.

What really takes place is that the accounting system more or less accommodates the various changes. But tweaking will work only so long; the point comes when the system needs adjusting or changing.

Indicators for change

The most obvious indicator is that the accounting area is always operating in a crisis mode. This may be obvious, but when crisis is the normal mode people tend to ignore a crisis as “same old stuff” without looking at its cause.

Is it understaffing? A poor internal system? Inadequate or faulty equipment? Lack of training? Information not moving from one person to another? A combination of factors? Whatever the root of it, an eternal crisis mode is a strong indicator for change.

Other indicators include:

1) A long time lag between data entering the accounting system and information coming out. Sometimes this is because your system (software or hardware) can’t adequately handle your data.

Time lags also arise from the way information moves within your business. How does the accounting department get information about sales, purchases, transactions, billing, and so on? Is the system efficient? How directly does information go to the person who needs it?

2) Decision-making is inefficient. Making employees and customers wait “too long” for decisions on minor matters is costly on several levels including: lost sales and lost opportunities.

3) Decisions are made too quickly, without allowing adequate time to gather information and analyze it.

4) Too many details slip through the cracks.

How many is too many? One, on serious matters. Accounting systems are supposed to keep up on details. You need quick and easy access to the details whether or not you’re dealing with significant events or minor matters.

5) Data is incomplete or hard to understand. Incomplete or incomprehensible data is virtually useless and leads to ineffective long term planning, results that are difficult to assess, and a general lack of focus.

Which indicators should you pay attention to?

All systems suffer from some of these symptoms on occasion. Not all of these indicate a need for wholesale change in the accounting system. But when an occasional problem turns into the “same old stuff,” it’s time for change.

Accounting system basics

Consumers – and small businesses – tend to overbuy on their physical accounting system. Some overbuying is inevitable since most systems come with software that that you’ll never fully use.

Other aspects enter into your decision:
- Cost – buying the system shouldn’t burden your business’ finances.
- Flexibility – the system should be able to accommodate changes.
- Effectiveness – you should have easy access to useful information such as reports, summarizations, details, lists and projections
- Controls – internal controls, such as various checks and balances within the accounting process, help insure accuracy and reliability
- Security – protecting assets, ensuring privacy, securing and guarding against potential fraudulent actions should be high priority in the system.
- Finally – the learning curve will make or break the effectiveness of the system. All accounting is cumbersome if you don’t know something about accounting. Get some expert advice. Your accountant can recognize whether a system is relatively straightforward or overly complex for you and your business.

All of this sounds like a system that is more perfect than perfect. What’s the reality here?

The reality is that if a system doesn’t work effectively for your business, it doesn’t work. All systems have features you just learn to live with; the key is whether it does what you (and your accountant) consider the essentials for the job.

For a small business, the essentials are
the basic bookkeeping, reports, statements, some analytic and statistical ability, and flexibility to adapt to changes. The bells and whistles may sound nice, but are you really going to use them?

Word of mouth can be a valuable source of information. What are other, relatively similar businesses using? What do users say about their experience with a particular software?

**People and processes**

Software systems get much blame for unwieldy accounting systems – and there’s some basis for that. But too often the real problem is that people aren’t adequately trained on using the software.

Users don’t need just to be “shown the basics,” which often passes for education. They need training. At the other extreme, they also don’t need to know everything about the system – but they need the opportunity to learn everything they need to know to do the work effectively.

Investing in software is just one component of the accounting system. The missing companion piece is investing in employees so they can use the software efficiently and effectively.

**Processes**

How would you gauge the flow of information in your business? “Pretty good?” You know what information you get, and it’s timely and not bad. But what happens along the way, before the information gets to you?

Are people getting the right information, in the form they need? Does everyone have enough time to process the information? Or does everyone have to focus on just the deadline with no time to really consider the information itself?

Ask your employees what changes they’d make in the flow of information.

And for that matter, ask them what changes they’d make in the accounting system as a whole.

They work with it. They know.

**Conclusion**

All systems – hardware, software and process – have moments when they’re out of kilter. But when those “moments” interfere with your business’ operations change is called for.

Does your accounting system make a positive, significant contribution to the business?

Put it to work!

Mary McVicker writes and lives in Oak Park, Illinois.

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Does your accounting system make a positive, significant contribution to the business?

Put it to work!

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Climber/Bucket Operator w/CDL

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TCIA invites all members to gather in Washington, D.C., July 24-26, for the 2011 Legislative Conference and Day on the Hill. The event provides opportunities to visit with your congressional representatives on Capitol Hill to discuss issues that affect the industry. Attendees will receive an issues briefing before their Hill visits, and first-time participants receive special attention and assistance from veterans of the event. TCIA has once again teamed with The Professional Landcare Network (PLANET) as hosts.

Depending on your schedule, you can plan to arrive either Sunday or Monday. See the schedule below before making your travel arrangements!

1. Arrive Sunday, July 24, in time for the education sessions and opening reception
1:30 p.m. – We’ll have two training sessions for first-time lobbyists or those who want to hone their skills. During Advocacy Communication, learn the basics about how to confront issues in your state or community. This training will walk you through the process of dealing with elected officials and building a grassroots coalition to overcome local issues. You will also learn how to use local media to convey your message through letters to the editor and media interviews.
3:15 p.m. – During How to Lobby on Capitol Hill, we’ll explain what to say and do – and what not to say or do – to help put you at ease during your Capitol Hill appointments. Gain insight on exactly what you can expect and how to apply your sales experience to selling the benefits of the industry and your business to your elected members of Congress and their staff.
6:30 p.m. – Opening Reception overlooking the Potomac River.

2. Arrive Monday, July 25, in time for the keynote speaker, issue briefings and dinner
3:00 p.m. – Keynote speaker Jonathan Karl, senior congressional correspondent for ABC News, will give attendees a look at current affairs and politics. He will discuss what is happening in the nation’s capital.
4:00 p.m. – Briefings begin on key industry issues that will prepare and inform you on the topics you will be taking to your Representatives and Senators in the morning.
7:00 p.m. – Reception and Dinner.


On Tuesday, we will start the day at 7:30 a.m. with breakfast on the Hill, then fan out to visit with our legislators. You will be part of a larger group on Tuesday for your visits — unless you want to detour on your own to stop in on your representative.

The landscape in Washington has changed dramatically since our last Legislative Conference in 2009. TCIA has been hard at work to make the best case for commercial arboriculture and to create a regulatory and political environment that benefits the green industry. Issues such as safety regulations, chemical use, crane best practices, taxes, workforce issues and more affect your business every day. Now, we need you to add your voice as a business owner. We can’t be effective without your support.

Circle the dates and make plans to join us in Washington. If you have any questions or require more information, please call Mark Garvin at 1-800-733-2622 or e-mail garvin@tcia.org.

Let your voice be heard.
With exceptional education sessions, distinct networking opportunities and impressive products dedicated to your tree care business, TCI EXPO 2011 seeks to exceed your expectations.

“The trade show presence is only effective if the attendees want to be there,” says Chris Nichols of Vermeer. “With TCI EXPO, they do.”

If you’re interested in exhibiting at TCI EXPO 2011, contact Sachin Mohan at (516) 625-1613 or mohan@tcia.org.

The tree care industry will converge on the Connecticut Convention Center in Hartford, Connecticut, this November 3-5, and with more than 90 percent of the floor already sold out, we’re sure that TCI EXPO 2011 will go beyond the ordinary. In fact, Hartford is the site of past record-breaking attendance at TCI EXPO!

Arborists and tree care business owners like you will hear the latest research in our education sessions and gain CEUs, view the newest product innovations and score great deals on the show floor, plus watch some of the world’s best climbers in the demonstration tree. In your downtime, network with colleagues from around the country, enjoy downtown Hartford, and refresh your tree care perspective.

TCI EXPO is your show – and these opportunities are built for you.

Stay updated on everything TCI EXPO has to offer at www.tcia.org and via our social networks. View the schedule of events, check out the trade-show floor, make your hotel reservations, etc. Be sure to check back frequently as information is being updated daily. Online registration for the show will open in June.
We find that many TCIA members, and others, do not know or truly understand all that TCIA can do for them. Our “Call of the Month” feature highlights a request for help from a member—and TCIA’s response to that request. This month’s call was handled by Sheryl Wells, administrative assistant.

Q: Do you know about TCIA’s Business Management Guide?

A: After receiving his March Reporter, new member Michael Brown, of Tree Werks & Stump Removal in Milford, Ohio, called to request his free High-Visibility Safety Apparel Pocket Guide and poster. Knowing he was a new member, I started telling about some of the information that is available to him on our website, such as the Business Management Guide. I asked him to sign in as a member and we explored the Business Management Guide. I said, “you probably already have some of these financial and personnel forms.” He stopped me right there and said, “NO, I DON’T.”

“I’m a small tree business and I don’t have any of these! I had no idea this was available to me. Thank you for showing this to me.”

We reviewed other tabs in the Business Management Guide section as well as the list of volunteer Business Advisors.

But Michael is not alone. I receive calls all the time from members who are not aware of the Business Management Guide and other resources available to them on the our website, or from our office.

I received another call that same day from Advance Tree in Walnut Creek, California, a member since 1999. Mark Tillson called because Darren Edwards, company president, asked Mark to find some safety checklists, etc. and to start putting together a Safety Program. I directed him to the Illness and Injury Prevention Program. He may call back to order that. In the meantime, I took the opportunity to direct Mark to the BMG as well; and he also didn’t know about this guide and was very appreciative for the information.

Remember, TCIA staff are here to help with just about any question you may have. If we don’t have the answer, we’ll do our best to help you find it. Call us at 1-800-733-2622. And, if you have an anecdote about how a staff member helped you with a question or problem, please e-mail editor@tcia.org.
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By Tchukki Andersen

“Talons and Tree Spikes” could be the alternative title for this book. Combining two seemingly unrelated realms into one unique niche, Cadre of the Mews, by Edwin Lancaster Hobbs, relates the colorful “true story of how a group of unique men working on dangerous ground changed an industry.”

Hobbs, who self-published his book in 2010, is noted for his long list of contributions to the tree care industry, but his eventual destination in the tree tops was initially incited by a passion for falconry. The “Talons” part of the book relates to the author’s memorable descriptions of his early fascination with catching and taming falcons, those amazing birds of prey with screwdriver-sized talons that could easily sink into the human arm holding it. Part of the acquisition and taming of the falcon was to first climb a tree to capture one. This is the “Tree Spikes” part of the alternate title. Hobbs relates vibrantly how he invented some of his own climbing equipment in order to procure his many falcon species over the years, and many of those early equipment inventions were the blueprints to standard equipment in use in tree care today.

Raptoring was his first passion, and because of that Hobbs became a bell maker for the birds so he could follow the sound when the birds flew out of sight. This led to metal crafting, tool and die making, etc. This phase then brought the attention of falconers who climbed trees and needed bells. Over time, he drew more like-minded individuals to his bird/tree circle, which developed a group of individuals united by their love for birds and trees.

Soon all this combined knowledge led to Hobbs and his circle taking an interest in climbing trees for removal. Thus was born the “Cadre.” As a working unit, they became close with a strong work ethic. Thriving on two words that fueled the operation, simplicity and efficiency, they beat the competition and were proud of their work. Esprit de corps was necessary due to the inherent dangers of the work of that time, and keeping oneself and one’s crewmates safe was paramount.

The imagery of the book places the reader right where Hobbs wants them be – on the West Coast looking up into the endless canopies of the giant sequoia, coast redwood and eucalyptus searching for both peregrine falcons and solid anchor points for manila climbing lines. Just as the reader is absorbing the straightforward approach of the text, florid descriptions suddenly pop up, creating a simultaneous delightful and amusing impression.

Perhaps the most attention-grabbing account of events was the now infamous “trip through the picket fence”; a result of a dangerous industry practice of the times that inspired the current design of the Hobbs lowering device, a tool that is today the backbone of all tree rigging operations.

There are several audiences for this book: falconers, tree care professionals and the history buffs who will relish the vivid descriptions of a time of social upheaval at the epicenter of the 1960s – Berkeley, California.

Cadre of the Mews is an absolute pleasure to read. Every tree care professional should have this essential bit of industry narration available, for both entertainment and lessons-learned the hard way. The group of hard working, well-trained tree men of the time have a way of pulling you into their story, with Hobbs explaining the things he experienced with a charming, humorous twist. Have you ever read a book that you weren’t aware you were reading at the time? Cadre of the Mews is that book. Hobbs’ visual details are painted in way that makes a tiny movie play in the reader’s head. It has splendid content, merit and style, and is a brilliant testament to the life of an extraordinary tree care pioneer.

Tchukki Andersen is a Board Certified Master Arborist and staff arborist for the Tree Care Industry Association – and she grew up and worked among the big trees in Oregon and Washington state.

Accident Briefs

(Continued from page 30)

Climber dies in fall from tree

A climber died March 15, 2011, after falling 45 feet out of a backyard tree in the Philadelphia, Pennsylvania, area. The man died of internal injuries after surgery, according to a report from other tree workers in the area. Though nobody witnessed the incident, the climber’s rope was still in the tree after the fall.

Trimmer injured cutting near power lines

A tree trimmer was injured Mar 17, 2011, while cutting near power lines in St. Petersburg, Florida. The trimmer’s clothing was on fire when he fell from a ladder to the ground, according to witnesses.

It was not clear if the man, who fell about 15 feet, was electrocuted. The man, who was not a local resident, was conscious when he was transported to a hospital for observation, according to a St. Petersburg Times report.
Operator injured by stump grinder
A Port Chester, New York, man was hospitalized March 18, 2011, with potentially life-threatening injuries after one of his legs became entangled in the grinding wheel of a large stump grinder he was using at a Greenwich, Connecticut, residence.

Another tree service worker turned off the stump grinder and freed Hector Guerra, who is in his 50s; the pair were part of a crew of four working at the location. Guerra was taken to a hospital with serious, possibly life-threatening, injuries, according to the Greenwich Time report.

Climber survives fall after fire in palm
An independent contractor hired by a homeowner to trim a palm tree fell 30 feet to the ground March 18, 2011, in Tucson, Arizona, after the chain saw he was using sparked and the tree caught fire. The man suffered life-threatening injuries and was airlifted to a hospital with burns and other injuries, according to KGUN Channel 9.

Man hit and killed by wood chipper
A 58-year-old tree service company owner died March 22, 2011, in Old Lyme, Connecticut, of head injuries suffered when a wood chipper being towed by a truck hit him at a work site. Thomas Lomas, was part of a four-man crew working together when the accident occurred. Lomas was taken to Shoreline Clinic in Essex, where he was pronounced dead, according to The Day in New London.

Trimmer rescued from palm fronds
A tree trimmer found himself trapped 75 feet up in a palm March 25, 2011, in Greenwich, Connecticut, of head injuries suffered when a wood chipper being towed by a truck hit him at a work site. Thomas Lomas, was part of a four-man crew working together when the accident occurred. Lomas was taken to Shoreline Clinic in Essex, where he was pronounced dead, according to The Day in New London.

See more March accidents on this page in our digital version of TCI at www.tcia.org, under the Publications tab. Send local accident reports to editor@tcia.org.
By Marie Hawkins

One late evening, after a long hard day, we received an emergency phone call from The CSX Railroad Company. They had a tree on the outskirts of a nearby town, next to the tracks in a small patch of woods with an already picked cornfield on the other side. It was 21 miles away from our shop, and the tree was on fire and ready to fall on their telegraph and signal lines. They wanted the tree down before it fell on the lines.

Sight unseen was sort of a scary thought. Not knowing how close to the lines and rails, what size, how dead, and how hollow. With what the man said on the phone, the size and all information was just an estimate from a non-tree person, and anything goes at this point.

We loaded up all size saws, ropes, ladder, fuel, oil, winch truck and whatever else we thought appropriate for this job. However, most of all, good flashlights and plenty of batteries, the reason being, it was within an hour of being dark.

It was about a 25 minute ride; we could see the flaming tree from the highway. Pulling into the field, we started surveying the area so as to prepare this tree for falling. After a thorough investigation of the situation, we put our plan into effect.

The tree was a white oak approximately 60 feet tall and 34-inches DBH. The tree was hollow from top to bottom, and when I say hollow, I mean we were lucky to have 3 inches of wood around the cambium. The CSX personnel said the farmer had tried to burn the scrub brush and that is why the tree was on fire.

It had turned dark while getting set up, no moon and no lights anywhere except for our headlights. Here is the way our plans went. It took a few minutes to put a rope in the tree as high as we could throw it, with the reason being, a burning tree was not a safe tree to climb.

After aligning the truck with the tree, parking away from the tree about 150 feet for safety, we then pulled the cable from the winch and made our hook up for helping the tree to fall away from the telegraph and signal wires. We put tension on the line to be ready for the notching.

We had decided on a code with a flashlight. The code was, after the tree was notched, Rodney would wave two up and down flashes, which told me to start pulling the tree over slow because he had started cutting on the back side of the tree. Next, three on and off signals when the tree needed a steady pull to make sure it went over center of gravity for the final part of the job.

While making the notch, he would rev the saw for speed, and that added fuel (oxy-gen) to the fire. The exhaust from the muffler was setting the bark on fire due to the tree burning so close to the outside edge through the tree. Smoke, fire and sparks were coming out of the top of the tree like an out of control house chimney.

Rodney was afraid the tree might start to crumble while cutting. I shut off the headlights for the final cut as to not blind him. I had a flashlight to let him know that the tree was coming over center, just in case he could not see in the blackness of night.

The tree made an eerie twisting sound along with the popping and crackling of the burning wood on its way down to the ground. When it landed, as hollow as it was, it made a small bounce with a thud and all the air going through the trunk made it burst into humongous flames.

Of course we knew at the time that the bull rope we put in that tree we would kiss good-by. We had a hatchet in the truck and got as close to the tree as possible and tried to save a portion of the rope – for a lot shorter tree next time. CSX personnel said, “Charge us for a new rope, there was no way to save that rope.”

The man praised us for a great job, along with saving the railroad thousands of dollars in damages along with the down time.

During the post-job chatter, Rodney said, “When flames were shooting out around my saw, I wondered, ‘why in the world am I doing this?’”

We all said, “It had to be done.”

After all the discussion of how it went so smoothly, we all decided we needed a good shower. After all, we were black with soot and reeked of smoke.

Marie B. Hawkins and her husband, Rodney, own and operate American Tree Experts Inc. in Loogootee, Indiana.
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