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ALMSTEAD
TREE & SHRUB CARE CO.
The science of preserving nature since 1964

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Improvement No. WC-16727-H05
Connecticut Registration No.
CT-610956

Horticulture Calendar Winter 2007- 2008

As we make our way through the colorful days of fall and the wintery-white eves of the coming season, it's imperative to keep the good health and vigor of your trees, plants and shrubs in order. The fall/winter season is a superb time to do tree work on your landscape – don't forget to inquire with your Almstead Arborist about the benefits and cost efficiencies that can be applied to work completed during the winter season.

November

- **Winterize your summer power equipment** After the last mowing of the season, bring your lawn mower in to be serviced and have the blade sharpened so it's ready for spring. Winterize all summer power equipment by allowing the machines to run until the gas tank is empty.
- **Composting** Cut back perennials that were overcome by frost down to just a few inches. As long as the leaves aren't diseased, use them for compost.
- **Blooming winter bulbs** Plant spring-blooming bulbs in pots and store them in the refrigerator. You can bring these bulbs to bloom inside during the winter months.
- **Fall pruning** Due to November's chilly weather, insects and disease-causing organisms are in a dormant state. This means that the possibility of spreading infection while pruning during this time of year is eliminated.
- Schedule a seasonal property inspection with your arborist to prepare for your 2008 Plant Health Care program.

December

- **A fertilization *don't*** Don't fertilize your houseplants as they grow very *very* little during the month of December.
- **Poinsettias** Keep poinsettias well-watered and away from heat sources, such as ranges and fireplaces. They will droop at the drop of a hat. Also keep poinsettias away from your animals – they are poisonous to them.
- **When salting your walkways** Use calcium chloride instead of sodium chloride. It does less damage to plants and your animals paws. Better yet, use sand – it will not hurt your plants or your animals paws at all.
- **Antidesiccant** This preventative treatment has been known to aid in the prevention of winter damage (such as winterburn) on evergreens. Winter injury is rarely caused by excessive cold; most often it is due to a lack of moisture. Commonly effected evergreens include hemlocks, pines, spruces, rhododendrons, laurels and hollies.

January

- **"White Mulch"** When shoveling or blowing snow, try to dump the snow atop your perennials – as long as this snow does not have any salt in it, it will work as a "white mulch" and protect the plants underneath from extreme temperatures.
- **Lessen the landfill** Instead of leaving your Christmas tree on the curb, cut off the branches and lay them around the bases of roses or over perennials as a winter mulch. Less curbside pickup means less waste that goes into the landfill.
- **Start seeding indoors** Start seeds indoors for the slowest growing plants such as parsley, thyme, tarragon, bedding geraniums and sage. You can also start seeds for the plants you can put outdoors early such as chives, onions and leeks.

February

- **Prune your trees** Take the opportunity to prune your trees. Be careful with flowering trees and shrubs – you don't want to trim off developing buds. As a rule of thumb, prune flowering trees and shrubs within a month or so after they flower. Difficult removals can be done by professionals using heavy equipment over frozen lawns and soil; February is the time to have your Arborist schedule a hazardous tree assessment for your property.
- **"The February Stomp"** Check your perennials. Temperature extremes of highs and lows tend to create frost heave and some shallow-rooted plants are slightly uprooted. Press them down firmly with your foot; this is something old-timers call the "The February Stomp."

Plant Health Care Contracts

Don't forget to review your 2008 Plant Health Care (PHC) contracts and mail them back to your Almstead Arborist. PHC contracts outline the annual program custom tailored to your landscape. Each program is reviewed by site inspection by your Almstead Arborist to ensure that your landscape receives the best of care. Take advantage of our 6% discount when prepaying for your program.

This newsletter is printed on Mohawk Options paper. It is manufactured with renewable, non-polluting wind-generated electricity and uses 30% post-consumer waste. Mohawk is a signatory to the American Forest & Paper Association's Sustainable Forestry Initiative and has been certified by SmartWood, an affiliate of the environmental group Rainforest Alliance, to manufacture paper in accordance with standards developed by the Forest Stewardship Council. A typical brochure printed on Mohawk recycled paper generates environmental benefits equivalent to:

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Answers from your Almstead arborists

As the days become shorter and the temperatures grow cooler during fall and winter, the green palette of summer will transcend quickly into a vivid palette of reds, oranges, golds and browns. This color change is known as "fall foliage".

When and why does this happen?
As daylight becomes shorter and nights become longer and cooler, biochemical processes take place in the leaf and start to paint the landscape with Natures palette of delectable autumn hues.

Where do these colors come from, and how do they get there?
Three types of pigments are involved in the change of a leaf's colors: Chlorophyll, carotenoids and anthocyanins. Chlorophyll is the enzyme that gives leaves their green color. It is necessary for photosynthesis, which is the process of producing sugars that are used during the dormant winter period as food.

Carotenoids, another enzyme found within a leaf, produces yellow, orange and brown colors. Anthocyanins are water-soluble nutrients that appear in the watery liquid of leaf cells. This nutrient enables the tree to produce colors that vary between red, crimson and mahogany.

As the length of nighttime increases in the autumn, chlorophyll production slows down and then stops. When this happens, the chlorophyll is destroyed and the carotenoids and anthocyanins that are present in the leaf are exposed and show their true colors.

Are certain colors characteristic of certain species?
Yes. Oaks characteristically turn shades of red, brown or russet. Hickories turn golden bronze; aspen and yellow-poplar turn golden yellow; dogwood, purplish red; beech, light-tan; and maples differ from species to species. The timing of the color change also varies by species.

What happens to the leaves once they change color and fall?
Fallen leaves and needles can be raked up and distributed as an organic food or mulch under other trees or as a compost through homemade compost bins. Tree leaves and needles decompose and will restock the soil with nutrients. These fallen leaves and needles make up part of the forest floor that absorbs and holds rainfall, and they also serve as a food for numerous soil organisms. For information on home composting, visit cwmi.css.cornell.edu/compostbrochure.pdf.

Arbor Notes

Fall/Winter 2007-2008

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Branch Highlights

Stamford, Conn.

Almstead's Stamford branch has once again been awarded the contract for the City of Norwalk tree-maintenance and tree-planting programs. Tree maintenance involves the pruning of city trees and the removal of hazardous trees. The tree-planting program is a city-wide effort to replenish trees along the city streets. Homeowners agree to maintain newly planted trees that are put on their property according to city guidelines. In exchange, they get a free tree of their choice.

Also in Stamford, branch manager and arborist Bob Bociek gave a series of Air Spading demonstrations at a Connecticut Tree Protective Association workshop in September. See our article in this newsletter on girdling roots to learn about Air Spading.

An Almstead crew member exposes the root flare of a tree using an Air Spade

North Haledon, N.J.

Almstead's New Jersey branch is moving toward an organic method for lawn care. As a result of construction and other human factors, many properties have lost the nutrient-producing microorganisms that live naturally in untouched forest soils. Traditional lawn care involves feeding grass these missing nutrients. The purpose of organic care, on the other hand, is to reestablish a natural, nutritious soil. This approach is effective, and it's healthier for properties as a whole. We will still be offering traditional lawn care services but are confident in recommending organic care as the best long-term solution. We have made large investments in the technology and personnel necessary for this service, and we look forward to seeing it through to fruition in the coming year.

Hawthorne, N.Y.

In Hawthorne, Almstead has begun work under our newly awarded tree-care contract for the town of New Castle. We are working with the town arborist David Rambo, recently certified by the International Society of Arboriculture, who is charged with the care of the town's trees. It's great to work with a like-minded certified arborist who takes the big picture into account when looking at problem trees and makes informed decisions as to whether to remove them or not.We recently worked on town land abutting a property that is being donated to the state by a local resident as part of this project. We are also planning to help with the Saw Mill River Coalition again in the fall.

New Rochelle, N.Y.

The New Rochelle branch has just taken on Saint John's University in the borough of Queens as a client. We have an initial care program in place for the campus that focuses on hazardous tree assessment, tree maintenance, and correcting problems such as soil compaction due to recent construction activities. We also have long-term plans for the property that use custom-blended fertilization and soil-care treatments.

Also, work has been extended for the New Rochelle branch on a tree-renewal project for the National Park Service at Governor's Island, a secluded park located just off the tip of Manhattan. This phase of work includes fitting trees with identification tags and taking an inventory of the trees on the island, including their GPS locations. In September, we focused our work on Fort Jay, which is listed on the National Register of Historic Places.

View of Manhattan from Fort Jay on Governors Island

Recommended Reading from Almstead Arborist Bob Bociek!

"An educated consumer is your best customer." OK, it's borrowed from a local clothier (Sy Sims) who's batted around the phrase for a few decades, but it rings true, especially in the science of caring for trees. Many practices like painting tree wounds and filling cavities with, concrete were accepted 50 years ago and have since proven to be detrimental to a tree's health or, in the least a waste of time and money.

This is one of several very accessible books written by Dr. Alex Shigo, the "Father of modern arboriculture"

Where can the consumer turn to become more informed about tree care and modern practices? The internet is a great resource, especially those sites maintained by universities that have dedicated horticultural departments. If you prefer the feel of a good book between your hands we'd like to suggest a few that grace our shelves.

A legend in our field who sadly passed away several months ago is Dr. Alex Shigo. Dr. Shigo probably did more to change the way we look at trees than anyone in the practice of modern arboriculture. He left behind a legacy of written works and technical papers, most noteworthy; *Tree Basics*, *100 Tree Myths*, *Tree Pithy Points* and if you're feeling the need to really get inside a tree, *A New Tree Biology* and its companion, *The New Tree Biology Dictionary*. During his years with New Hampshire Forestry Service and as an independent researcher and teacher, Dr. Shigo dissected some 15,000 trees to see what really makes them tick. He challenged those of us in the industry to "touch trees"; you'll see them differently after reading his work.

On the lighter side and often taking sides against some of his colleague's opinions is Claus Mattheck. Claus and his cartoon companion, Stupsi, take the reader through the biology of trees in *Stupsi Explains the Tree*. It's been called the kids book for adults. While on the subject of kids, *The Talking Tree* by *Al Cherry* is a great way for young people to gain a new appreciation for that living thing in the yard that their swing is tied to.

Claus Mattheck's character Stupsi guides readers through tree biology

John Farrar's *Trees of North America & Canada* is a picture-filled reference great for learning to identify the trees that surround us. *Evaluating Tree Defects* by Ed Hayes will help you better understand the warning signs that can turn a living wonder into a potential hazard. *Arboriculture and the Law*, published by the International Society of Aboriculture, presents a case-law reference to landowner's responsibilities and recourse in matters involving property damage, malpractice and tree-related legal issues.

There are hundreds of other titles, but these represent a great cross-section for anyone wishing to become more informed about how trees grow, how to keep them healthy and how to be an educated user of tree-care services. Enjoy.

et ter from the C

Welcome to the fall/winter edition of Arbor Notes! hoe that you are continuing to enoy the seasonal information and eert advice resented in our new format by the team of Arborists here at Almstead

n an effort to continuously rovide environmentally- conscious roducts and services would like to share with you an eciting new roect being led by our founder Richard Almstead

n Columbia County New ork we recently constructed a 0000-suare-foot building dedicated to roducing 00 ercent natural-aged mulch nlike many manufacturers who use wood allets and construction demolition debris Almstead mulch is made from native and local hardwoods We have also eanded our firewood-rocessing facility at this new location to rovide you with uality seasoned wood on a timely basis With the rice of home heating oil and natural gas constantly rising we hoe to eventually elore the ossibility of roducing wood-burning ellets which we intend to use to heat this building

As always should you have any recommendations or suggestions for future *Arbor Notes* ublications or any area of service we rovide lease contact me directly at kalmsteadalmsteadcom

hoe that you enoy this edition of *Arbor Notes* From all of us at Almstead we wish you and your family a hay and healthy ucoming holiday season

incerely

en Almstead
A Certified Arborist

Have you considered?

Japanese Stewartia in the fall

Winter is the erfect time to sit down and ma out new additions to your landscae heres a lot to consider when icking out a new tree Heres one secimen to consider

Latin name: *Stewartia pseudocamellia*

Common name: *Japanese Stewartia*

Sun and water requirements: Partial to full sunlight mo derate climate

Tree Type: Deciduous loses its leaves his tree is hardy in the northeast ones -7 and grows from a multi-stemmed base

pected rowth: to 0 feet he *tewartia pseudocamellia* is a small to medium yramidal shaed tree in the wild this tree can reach heights u to 0 feet tall

Flowers: ronounced saucer-shaed flowers white in color with white filaments and orange anthers bloom in the early summer

Foliage: eaves are dark-green in the summer and turn from orange to red in the fall

Bark: his tree has beautiful bark that develos a sinuous muscled character that efoliates fragments he bark fragments range in color from tan to taue to beige to white see inset

Fruit: mall green fruits that range in shae from round to oval and grow between one and three inches in lengthare roduced on this tree in the early summer he fruit of this tree does not attract wildlife and is not known to cre ate a significant litter roblem

Landscape value: Can be used as either an ornamental or secimen lant t s thought to be resistant to disease and insects

Flower

Nut

Bark

oolly adelgid infestation on an Eastern emlock

Hemlock Woolly Adelgid

f there are astern Hemlocks on your roerty kee an eye on them this winter hey may be hosting woolly adelgidssa-sucking insects that first become visible in the trees around November By striing hemlocks of their stored nutrients infestations of woolly adelgid disfigure trees uickly and if left untreated tyically lead to death within a few seasons

ver the sring and summer hemlock woolly adelgids live close to the bark at the base of the needles and are unnoticeably small hen over the fall and winter they develo out of this nymh stage into mature adults During this transition the insects bundle themselves in white fluffy wa creating the first obvious visual sign of infestation nce a branch is infested these bundles remain visible year-round

he damage caused by a hemlock woolly adelgid infestation is due to the insects using their long mouths to suck a trees stored suly of nutrients located beneath the bark ymtoms include discolored foliage to a light yellow-green and needle loss ltimately an infested Hemlock dies of nutrient loss

Fortunately infestations of hemlock woolly adelgid tend to be highly localied only living on articular branches and are highly treat able ou may elect to treat hemlock woolly adelgid systemically utiliing a trees ci rculatory system by inecting the soil around an infested treewith the control midaclorid most commonly found in the treatment called erit his roduct controls adelgid infestations for at least twelve months and is relatively mild However it can kill the beneficial insects that kee sider mite infestations under control so it may become necessary to treat for mites when using erit

Although multile alications are often nec essary after insection one of thesafest and most effective ways to fight a hemlock woolly adelgid infestation is with horticulturabils or insecticidal soas Both of these treatments are mild and do not disturb beneficial insects living in the trees hey are mild enough to aly yourself but chances are your Hemlocks are tall enough that having a ro fessional from Almstead erform the alication would be a better choice

Dont let woolly adelgid deter you from the astern Hemlock Hemlocks remain valuable to our landscaes in the Northeast as one of the few evergreen trees that can survive in areas that are shady or have artial sun rather than the full sun most evergreens reuire

Antidesiccants

Sure, your evergreens stay beautifully green through the winter. But have you noticed them turning brown come spring? f ten browning and curling of evergreen foliage in the sring is the result of desiccation moisture loss occurring over the winter season

Cold weather means froen ground and that means less moisture making its way to the roots of trees and shrubs At the same time moisture is escaing those trees and shrubs through their foliage via stomata located on the underside of leaves and needles his moisture loss is characteristic yearound but a during the winter there may not be enough water in the soil to relenish whats lost through leaves and b dry winter winds are esecially rone to dehydrate foliage

Deciduous trees know their limits heir wide relatively fragile leaves are a liability they art with as cold and windy weather aroaches vergreens on the other hand meet winter with different defenses a ny have thin needled foliage that cuts down on wind-breaking surface area Another freuent characteristic of evergreen foliage is a moisture-retaining wa-like outside coat

What s the solution?

ometimes an evergreens natural defenses aren enough esecially in the contet of the urban landscae where trees and shrubs are often overeosed to wind and sunlight o revent winter drying we recommend the alication of an antidesiccant a mild substance that forms a thin transarent film on and under leaf surfaces mimicking one of the trees natural defenses his film acts as a moisture barrier dramatically slowing the outward movement of water from a trees foliage Additionally antidesiccants hel minimie sunscald which is a condition resulting from white surfaces ie anything covered in snow reflecting sunlight onto and ultimately burning the foliage of a tree

f there are evergreen trees and shrubs on your roerty have them assessed for an antidesiccant treatment as soon as ossible he alications wear off naturally and in some cases such as with arborvitae should actually be alied twice once in the late fall and again in late winter to roerly ensure against damage t her common trees and shrubs suscetible to desiccation in our area include hemlocks ines sruces rhododendrons aleas ieris laurel and holly

Effects of winterburn on a hododendron

An arborist might rescribe more etreme reventative measures for winter drying and sunscald such as wraing articularly suscetible trees and shrubs in burla for the winter season Watering ractices are also imortant in staving off winter drying horoughly soak suscetible evergreens in late fall and water them during the winter if there is a warm eriod or an etended dry sell

irdling Roots

ne of the most ervasive roblems we encounter as arborists is that of girdling roots ne arborist insected 0000 trees on a horse farm and found only two *without* girdling roots According to another arborists insection of a rivate school camus over 7 ercent of more than 00 trees including many eensive feature secimens ehibited the condition t can also be a very ha ardous roblem ultimately compromising the structural integrity of many trees et another study found that out of 87 eamined trees that fell during a hur ricane in North Carolina turned out to have girdling roots

o what *is* this ervasive haardous roblem eactly? A girdling root is one that circles around the trunk of a tree rather than growing out away from it he structural damage is twofold very root that grows around a trees trunk is one fewer root that offers the tree lateral suort additionally as girdling roots growthey ress against the trees trunk cutting off circulation like a self-imosed tourniuet

But in reality girdling roots arent self-imosed at all hey are wholly a result of human involvement and only aear in the urban forest sually a girdling root roblem is established while a tree is being lanted - and it gets rogressively harder to correct from then on n nurseries trees begin their lives in small ots with little room for their roots to sread outward so they begin to circle By the time salings are ready to lant they often have many umbled circling roots t is imortant to rune and rearrange these roots as art of the lanting rocess otherwise a girdling attern is established irdling roots also aear when the natural growth attern of a trees root flare is obstructed Just like in the small nursery ots if a tree root hits a barrier such as a sidewalk curb it will alter its course and otentially circle back around the tree trunk

ne more maor cause of girdling roots is the absence of a root flare he root flare is where a tree trunk transitions into its roots and should be located ust above ground level However trees are often lanted inaroriately dee burying their root flares in soil or ecessive volcano-shaed iles of mulch Roots then have the oortunity to grow u around the buried base of the trunk invisible to observers above ground

For a long time the roblem of defective root systems was a great source of aggra vation to arborists because accessing them was so laborious he cost of hysically digging to eose buried roots was high for tree-care comanies and clients alike and that was ust for a diagnosis But thanks to a new technology we are now able to access root systems much more easily

he industrys tool of choice for accessing root systems and the one we use at Almstead is the Air ade Remember the arborist who insected the roots of 0000 trees on a horse farm? his is how he did it An Air ade uses com ressed air to break u and remove soil t works much more uickly than conventional digging and it eliminates the danger of damaging tree roots or utility lines Accessing root systems with an Air ade is called root collar ecavation RC and can be erformed for a number of reasons ie to check for root rot or break u smothering comacted soil n the case of girdling roots RC makes it ossible to assess roots and eliminate them when its necessary and when its safe to do so evering girdling roots is often essential to saving a tree but there are concerns an arborist needs to consider such as the trees structural integrity and the likelihood it will survive the rocedure

Aftercare for trees where girdling roots have been removed is very imortant At Almstead we often recommend rograms that monitor a trees health and soil-care roerties such as levels of biostimulants and the beneficial fungi mycorriae on a regular basis Proer watering is also essential And the net time you lant trees consult with a rofessional first to avoid the roblem altogether

Exposed root flare of a tree exhibiting girdling roots

Severing girdling roots takes constriction off of the tree trunk

nsections of the rivate school camus and of the hurricane damage were conducted by uy eil leur and referenced in his article Root Pruning evering ubterranean tranglers in *Tree Care Industry Magazine* he horse farm insection was conducted by Dave eonar d and referenced in the same article

Volcano u lching

Have you seen this phenomenon in the landscape?

We see it far more often than wed like n the tree care business it known as Volcano u lch nclear of where when or why it began homeowners and rofessionals alike continue the ractice believing that it is good tree care ts been said if a thousand eole have a bad idea its still a bad idea n behalf of the trees its a bad idea

A few reasons why

When the trunk of a tree is buried over its root-flare the buttress-like sread where the trunk meets the ground the living layer beneath the bark remains constantly moist n time tissues begin to decay and before long the connection between roots and trunk is comromised or lost altogether What goes u cannot come down and vice versa he tree loses its ability to carry on normal function branch loss and tree failure are soon to followa ny secies send out a secondary root system into the mulch layermuch like a cutting from a house lant does when set in a glass of water he main root system begins to die and this second set of roots has little ability to sustain the trees reuirements for utake or suort Again they slowly dieback from to down or tole altogether during eriods of severe weather he condition is also favorable for the formation of girdling roots which wra around the trunk and shut down the flow of vital fluids n each case long-term results are the same imroer or stunted develoment loss of aesthetic value and ultimate failure and removal

Remediation is key to long-term survival he mulch volcano needs to be removed from the base of the tree f an ecessive amount of roots have found their way into the mound then remove it in stages over a few months to avoid shocking the tree he susended roots between the eosed trunk and root flare are then severed back to the trunk with a small saw or runing shear n ce mulch and ecess soil have been removed to grade level a fresh layer of mulch can be laced back over the lanting area a intain a one- to one-and-one-half-inch deth of mulch and leave a small ring around the trunk mulch free to avoid reeating of the roblem Wells that may have been built to hold water around newly lanted trees should also be removed at this time

Removing mulch that has iled u over several seasons may reuire the use of secialied euiment to safely comlete the oeration We use a tool called an Air ade to erform such tasks he ade uses comressed air forced through a neumatic gun in lieu of shar imlements like icks and shovels ts imortant to avoid trunk inuries that will further stress an already weakened tree At this stage its time to eamine the base of the tree to see if it was lanted at the correct deth Also check to see that all twine and balling materials were roerly removed ncorrect lanting deth ecessive mulching and synthetic materials left at the trunk base are common causes of failure during the trees formative years

f you susect any of these conditions eists in your landscae and the methods of correcting the roblem are unclear contact your arborist for some advice When faced with reservation versus relacement the former is often more economically and environmentally ractical