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Weeping Varieties

Caragana arborescens 'Pendula' (Weeping Siberian Peashrub)
 Caragana arborescens 'Walkerii' (Walkerii Peashrub)
 Cercis canadensis Lavender Twist™ (Lavender Twist™ Redbud)
 Laburnum x watereri 'Pendula' (Weeping Goldenchain)
 Malus Louisa, Molten Lava®, Red Jade, 'Royal Beauty' (Weeping Flowering Crabapples)
 Prunus Snow Fountains®, Double Subhirtella (Weeping Flowering Cherries)
 Robinia hispida x macrophylla, (Flowering Loose Globe Locust)
 Wisteria macrostachys 'Aunt Dee' (Aunt Dee Wisteria)

Varieties run up on their own trunk

Cornus alba 'Argenteo-marginata' (Variegated European Dogwood)
 Cotinus coggygria Golden Spirit®, 'Royal Purple', 'Velvet Cloak', x Grace (Smoketrees)
 Forsythia x intermedia 'Spring Glory' (Spring Glory Forsythia)
 Hydrangea paniculata 'Grandiflora' (Peegee Hydrangea)
 Hydrangea paniculata Tardiva, Unique (Panicule Hydrangeas)
 Physocarpus opulifolius Center Glow®, Diabolo® (Ninebarks)
 Rhamnus frangula 'Asplenifolia' (Fernleaf Buckthorn)
 Ribes sanguineum 'King Edward VII' (Red Flowering Currant)
 Viburnum lantana 'Mohican' (Mohican Viburnum)
 Viburnum opulus 'Sterile' (Common Snowball Tree)

Top Grafted Varieties

Corylus avellana 'Contorta', Fusco-rubra (European Filberts)
 Euonymus alatus 'Compacta' (Dwarf Winged Burning Bush)
 Hamamelis x intermedia 'Arnold Promise', 'Diane', 'Jelena' (Witchhazel)
 Malus Cinderella®, Coralburst®, Firebird®, Lancelot®, Lollipop™, Royal Gem™, Sargent Tina (Flowering Crabapples)
 Prunus incisa Little Twist® (Flowering Cherry)
 Prunus x cistena (Cherry Plum or Myrobalan Plum)
 Robinia pseudoacacia Twisty Baby® (Black or Common Locust)
 Salix caprea 'Pendula' (Weeping Pussy Willow)
 Salix x integra 'Hakuro Nishiki' (Dappled Willow)
 Syringa Tinkerbelle® (Bailbelle)
 Syringa laciniata, Cutleaf Lilac
 Syringa meyeri 'Palibin' (Dwarf Korean Lilac)
 Syringa patula 'Miss Kim' (Miss Kim Lilac)

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MALUS 'FRIDLUND' ROYAL GEM™

Royal Gem™ (Malus 'Fridlund') is a unique flowering crabapple that was discovered and developed by Dr. Paul R. Fridlund, a Plant Pathologist at the University of Washington, Prosser. Carlton Plants began testing the plant in 1989 and trademarked the name in 1996.

This genetic dwarf has drawn comparisons to Coralburst® (Malus 'Coral') and Midget (Malus x micromalus) with its compact, densely rounded form and matures, slowly to moderately, at around eight to ten feet in height and width. In addition to its diminutive stature, many characteristics make it an outstanding prize in containers, patios, small spaces and garden centers:

- Good to excellent disease resistance
- Zone 3 hardiness
- Crimson-red new growth maturing to dark green
- Single red-rose flowers the size of a nickel
- Dark red fruits
- Yellow fall color

Plantline



August 2010

A Newsletter from Carlton Plants LLC

Small Ornamental & Flowering Trees for the Yard and Patio

- by Joe Dixon

Over the years there has been a trend toward developing residential properties with smaller and more compact yards. As such, the demand for small, colorful and unique trees is on the rise. Finding and developing new and unusual varieties has always been a fun and challenging horticultural endeavor at Carlton. Most conventional seedling or budded trees are generally much larger and are great for the macro landscape. To come up with smaller trees for the micro landscape, we have found ways to turn flowering shrubs into small trees by top grafting onto a short tree standard or by selecting a single shrub shoot and training it up into a small tree. Some dwarf trees, such as with flowering crabs, are easier to develop into a small tree by top grafting onto a short tree standard. Many smaller size pendulous varieties also work better when top grafted.

Many of these small trees are very suitable to plant into a large decorative pot for gracing the deck or patio. Later on, after they have gained size, they can then be transplanted into the landscape. These small trees can also be utilized in a rock garden setting and alongside water features without over dominating the landscape. Having a small flowering tree such as 'Little Twist'® cherry in a designer pot or rising above a flower bed or landscaped lawn mound can be very striking while fitting very nicely into a very compact space.

The list included with this article has been broken down into top grafted varieties, those grown on their own trunk, and weeping varieties. Detailed descriptions

can be found in our latest catalog. The maximum mature size of this list is in the fifteen foot range. By pruning, these trees can be easily maintained and confined to a much smaller size. They can also be maintained in a pot for a much longer period of time by practicing annual dormant season root pruning.

There are several forms available from vase shaped to pendulous. Many have year round interest that includes undulating branches, exfoliating bark, dazzling flower display, eye catching foliage, brilliant fall



Top grafted 'Firebird'® Flowering Crabs on display at Fortuna Feed and Farm Supply in Fortuna, California.

colors, and ornamental fruit. For marketing purposes, grouping and displaying these small trees together in a collection would add interest, focus attention, and increase potential sales in the garden center. In these times when homeowners are not moving as frequently as in past recent years, small, colorful ornamental trees provide them with a longer term range of possible ways with which to add beauty and enrich their landscape in smaller spaces than ever before.

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Hope is nurtured every time a pruned-back bush sends forth invigorated shoots, every time a languishing bush flourishes in a new location, every time a self-seeded volunteer crops up in a new location as a lovely surprise... "Everything I know I Learned in My Garden"
 - by Emile Barnes

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August Open House

Please mark your calendars for our August 25 open house. Tours will be happening all day, and a delicious Indian style salmon and barbecued chicken dinner with all the trimmings will be served starting at 5:30 p.m. Sit back, enjoy live music and visit with your nursery industry friends. Leave your business card or name and nursery in one of the raffle boxes for a chance to win some prizes. New this year at 7:00 p.m. will be a presentation at the propagation pond explaining the benefits of floating islands. It's all happening again this year at our Propagation Facility and we hope to see you!

photo property of Mike Sullivan

Conservation Corner

Taking a Lesson from Nature

- by Allan Elliott

The complexity of nature is incredible and is expressed in so many marvelous ways. As human beings, we have the opportunity and capability to utilize natural systems to better ourselves and our environment. It is often simply a matter of observing and evaluating our surroundings to understand how we can improve our lives by incorporating natural processes into our lives and businesses.

One such area is that of water management as it relates to water quality. Many nurseries maintain ponds and reservoirs in their operations. Many times they are man-made and void of vegetation. With recycling of runoff, these areas can become concentrated with nutrients and chemical residues or simply become mossy.



In nature aquatic, bog, and stream bank plants utilize their roots' systems and foliage to mine nutrients from the water to produce plant mass. At the same time they are filtering particulate and chemicals and cleansing the water. These complex eco systems can also function as a simple man-made artificial wetland just as well. The extended benefit being an enhanced habitat for aquatics and wildlife.

Carlton Plants has recently embarked upon a project to utilize floating vegetative wetlands to cleanse or "polish" the water within our irrigation ponds. First observed in Europe some years ago, we have trialed various forms, sizes, materials

and plants for floating wetlands at Carlton in 2009. The results were encouraging and conversation with our local soil and water conservation district manager, Tim Stieber, lead to a longer project for 2010.

The project consists of using 4X9 ft. by four inch thick foam boards. Using a modified hole saw and drill, we punched forty four 2-3/4" diameter holes per board. One gallon containers poured with concrete attached to 3/8" nylon rope functioned as anchors. An assortment of aquatic plants, shrubs, and sunflowers were grown in slotted pots 2-3/4" diameter x 4-3/4" deep in a light soil mix.

At planting time the plants and pots were simply dropped into the holes in the foam boards. Three planted islands were positioned side by side and secured at the corners at each end with recycled drip irrigation tape and staples. A firm shove and the vegetative wetlands floated into the pond. The islands were later positioned and anchored in place using a small boat. In all, eight 9 ft. x 12 ft. vegetative wetlands now float across about 2 acres of pond surface.



Carlton Plants is working with the Yamhill County Soil & Water Conservation District to sample and analyze the water throughout the season.

What we hope to accomplish:

- Evaluate the growth of various types of plants for both top and root growth to determine the best plants for the job.
- To shade the water and keep it cool with 864 square feet of surface area provided by the eight floating wetlands.
- Use the large root surface to mine any available nitrogen and phosphorus from the water.
- To filter and absorb any chemical residues and mitigate their exposure to fish and wildlife.
- Add habitat and beauty to the pond-scape.
- Eventually recycle the biomass of plants into our composting program and captured nutrients.
- Develop an inexpensive and simple system that the soil and water district can recommend to area landowners with small ponds.
- Understand how we can refine the process and expand it to additional ponds next year.
- Develop a natural systems approach to improving water quality on and around the nursery.

The overall process has gone much better than anticipated. It is still a trial and we expect some setbacks in the process. However, we are encouraged and excited about learning and improving to the point where vegetative floating wetlands are standard operating procedure on an annual basis at Carlton Plants.

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Processing station



On a spring visit to a customer, I was fortunate to become a crew member for a few hours. I joined the production crew of Millican Nurseries, Inc. located in Chichester, New Hampshire. The task that was set before me was to help with the harvesting of some small deciduous shrub material. This nursery strives for efficiency in all of its practices. I was not surprised to learn how they have maximized the efficiency of the small crews and the equipment available to them. In the past, the root ball was dug by hand. Hand dug root balls were processed on the



Processing Field Produced Shrubs Efficiently

- by Will Steller

ground, with a sisal rope tying. Millican's crews use a small mechanical spade to dig their root balls. They have modified their processing technique in order to help with the laborious task of processing machine dug root balls. Following is a description of how this process has been changed.

Millican Nurseries has produced custom processing stations. It is a small wheel and rim that is mounted on an axle which includes the wheel bearing.

- The concave shape of the rim acts as a great way to hold and shape the root ball.
- The wheel on an axle gives the processors the ability to turn the plant if necessary.
- The plant is dug and brought to a station that is easily moved.
- The crew has a wire mesh basket and burlap square on the station ready to receive the freshly dug shrub.

- The machine operator places the shrub on the burlap which is on the stand at waist height.
- The machine operator is off to collect another shrub.

While the machine operator is off collecting another shrub, the crew is tying the burlap around the shrub and tightening the wire mesh basket. This is done by pulling up on draw wire on the top of the basket. Three or so twists on the top of the wire mesh secures it. A "pigtail" crimping tool is then used to tighten up any loose areas of the mesh basket.

Special metal framed pallets built by the nursery are kept close to this process so the crew can lift the shrub (at waist height) and place the finished shrub on the pallet. It is now ready for display or shipping.

From start to finish, the process can take less than a few minutes per shrub. Travel time and the machine operator's ability direct the pace for the day.

This process helps crews with uniformity, speed and saves the back breaking labor of bending over to process small shrubs.



There will be a vegetative floating wetlands presentation at our Farwest Show Open House on August 25, 2010. Please join us to view the progress and participate in the discussion.

Plant Materials Used

Common Name

Cattail
Soft rush
Iris
Arrow arum
Small bulrush
Water parsley
Monkey flower
Sedge
Pickeral rush
Red Twig Dogwood
Dwarf Blue Arctic Willow
Dappled willow
Sunflowers
Spiraea

Botanical Name

Typha latifolia
Juncus effusus
Iris ensata
Peltandra virginica
Scirpus microcarpus
Oenanthe sarmentosa
Mimulus: guttatus & cardinalis
Carex aquatilis
Pontederia cordata
Cornus sericea
Salix purpurea nana
Salix x integra Hakura Nishiki
Helianthus - variety of sizes and colors
Spiraea billardii