Callery Pear - *Pyrus calleryana*

Native to southeast Asia, including parts of China, Japan, Korea, Taiwan and Vietnam. *Pyrus* is Latin for pear, *Calleryana* honors Joseph M.M. Callery, a missionary in China and a botanical collector. He brought 2,000 plants to the Paris Museum of History. There are many cultivars, and this is one commonly known as the Bradford pear.

In the 1950s and 1960s, the Bradford Pear cultivar of the Callery became very popular. Resistant to fire blight, tolerant of drought, heat, pollution and poor soil, who wouldn't like that? The Bradford cultivars were quickly planted in residential areas, commercial sites, school grounds and malls. The flowering trees were a welcome sign of spring, and the dense branches, deciduous leaves and pyramidal shape created beautiful images, especially with their numerous white flowers.

Everything was too good to be true. The original trees were assumed to be sterile and therefore would not pollinate. The same for the Bradford cultivar. However, they did cross-pollinate with the original species and produced nutritious fruit for birds and other small animals. We also discovered however the flowers give off an unpleasant odor, and the tree is weakly structured, with branches and trunks breaking off due to snow or ice accumulation, or even strong winds. You can see on this tree the very acute angles of the branches, and the disorganized manner of its growth. And the tree easily self-propagates, with animals and wind widely distributing seeds in the Eastern woodlands.

The quickly growing Bradford took over thickets of native forest trees such as dogwood, maples, oaks, and redbuds, crowding out the natives. The Callery Pear is now considered an invasive plant. Removing them and planting the native trees we discussed will help control the invaders and reinforce the native biodiversity needed for a healthy environment.

Here alongside the Callery we also see many examples of other invasives, including Japanese and Chinese privet, ligustrum, and others. Keep a watch at your property, and remove them. They usually pull out very easily.

Native Alternatives: Fringe tree, Dogwood, Water oak

Honey Locust - *Gleditsia triacanthos var. inermis*

The Honey Locust's name was derived from the sweet honey like substance found in the pods. The genus, *Gleditsia*, is named for the 18th-century German botanist-Johann Gottlieb Gleditsch. *Tricantho*s is derived from the Greek word *acantha* which means thorn and tri meaning three. *Inermis* is Latin for unarmed.

It is native to central and eastern North America, from North Carolina to Mexico. The honey locust has been cultivated for over 4,000 years and has a long history of use by humans: The Cherokee in Tennessee are thought to have been the first to use the wood to make bows. Native Americans also used the dried pulp from the seed pods as a sweetener and minor food source, and made medicines from various parts of the plant. Today extracts are still used in some medicines for arthritis and cancer.

What's the first thing you notice about this tree? It's condition, and where it's planted. It's clearly stressed, looking into the upper branches, and compared to other very healthy trees across in the other median that have sufficient space to grow. The bark and structure of the tree are quite attractive all year, even with no leaves. This one could use some pruning to help clear out the central branch area, but the real solution would be to break out all this cement and give its root system more access.

The tree can be found in forests, but are more common along roads and fields. The tree spreads rapidly and sprouts pop up in fields. When the fields are mowed, the sprouts increase.

The pods are unique. They're brown, flat and gnarly seeds about 6-7 inches long. The pods are rich in carbohydrates and proteins, and have a very sweet flavor. Deer, rabbits, squirrels, possums and raccoons like to feed on the pods.

If considering the Honey Locust, choose the thornless and podless cultivar. It's an excellent choice for shade around the patio, recreational play area or street tree. Ensure there is adequate room for the roots to spread. The tree's mature size is-30-40 feet tall and 25-40 feet wide. Plant in a sunny location. The tree tolerates a variety of soil conditions and is resistant to

deer, and pollinators are attracted to the flowers. They are easy to transplant and the best time to do this is in the fall.

Native alternatives: Water oak

Fringe Tree - *Chionanthus virginicus* (native)

This native tree can be found in various parts of the southeastern United States. One of the nicknames is the old man's beard due to the showy white fringe flowers. *Chionanthus*' Greek meaning is snow flower and *virginicus* means from Virginia.

Native American tribes used various parts of the tree for medical purposes. Leaves and bark were used for making teas. These were used to treat different diseases including respiratory, liver and general health tonics.

The Fringe Tree can be found in deciduous forests or along riverbanks. The showy flowers attract pollinators such as bees or butterflies, and hosts 8 species of caterpillars. The tree grows in full to part sun and can tolerate drought as well as wet soil, however it's one of the last to leaf out in the spring and it's a slow grower, so take that into account for your landscape plan.

You can see we have several different fringe trees here in the median, and they have different characteristics. This slow-growing tree is tough and easy to maintain. You can allow it to grow as a tree 12-20 feet high or higher, or shape into a smaller single or multi-stem bush. You can see that in one example where it has a single large straight trunk, and then right next to it is one with many smaller stems. This is a good example of why it is sometimes difficult to differentiate between what we call a tree or a bush. Both male and female trees can produce flowers, however the male tends to have the showiest. If pollinated, the female tree produces a cluster of dark blue fruit. Birds enjoy the fruit but they should not be consumed by humans, and as you can see, they can be quite messy if planted near walks or drives. The American Fringe Tree is suitable for use in a wide variety of borders, residential landscapes, parks or gardens. The fringe

trees here in the median get lots of human traffic, don't have a huge amount of soil space to promote growth, and suffer from some indiscriminate pruning, and while they are older trees they still remain small. These two in this median are good examples, and when we walk around the market we'll see others that do not appear as robust.

Weeping Higan Cherry - *Prunus x subhirtella*

Prunus means plum and *subhirtella* means somewhat hairy. Check the bottom of the leaves for the hairiness. Originally from Japan, the Sakura or cherry trees symbolize human life's briefness. Hanamis, or Cherry Blossom brings many families and friends to admire the one-week blooming season of the white and pink flowers. This is one of those trees where the leaves develop after the bloom occurs, rather than first. You are all probably familiar with the famous cherry trees in Washington DC and spring blossoms. This particular weeping tree has been pruned up because of the liriope and hawthorne planted under it. In your landscape plan, be aware of this and decide what visual effect you are looking for.

This hybrid tree is not found in the wild - because of many years of hybridization, they are only found where planted by humans. The Weeping Higan Cherry is considered the oldest hybrid. The visual interests of the Weeping Higan Cherry are the branches drooping to the ground and the mature trunk which displays furred bark with scaly tops. These trees are now primarily grafted, with the grafting about 4-6' above the ground to enhance the weeping characteristic. You can clearly see the graft on this tree, with new weeping branches emerging at the lowest point of the graft.

If you choose this ornamental tree for your landscape, plant in full sun and well-drained soil. Good air circulation around the canopy helps prevent diseases, as it can be prone to pests and infections. Because of it's density and surface area, it can also be prone to wind damage. The blossoms attract butterflies and hummingbirds. The tiny berries are inedible to humans but enjoyed by birds, deer and squirrels.

Native alternatives: Rhododendron various

American Sweetgum - *Liquidambar styraciflua (native)*

The American Sweetgum is a large, deciduous tree native in the U.S. from southeastern Connecticut, New Jersey, and southeastern Pennsylvania, south to Florida and east to eastern Texas. They are most prized for their beautiful fall color in shades of yellow, orange, red and purple.

Growing to 60' to 75' tall (up to 150' in the wild) and 40' to 60' wide, the Sweetgum is considered to have a medium to fast growth rate, sometimes 2' to 3' in a season. It grows best in full sun to part shade (6 or more hours of sun best). It prefers moist, well-drained, slightly acidic, and rich/fertile soils but will easily grow in average, even clay soils. This particular tree appears to be very happy – this area does not drain well and can remain damp for long periods. You can see the slope from the street down toward the hedge which retains lots of water. You can also see the roots; they are shallow and can be impacted by foot traffic or machinery.

The Sweetgum flowers, while insignificant, attract bees and other pollinators, turning into the easily recognized spikey gum balls containing its seeds. The gum balls seem to be the biggest detractor for the tree, along with it being deciduous, creating loads of cleanup for the owner. The luna moth and many other moth species use Sweetgum as a larval host plant.

Sweetgum tolerates some road salt, wet sites, and occasional flooding and makes an excellent shade tree. It is valued for its handsome, high quality, hard wood, often used as a veneer for plywood and for furniture and flooring. The sap (or "gum") is used in perfumes, making medicines and salves to cure a variety of ailments, treat wounds, making adhesives, incense, and chewing gum. The gum balls, while annoying to those wishing to walk barefoot, are slow to break down and are useful for mulch and are often added to the bottom of garden pots to provide drainage and reduce the amount of soil required in the pot.

Loblolly Pine – *Pinus taeda* (native)

The Loblolly is native in 15 southeastern states and can get over 100’ tall. The Loblolly pine got its name from where it prefers to grow; dark moist, loamy soil. This soil looked similar to the dark, mucky gruel that was served to wooden ship sailors, known as loblolly. The young midshipmen onboard were sometimes known as Loblolly boys because they distributed the meal to the crew. It provides cover, nesting and seeds for small mammals and birds, and attracts and host butterflies.

While the pine prefers well-drained conditions, it will tolerate a wide range of soil conditions from dry to poor drainage, and grows quickly, 2 feet per year or more. It’s widely used for lumber, reforesting damaged areas, and repairing those with marginal soil conditions. It’s a great water filter and responds well to better soil conditions.

It’s very similar to the Yellow Slash Pine, and it’s difficult to differentiate between the two. However, the needles and cones help with the identification – the Loblolly has very sharp spines on the cone scales (leaves). The Loblolly will also tend to mature to a tall straight limbless trunk with a somewhat symmetrical crown, while the Slash may be more irregular in its trunk shape and crown.

If you are looking to create a screening effect you might be happy while the tree is growing, but at maturity you might lose it all as the tree self-prunes and takes on its mature shape. The root system tends to be concentrated near the surface, and will extend beyond the lateral limits of the crown, so be cautious planting near hardscape. If you walk over to the pine you will see the large roots emerging from the ground. These have been damaged by lawn mowers and other traffic running over them. Also look down the road and notice the straight line of trees next to the power lines. You’ll see the terrible pruning and subsequent shape of the trees, a result of being too close to power lines. Finally, pine needles and cones are not welcomed by all so be sure you want to make them part of your landscape. If you are seeking environmental benefits, use the National Tree Value Calculator. A

Loblolly is worth about $130/yr, 50% for stormwater mitigation,35% for property value, and CO2 mitigation.

Lily Magnolia or Saucer Magnolia – *Magnolia liliiflora or Magnolia x soulangeana*

These are not native to the USA, but came from China and were hybridized in the 1820s in France. They are deciduous with brilliant early year blooms. Even though a non-native, the *soulangeana* is one of our recommended trees for Hampton Roads.

These magnolias are a showy robust sign of spring. There are two of these trees at the Farmer's Market. They are both planted close to the building, but this one has a good size space with soil/mulch to the drip line. This is a very mature tree, and the size is very manageable. To get the best "show" from these trees, plant them by themselves so nothing distracts from their beauty. Buds start forming in the fall, and it blooms in late winter, before the foliage appears. This is one of the first trees to blossom in Virginia Beach. The Saucer magnolia (*soulangeana*) is a hybrid of the Lily magnolia, and in general the hybrids are preferred for their robustness compared to the species. They are very similar trees with the *soulangeana* being slightly larger than the *liliiflora*, the *liliiflora* leaves tend to a bit rougher in the fall, but otherwise are they difficult to distinguish. The buds are fuzzy and start setting in the fall. In late winter early spring as the weather warms up these buds enlarge, start to open and the various colors appear. Within a couple of weeks they fully open to large blossoms that are two to three inches wide. Blossoms are a vibrant mixture of white, pink and purple. A few more blossoms will appear throughout the growing season.

Birds love this tree because of the way the branches intermingle, a perfect place for nesting. They start building their nests before the leaves appear. By the time they lay their eggs, the leaves hide the nests from predators.
This magnolia can be pruned to be shaped like a single trunk tree,

multi-trunk or a bush. After they are established they do not require much care, however you can see this tree, as with others you've seen, could benefit from some judicious pruning.

Native alternatives: Stewartia var

Black Gum - *Nyssa sylvatica* (native)

Nyssa refers to the mythological water nymph as the tree grows along streams, swampy areas and hillsides. The native tree is known as the black gum or black tupelo, and also as the sour gum.

Black gum is found throughout Virginia and can live in a wide range of conditions from very wet to relatively dry. Don't confuse it with the water tupelo, the *Nyssa aquatica*, which is found in a very limited area of the state, usually in very wet conditions. The Black gum is very tolerant of clay soils but is not very tolerant of alkaline soils. The tree is slow growing, increasing in size by about a foot a year. The trunk of a mature tree is attractive with deeply ridged bark that becomes more interesting with age. Cavities in the bark provide shelter for frogs, bats, lizards, and insects. Black gums live a long time and once they die cavities inside the tree serve as homes to wildlife. Seedlings and saplings are a preferred food source for deer, so they will need protection in an area with a large deer population. As the trees mature they become less attractive to deer.

The tree flowers in April to May. Small, greenish-white flowers grow in clusters on long stalks. They are an important source of nectar for pollinators and in particular bees. Considered "honey trees", they are highly attractive to honey bees and produce large quantities of nectar that can be harvested in sufficient quantities to make honey. Advertisements for tupelo honey suggest that it has a unique flavor, light color, and smooth consistency.

The tree is of medium size, growing to a mature height of 50 feet and has an attractive pyramidal shape that spreads with maturity into a nicely proportioned shade tree. The tree has a single straight trunk with branches

growing out at right angles making it a good option as a single specimen tree. They are a good selection for planting beds because you can plant shade-loving plants underneath the tree's long branches. Largely free of serious diseases and pests, the tupelo may be affected by black leaf spot, rust, cankers, leaf miners, borers, and scale. The tree is generally low maintenance and does not require extensive pruning other than removing dead or dying branches or crossing branches. It is resistant to splitting which made the wood ideal for tool handles, farm equipment and railroad ties.

Crepe Myrtle - *Lagerstroemia indica*

Though Crepe Myrtles are not native, having arrived from Asia, they have a place in the gardens of Hampton Roads. Excellent native tree choices that offer color and similar size include our Dogwood, Redbud and Fringe trees.

Fred Heutte, born in 1899, moved to the United States, eventually located in Norfolk, and crossed paths with then-city manager Thomas L. Thompson in 1936. The city received a grant to establish the Norfolk Botanical Garden in 1938, and Fred was appointed as Norfolk's first Director of Parks and Forestry, a position he kept for 30 years. Heutte had a vision for Norfolk, and he started on Ballentine Boulevard – Fred went door-to-door encouraging neighbors to join his efforts in planting crepe myrtles. Soon, many other streets followed, and today throughout Hampton Roads you can see the thousands of trees that are a direct result of Ballentine's efforts. The trees also became widely popular, as you know traveling around the east coast, they are everywhere.

There are many reasons Crepe Myrtles are so popular in our Hampton Roads region and many reasons you may wish to consider this medium-sized tree in your landscape plan. They love sun, humidity, heat—everything we have in Hampton Roads in the summertime! Once established, they are also very drought tolerant and take little care. They provide beauty and interest all year long. Crepe Myrtles are often referred

to as the ‘Tree of 100 days’ because many of the species’ bloom from late-June through the month of September. They offer a variety of colors -- pinks, reds, fuchsia, purple, lavender and white so are a good specimen tree for a planned color-scheme garden. The white Natchez variety grows the largest, between 20-30 feet. They all provide nice fall color as their leaves are some of the first to turn from yellows to oranges and reds. One of the most unique characteristics of the Crepe Myrtle is the grey or light brown exfoliating bark that provides winter interest as well. Crepe Myrtles do provide wildlife value, attracting bees and other pollinators as well as cardinals, finches, juncos and sparrows.
It is especially important to consider the site when choosing to plant Crepe Myrtles because the blossoms drop and can stain hard surfaces like sidewalks and automobiles. Avoid planting too close to pools because of the blossom, leaf and bark litter. Without enough sun (at least 6 hours a day), they are prone to powdery mildew and leaf spot. In recent years they were plagued with Crepe Myrtle Bark Scale which caused blackening bark on the effected trees. The powdery mildew and leaf spot can be treated with broad spectrum fungicides, copper soap or Neem Oil.

A single fully grown tree can absorb thousands of gallons of water per year, helping to improve water quality and alleviate stormwater flooding – something that we’re all too familiar with here. Research even shows that trees and urban nature can measurably reduce stress, improve academic performance, and help to moderate the effects of ADHD. For every $1 spent on urban tree planting and care, the city sees $5.60 in benefits. With an ROI like that, you can’t afford not to plant a tree!

Native alternatives: Fringe tree, Eastern Red Bud

Chaste Tree - *Vitex agnus-castus*

This modest shrub has been enjoyed since the earliest times. During the Stone Age, the Chase tree was used as a spice. In ancient Athens, women took part in the 8-day Thesmophoria festival. They decorated themselves

with flowers and scattered leaves in their beds. Medieval Monks sprinkled monk's pepper on their foods, spread the leaves over their beds and swept the chaff on their floors. This tradition was to help them keep their vow of chastity. It was also valued for its medicinal purposes. In the 1670s the tree was introduced to the United States, possibly in Florida, where the tree can be found from Pensacola to Miami. Now in the northern US, it's considered cultivated; in the southeast exotic; and the southwest invasive!

In our landscape it grows best in loose-well drained soil which can be slightly dry – it is drought tolerant. There are no major pest concerns aside from leaf spot. This fast growing, deciduous shrub (4-10 ft) or small tree (11-20 ft) blooms from July to September. You can train it in either direction by appropriate pruning to help control size and shape. The leaves are commonly compound with 3 to 7 leaflets radiating from the stalk. They have hints of sage and the shrub is an excellent choice to be planted near beehives to promote excellent honey production, and it attracts other pollinators as well. It has the appearance of butterfly bushes, especially the conical flower shape. It has lovely pale violet flowers clustered along oblong spikes from June to September.

This tree is well situated with good soil, mulch, space and sunlight. There are a variety of native alternatives, such as American beauty berry, red choke berry, and viburnums.

Thomas Jefferson planted 9 rows of Chaste trees. Information may be included in his *Weather Memorandum Book*. Today you can find one growing in the east and one in the west lawns of Monticello.

Today, the Chaste still has an important medical use-especially for women. Who knew a tree could have such an interesting past?

Native alternatives: Fringe tree, American Beautyberry

Chinese Lacebark Elm - *Ulmus parvifolia*

The Chinese Lacebark Elm cultivar was introduced in the 1790's. Like many other things in this dynamic period, there was great interest in Asia,

and many products were brought back and introduced to Europe and America, the Chinese Elm being just one. In the 1930's Dutch Elm disease destroyed many Elms in Europe and the US, however, the Chinese Elm proved to be resistant to Dutch Elm Disease and became a popular choice for landscapes.

The scientific name means small leafed elm. The colorful fall leaves and distinctive mottled bark increased the popularity of the tree. The tree provides shelter for birds and food for the Question Mark and Coma butterflies.

If you are considering this tree for your landscape know that it is a medium to fast growing tree- 40-50 feet tall. It is quite popular in urban settings. It tolerates drought and poor soil. Not only is it resistant to Dutch Elm disease, but also the elm leaf beetle and Japanese beetle. The two examples here at the market are quite nice and provide excellent shade for a backyard setting. Their size is very manageable, and they benefit from judicious pruning.

On the negative side, their structure is not robust, and strong winds or the collection of snow/ice can cause limbs to break. If you stake your tree when it is young, this encourages straight growth, but staking should not be left for more than six months or so, or the trunk will not develop the needed strength. Selectively pruning 25% of the branches reduces breakages. These tips help diminish broken branches.

We have two examples planted at the market. It is considered an invasive plant because it self seeds in surrounding landscapes.

Native alternatives: River Birch, Red Maple, Persimmon. Check with the NC State Extension Gardener Plant Toolbox for other alternatives.