

OROC

Open Registration of Cultivars



International Register of Ornamental Plant Cultivars:

Woody Plants A – M

Book II: October 2016

OROC of www.cultivar.org

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We have endeavored to produce as accurate and useful descriptions as possible based on all available information on these new and often very rare cultivars. This registry is never finished so if you know more (and can document it) please contact us at ornamentals@lycos.com with OROC in your subject line. Where no descriptions are placed please rely on the under URL link to view the originator's or a major vendor's description. By current plans, Book V or VI will be an additional woody plant register with new additions, updated data, and other features. Book III will be Genera N to Z.

Your data submissions today will make those free books happen. Thank you in advance.

Before I ramble on...OROC is not pronounced like a popular, light weight, hotel lobby vacuum cleaner but as "Oh-rock" something like the snazzy and garish lime green or orange IROC Chevy Camero you or your dad may have had in high school. If you're a Millennial...Google IROC before your phone catches fire. Hope that helps. We hope to rock.

We wish we could delay publication until every last detail of every cultivar was nailed down, vouchered, taxonomically perfect, sealed in plexiglass domes for all time, DNA fingerprinted, placed in foirty-six reference LEED Gold certified Green collections, and otherwise documented to near perfection. But at some point, you just need to release the data to our highly knowledgeable readership and get feedback, moving on to the next register while hoping to improve this one every single day and week. This is preliminary data and that is what people tell us they want. If this book is too "quick and dirty" for you please write the ISHS and ask if their registrars are doing better with these taxa and when to expect a free woody plant registry with more than 0.1% of all new cultivars.

Kudos cubed to both Marks, Janice, Little Lisa, Max K., and Lloyd for helping beyond measure, fixing my mistakes, and being data magnets and skilled writers. More than 100 people sent data and we thank you for helping nurture and foster this passionate, niche community. That sounds horrible. We just...thank you.

When OROC published Book I we received many favorable comments and we are still delighted by a steady flow of Google Play Books and Cultivar.org downloads on a regular basis. It's still 100% free and always will be as long as I have breath. It turns out Book I was a slightly depressing experience for some folks. "I had no idea..." and "I'm so behind...out of touch" was emailed a time or twenty. One experienced guru used the term "shock and awe". The frightful and yet exciting tsunamic volume of cultivar knowledge today is humbling to everyone unless we're individually spending 500 hours a year seeking it out and devouring it in big bites on a daily basis with near religious furvor. We went from sad to glad, dumb to slightly informed, in the space of weeks. OROC is abstracting stuff...1000 hours a year if required.

Some wise collectors, breeders, plant materials experts, students, designers, directors of this or that, consultants, big growers, plant people of all shapes and sizes, curators, taxonomists, gurus, future gurus, and otherwise well connected plant people did not know about a large percentage of the plants we registered. Neither did I. So maybe this remains a good idea.

If this Book II makes you or me feel more eager to learn and click, empowered, charged up, ready to dig up more of your lawn for planting beds, crazy and insane to acquire some new cool plants, happy about the general state of gardening universe, loving those devoted plant breeders, bringing your students up to pace, and with a vast new knowledge base, we at OROC have done our job. If we went "above and beyond" and we knocked your socks over to the next county, please write. If we didn't - also please write and tell us how to get better.

Better yet...join us. OROC Certified Cultivar Registers must study, read entire volumes and many articles, and pass a rigorous exam regardless of previous formal education and background.

Tell us what you think because we truly care.

- Larry Hatch (ornamentals@lycos.com, 919-900-0553, my only phone and personal cell)
Chief Senior Cultivar Registrar
www.cultivar.org



ABEL001 - Abelia TWIST OF ORANGE™ 'sPg-3-069' (Hawksridge Farms) - 4-5 ft. tall x wide. Leaves margined coral-orange at first, later more gold-margined, chimera 15-30% surface, very bold as such. Flowers near white, floriferous. Developed by the Southern Plant Group or sPg.

ABEL002 - Abelia SUNNY CHARM® 'MINDU01' (Plantarium.nl) - 50-110cm tall x wide, dense, subglobose. Flowers dark cream to light yellow, throat also purplish-pink to pale violet on side, main throat cream with fine golden reticulations, very odd colors for this genus, buds distinctly violet to purple on exterior, calyx more copper to reddish. Selected by Pepinieres Minier, Eur. PBR 35714.

ABEL003 - Abelia x grandiflora LUCKY LOTS (Concept Plants)

ABEL004 - Abelia x grandiflora LADY LIBERTY™ 'Keylib' - habit compact, dense. Flower corolla white tinged pink, calyx pale dusky pink. Leaves red in fall, showy. Cold hardy to -20 deg. C. Eur. PBR to breeder Klemens Keijzers, also spelled Klemens Keyzers Plantipp.eu, accessed 4.25.2015.

ABEL005 - Abelia PINK PONG® 'ABENOV41' - 1.5-2.0m tall x 1.2-1.5m wide. Flowers rich lavender-pink to violet in bud opening to light pink or lavender-pink with darker markings of golden-orange in throat, calyx more light pinkish-orange to purplish-copper, highly floriferous over a long period. Selected by INRA/SAPHINOV, a 2004 cross of *A. schumannii* 'Bumblebee' x *A. grandifolia* 'Semperflorens', sapho.fr, EU PBR pending, accessed 5.31.2015.

ABEL006 - Abelia x grandiflora GOLD TOUCH® 'BMRGOLD' - 60-100cm tall x 60-80cm wide. Twigs orangish to red, showy, contrasting well. Leaves golden-yellow, orange and copper tints in new tips, similar but stronger tones in fall. Flower near white to pale pink. Selected by Andre Briant in cooperation with Pepinieres Minier.

ABEL007 - Abelia x grandiflora MYSTIC DAYDREAM 'Opstal40' USPP# 25193

ABEL008 - Abelia MISS LEMON™ 'Hopley's Lemon Zest' - 3 ft. tall x 4 ft. wide. Flower corolla light pink. Leaves irregularly margined golden-yellow at 5-15% surface, this chimera later more ivory-yellow to cream by the second year. In: Southern Living Plant Collection. Web: http://southernlivingplants.com/images/uploads/fact-sheets/abelia_miss_lemon.pdf, accessed 4.6.2016

ABEL009 - Abelia x grandiflora PINK LADY™ 'KEYLAD' - compact, irregularly spreading to mounded. Leaves broadly margined white at 15-40%, new growth bright pink, very showy as a tricolor.

In, ph: <http://www.sapho.fr/gb/trees-and-shrubs/246-abelia-x-grandiflora-pink-lady-keylad-.html>, accessed 10.13.2016

ABEL010 - Abelia x grandiflora 'KEYFLY' - Pat: Euro PBR CPVO #20122179 to Klemens Keyzers on April 24, 2014.

ABEL011 - Abelia x grandiflora 'KEYCARN' - Pat: Euro PBR CPVO #20150197 to Klemens Keyzers on January 26, 2015

ABIE001 - Abies concolor 'Bugsy Wugsy' (Buchholz Nursery)

ABIE002 - Abies fraseri 'Green Scout' (Brotzman's Nursery) - narrowly columnar

ABIE003 - Abies balsamea 'Sticky Fingers' - compact, dense, columnar from broom, branchlets lon, finger-like, needled light green, shorter, quite resinous. Or: Mike and Cheryl Davison. Offered by www.coniferkingdom.com, accessed 2.16.2016.

ABIE004 - Abies lasiocarpa 'Blue Bear' - compact, slow, 2-4 in. a year growth rate, very rich icy blue, a different shade than the popular 'Glauca Compacta'. In, ph: <http://www.coniferkingdom.com>, accessed 10.12.2016

Editor's Note: A very large number of Abies, Cedrus, Chamaecyparis, Cupressus, and other witches brooms are faithfully and laboriously catalogued in the The Conifer Treasury 8.0 @ <http://www.conifertreasury.org> by Zsolt Mesterhazy, being especially rich in named clones of European introduction. This is a 100% free reference. More than 77 conifer originators and collectors contributed to this superb website, often with original images. Jerry Morris, who is famous in the US for his superb dwarf finds, has a Breeders Hall of Fame "Life Monument" that is quite remarkable and useful. Until such time as these numerous sports and brooms make it to the commercial trade or major collections (and we suspect most will not), we are declining to register them here and now. His reference is superb for those wishing to have knowledge of more than 16,000 cultivars not found in major conifer books and perhaps avoid reusing a name or two.

ACER001 Acer davidii VIPER® (Minier Nurseries) - an interesting bark, mostly pale greenish-white, faint stripes

ACER002 Acer rufinerve GREAT STAR® (Minier Nurseries) - bark bright green, heavily striped white (40% or so). Leaves rich carmine-red to orange shades in fall. In: <http://www.pepinieres-minier.fr/fichePlante.php?codePlante=7983&route=pepiniere-RetDbis-research&lang=gb>

ACER004 - Acer 'Sugarflake' (A. griseum x A. saccharum)

ACER005 - Acer (Rochester Group) 'Shaved Chocolate' (Songsparrow Nursery, a Klehm introduction)

ACER006 -Acer palmatum x pseudosieboldianum ARCTIC JADE (Iseli Nursery, their own hybrid)

ACER007 - Acer palmatum DRAGON TEARS™ - Habit weeping. Leaves very bright red, deeply lobed, not classically incised or dissected. Selected by Ray and Cindy Jackson. HeritageSeedlings.com, accessed April 2014.

ACER008 - Acer 'Ample Surprise' (A. amplum x A. platanoides)

ACER009 - Acer platanoides 'Beskid' (Institute of Pomology and Floriculture, Poland) - fastigate with twisted, curled leaves, something like 'Newton Sentry' and 'Crispum' were crossed. Collectors will adore this. NOTE: this link produces an automatic PDF download which may or may not load onto your screen.

ACER010 - Acer x freemannii SHELINA'S BEAUTY™

ACER011 - Acer campestre JADE PATINA™, photo courtesy of and copyright owned by www.baileynurseries.com, is a distinct improvement on the old, rampant, and ratty species. This one has a clearly incurving habit, erect-globose to ovoid in time, and a wonderful dark incised blade that reminds some of Acer griseum. The fine folks at Bailey's nursery, being in a climate where these super hardy maples are a real necessity, have a long record of improving tough Acer species.

ACER012 - Acer buergerianum 'Angyo Weeping' may prove to be the best weeping maples outside Acer palmatum Dissectum Group. It actually has some grace and is not semi-pendulous like so many so-called weeping, more like slightly cascading, cultivars promoted over the last two centuries. Now that the species has been shown to be surprisingly tough, hardy, and pretty in the North American mainstream landscape, suitable now for even corporate and mall plantings, this type of cultivar might get a shot at fame. Click image please. Image above not part of OROC Data Sharing.

ACER013 - Acer palmatum RED WINE® - Habit erect, strong. Leaves with

new tips very bright red, becoming green suffused and heavily tinged purple to dark red, some even bronzish-green or bronzed red, orange to red shades in fall. It is not "ever-red" in the Bloodgood sense.

ACER014 - Acer NORTHERN GLOW® 'Hasselkus' (A pseudosieboldianum x A. palmatum) - 20 ft. tall x 24 ft. wide, upright-spreading. Cold hardy USDA 4, giving palmatum-like looks a zone better. Leaves green, deeply lobed, coarsely dentate to long-dentate margins, fall color bright orange and coral-red to dark red, very showy. Bred by Dr. Edward Hasselkus, University of Wisconsin, Madison.

ACER015 - Acer URBAN SUNSET™ 'JFS-KW187' (A. truncatum x A. platanoides) - 35 ft. tall x 20 ft. wide, compact, needing little pruning, narrowly pyramidal to upright-ovoid. Leaves dark glossy green, favoring A. truncatum for shape, silhouetted as an almost ratr-like or Liquidambar style look with broadly spaced lobes and deep lobing, fall color a rich, dark red, other times a rich orange to red Rmix. Cold hardy to USDA 4b. Jfschmidt.com, accessed 5.8.2015, their new introduction for 2015.

ACER016 - Acer buergerianum RAISING BLAZE 'EOAB1' - leaves very glossy, dark green, improved orange to red fall colors. Low seed production rate, therefore less chance of invasive behavior as some species seedlings and cultivars exhibit with high samara counts. Proven more heat tolerant in the southern US. Selected by Rusty Allen, Eastside Ornamentals, Athens, Georgia, US c. 2012. Literature: Dirr, M.A. 2012. In praise of noble trees. web article, plantintroductions.com, accessed 5.8.2015

ACER017 - Acer miyabei 'Butterball' - fall color reliably yellow, showy, if given enough sun. See http://www.montgomeryparks.org/activities/things_to_do/fall/documents/shf_presentation.pdf

ACER018 - Acer circinatum THREE CHEERS™ - 10-15 ft. tall x 6-8 ft. wide, twice as tall as wide in some cases, flame-shaped or ovoid, not a weak wild form but having uniform growth, an extract shrub to small tree. Leaves of typical dimensions yet darker green than most. heritageseedlings.com, accessed 5.6.2015, their own selection.

ACER019 - Acer palmatum 'Kinky Krinkle' - 8 ft. tall x 4 ft. wide (10 years), upright. Leaves bright green, lime at first, distinctly and thinly marked dark red to reddish-purple (1-5% surface), margin irregularly serrate to serrulate, crinkled look, 3-5-lobed to 75% deep but marginal crinkling is finer and more shallow, golden fall colors. Selected by Buchholz Nursery, accessed 5.19.2015.

ACER020 - Acer palmatum 'Peve Dave' - leaves very deeply lobed to 90% or more, lobes very narrow elliptic-linear, intermediate between species and Linearilobum Group, favoring the later, dusky pinkish-red, midribs and secondary veins more clearly pink to orangish-pink, later more reddish-purple with maturity, orange or red shades in fall, can very fiery orange in the right conditions.

ACER021 - Acer platanoides 'Nowush' - semi-dwarf, densely compact and subglobose (from witches broom) at first, later more erect, narrowly ovoid to narrowly pyramidal, can be trained more columnar, numerous erect columns of foliage, not an odd bean-pole as some mutants, being well-branched with many laterals, appears to be a viable small tree for many applications in the landscape. Leaves smaller, reduced in all parts, slightly and elegantly curled, very asymmetrical, often more deeply lobed than species (to 50-75% at times), lovely for the semi-incised look with many strong lobe and sub-lobe acuminate to acuminate-cuspidate species, not deformed as some species mutants, terminal lobe usually large and dominating, fall color often a rich, showy gold.

ACER022 - Acer rubrum 'Jinse Qiutian' - leaves 5-lobed, distinctly light golden-brown in fall, photo appears to be more dark golden, 30 days of color. Published in Acta Horticulturae Sinica 42(2): 403-404 (2015)

ACER023 - Acer rubrum 'Yanhong' - leaves 5-lobed, very bright red in late October, best in early November, with 30-35 days of autumnal color. Acta Hort. Sinica 41(6): 1281-1282 (2014)

ACER024 - Acer rubrum 'Jinmai hong' - leaves 5-lobed, light red with golden-brown veins, beginning in October, best in early November, 30-35 days of autumnal color. Acta Hort. Sinica 40(12): 2549-2550 (2013)

ACER025 - Acer campestre STREETSIDE™ 'JFS Schictel2' - 35 ft. tall x 18 ft. wide, "upright sweeping" ovoid, bark exfoliating and showy reddish-brown curls, superior to random seedlings. Leaves dark green in summer, yellow in fall. Japanese beetle resistant. Or, in: www.jfschmidt.com, accessed 6.15.2016,

ACER026 - Acer griseum FIREBURST™ 'JFS KW8AGRI' - 25 ft. tall x 18 ft. wide, upright ovoid, "predictable performance and speedy growth", more uniform, erect, and with

superior branch structure than random seedlings. Leaves dark green, bright red in fall. Or, in: www.jfschmidt.com, accessed 6.15.2016

ACER027 - *Acer palmatum* 'Verkade's Jacus Potus' - Shrubby, heavily branched. Leaves 3-divided, margins crinkled, red new growth. Or: David Verkade. Offered by www.heritageseedlings.com, online Wholesale Catalog 2015-2016 (PDF), accessed 2.16.2016

ACER028 - *Acer negundo* 'Tadevsz Szmanowski' - leaves very deeply incised, typical bright, light green, some lobes cut to the midrib and others to 0.5-1.5cm deep from the midrib. photo: <http://www.drzewa.com.pl/7505/klon-jesionolistny-tadeusz-szymanowski.jpg>

ACER029 - *Acer capillipes* 'Honeydew' - new growth bright reddish-orange to coral-melon tones, youngest tips the most red. Photo: <http://www.esveld.nl/html/diadu/a/acchon.htm>, accessed 5.17.2016

ACER030 - *Acer saccharum* 'Kristins Dissected' - 40 ft. tall x 20 ft. wide. Both narrowly columnar and with incised, dissected blades, yellow or orange shades in fall. Ls: Dawes Arb. 2012.

ACER031 - *Acer palmatum* 'Snow on the Mountain' ('Yuki Yama') - Dwarf, tufted at times, subglobose to densely mounded, very small, leaves narrowly 5-lobed, new growth rich pink with a paler white to green mottled midrib, becoming dark green finely mottled green with occasionally large patches (sometimes entire lobes) in white with sparse green markings, chimera often 90% in new growth and becoming 40-50% later, and very limited in old leaves. The originators compared it to "a variegated extreme dwarf form of 'Mikawa Yatsubusa', having smaller internodes and denser habit over time. Or, in: s3.amazonaws.com/essence-catalog/Essence_Catalog_Spring2016.pdf, accessed 10.7.2016, their own introduction, Two named as used but since 'Snow on the Mountain' appears in single quotations marks we consider that the preferred cultivar name. Being of difficult propagation the first plants are offered at \$200.00 US.

ACER032 - *Acer macrophyllum* 'Santiam Snow' - leaves heavily sectored and mottled cream to light yellow to greenish-yellow, often faintly spotted too, chimera easily 50-80% surface on some blades. In: Heritage Seedlings. Offered by www.coniferkingdom.com, accessed 2.16.2016

ACER033 - *Acer palmatum* 'Hangover' - habit arching, semi-pendulous. Leaves very irregularly, asymmetrically of Dissectum Group, avocado green, undulate. Offered by www.coniferkingdom.com, accessed 2.16.2016, their exclusive introduction.

ACER034 - *Acer grandidentatum* MESA GLOW™ 'JFS-NuMex 3' - 28 ft. tall x 18 ft. wide, erect, ovoid. Leaves glossy, dark green in summer, orangish-red to red in fall. Drought tolerant, adaptable to areas where this species is perhaps superior to eastern species. Ch: USDA 4. Or: Rolston St. Hilaire, New Mexico State University. In, ph: <http://www.jfschmidt.com/introductions/mesaglow/index.html>

ACER035 - *Acer* RUBY SUNSET™ 'JFS-KW249' (*A. truncatum* x *A. platanoides*) - 25 ft. tall x 20 ft. wide, broadly ovoid to globose, USDA 4, leaves dark, glossy green, fall color rich orangish-red to dark red. Combines the best of each parent species. In, or: <http://www.jfschmidt.com/>, accessed 12.26.2016, 2016 intro.

ACER036 - *Acer buergerianum* VALYNOR® 'ABFSS' - 35-40 ft. tall x 20 ft. wide, habit directly more erect, columnar-ovoid, useful in a species which can easily span 50-80 ft. wide with time. Pat: US #19181 to Dwayne Moon

ACER037 - *Acer palmatum* (Dissectum Group) 'Scarlet Princess' ('Ash's Scarlet Princess' www.waysidegardens.com, accessed 10.3.2016) - as group but dwarfer, very small, uniform, and compact, rich red to dark red shades. Or: Thomas and Nancy Ash. Ash's Japanese Maple Nursery, Hampstead, North Carolina, as witches broom from 'Crimson King'. In, ph: <http://www.japanesemaplefarm.com>, accessed 10.4.2016

ACER038 - *Acer palmatum* 'LileeAnne's Jewel' ('Little Ann's Jewel') - leaves deeply and coarsely toothed, asymmetrical, slightly twisted blades, rich cherry red with pink and white stripes and markings throughout to about 15-40% of the surface, more green base color by summer, the chimera turns hot pink in fall. Or: Johnathon Savelich, named for his daughter LileeAnne, thus the popular 'Little Ann's Jewel' being incorrect. In, ph: <https://www.mrmapple.com/Buy-Acer-palmatum-Lileeannes-Jewel-Variiegated-Japanese-Maple.html>, accessed 10.3.2016

ACER039 - *Acer platanoides* 'Emerald Orb' (Waxman's Dwarf") - 10 ft. tall x wide (20-30 years, estimate), habit very dense, globose, perfectly symmetrical, "rounded

framework of tight spaced branched", only 6 inches growth a year at first. Or: Dr. Sidney Waxman, University of Connecticut, and one of his many fine witchesbrooms with high ornamental potential. In, photo: www.brokenarrownursery.com, accessed 10.3.2016, "a fun new selection...we finally decided to name and introduced after numerous favorable comments and more than a decade's worth of trial and evaluation". Ns: the name 'Waxman's Dwarf', very likely the same clone or a similar one has been used by www.davidsansjapanesemaples.com and www.nurseryguide.com, accessed 10.3.2016.

ACER040 - *Acer palmatum* 'Debbies Golden Splendor' - leaves golden-yellow all spring and summer, not fading as older gold-leaved clones. In: www.whistlinggardens.ca, accessed 10.3.2016, as was as lakenursery.com and www.handynursery.com.

ACER041 - *Acer palmatum* 'Clarabell' - leaves with yellow to chartreuse new growth, margined orange or tinged reddish-orange near the margins, primary veins yellow to chartreuse, contrasting well, similar to the popular 'Kadsura' but a smaller blade, mostly green and uniformly so by summer, fall tints in orange to red shades. In, photo: <https://www.mrmmaple.com/Buy-Acer-palmatum-Clarabell-Japanese-Maple.html>, accessed 10.3.2016

ACER042 - *Acer buergerianum* 'Golden Pharoah' - leaves bright yellow at first, slowing becoming reticulated with green major veins and some peach tones, maturing to rich green. In, photo: <https://www.mrmmaple.com/Buy-Acer-buergerianum-Golden-Pharoah-Trident-Maple-Tree.html>, accessed 10.3.2016

ACER043 - *Acer buergerianum* 'Michael Steinhardt' - leaves bright yellow, become rich yellow tinged orange by summer, not green-veined or reticulated as 'Golden Pharoah'. Or, in: Michael Steinhardt from a tree in his garden, introduced by Don Shadow. In, photo: <https://www.mrmmaple.com/Buy-Acer-buergerianum-Michael-Steinhardt-Golden-Trident-Maple.html>, accessed 10.3.2016
Web: <http://nypost.com/2016/06/12/hedgie-wants-nurseryman-to-sell-animals-to-pay-off-debt/>, a curious reference to this cultivar from a major media source.

ACER044 - *Acer palmatum* 'Celebration' - leaves bright metallic purplish-red with dark red veins, brighter than parent 'Purple Ghost', distinct jagged margins of teeth and sharp lobes of variable sizes.. Or: Buchholz Nursery from seedling of 'Purple Ghost' sown in 2007. In, ph: www.buchholznursery.com, accessed 1/1.2016

ACER045 - *Acer palmatum* 'Strawberry Spring' - leaves very pale green, heavily frosted in white and silver, new growth suffused rich red near the margins in particular, leaf shape with irregular, variable jagged teeth and lobes. Or: Buchholz Nursery as seedling of 'Amber Ghost'. photo: florawander.blogspot.com, accessed 10.4.2016

ACER046 - *Acer pseudosieboldianum* NORTHERN SPOTLIGHT 'KorDak' - 20 ft. tall x 15 ft. wide. Leaves green, silky pubescent at first, emerging late to avoid frost, tolerant of wind and heat, bright red in fall, retained into winter in russet brown shades, these retained leaves functioning to prevent sunscald of the bark. Ch: USDA 3 or about -40 deg. F. Or: Greg Morgenson, Bismarck, North Dakota.

ACER047 - *Acer japonicum* 'Kings Cope' - 2m tall x wider, mounded to semi-pendulous, cascading. Leaves deeply incised, bright rich green, petiole reddish and contrasting, orangish-red shades in fall. In, ph: <http://www.esveld.nl/html/daen/a/acjkco.php>, accessed 10.7.2016. hsp: the RHS maintain the Nomenclatural Standard specimen viewable from this location: <http://plants.jstor.org/stable/history/10.5555/al.ap.specimen.wsy0030481>

ACER048 - *Acer palmatum* subsp. *matsumurae* 'Alloys' - 2.5m tall (10 years), classic domed Dissectum Group look. Leaves highly incised, bronze-tinged in new growth, bright green becoming dark by summer, shape as the subspecies but cut similar to f. *dissectum* aka Dissectum Group, fall color in orange shades, petioles often a very dark bronze-red and contrasting well. In, ph: http://www.maillot-erable.com/en/boutique/35_acer-matsumurae/128_alloys, accessed 10.7.2016

ACER049 - *Acer palmatum* f. *dissectum* (Dissectum Group) 'Dark Straw' - classic, semi-dwarf, mounded form of the group, smaller than some of new vigorous material. Leaves very dark and rich red, a very duration, stable, almost blackish-red at times, not a pale red like some other new material, reminding some of a dark red haystack. In, ph: http://www.davidsansjapanesemaples.com/shop/product/dark_straw, accessed 10.7.2016

ACER050 - *Acer palmatum* subsp. *amoenum* 'Jade Gate' - habit smaller than subspecies as typical, a slower seedling. Leaves typical of this subspecies, being one with mostly 7 very wide, even bulbous, star-like lobes, rich green spring and summer color, orange to red fall shades. Or: Nancy Fiers found as a slower seedling, intended for bonsai use but it became a smaller, landscape tree of real merit. Or, In, ph: <https://www.essenceofthetree.com/products/show/153-acer-palmatum-jade-gate>, accessed 10.7.2016, their own introduction

ACER051 - *Acer palmatum* f. *dissectum* (Dissectum Group) FIRE CRACKER® (popularly 'Fire Cracker' or JEWELS® 'Firecracker') - Very vigorous for this group and thus

superior to older selection but still maintaining compactness. leaves much incised as form and group, rich crimson-purple becoming brownish-orange in fall, petioles usually a much bright, bolder red shade (not purple). Said by some experts to be among the most stable dark reddish-purple cultivar of this type. Or, pat: Holland, Euro PBR. In, ph: http://www.maillot-erable.com/en/boutique/37_acer-palmatum/1189_fire-cracker, accessed 10.7.2016

ACER052 - *Acer buergerianum* 'Himcode' - slower than species typical. Leaves copper-colored at first, last glossy, dark green, fall colors of dark red to scarlet. In, ph: <http://www.baumschule-wilken.com/pflanzen/laubholz/acer/buergerianum/himcode/acer-buergerianum-himcode.html>, accessed 10.11.2016

ACER053 - *Acer griseum* 'Golden Lucky' - leaves heavily mottled golden-yellow, some leaflets all this color, chimera 30-80% of the surface. Or: W.J. Van Ooi, Boskoop, The Netherlands.

In, ph: <http://www.plantmar.pl/oferta,10,1,1,44.html>, accessed 10.11.2016. Best image at: http://www.plantmar.pl/galeria/pro/min/20132702075919acer_griseum_Golden_Lucky_005.jpg

ACER054 - *Acer palmatum* 'Going Green' - strong, vigorous, robust young plants, twigs green in winter, showy in contrast to other colors such as the gold, reds, oranges in this species. Leaves a basic green but bright, showy, yellowish-orange in fall, serrate, about typical of subsp. *palmatum* shape and margins. Something of a good species alternative with better traits than random green seedlings.

ACER055 - *Acer palmatum* f. *dissectum* (Dissectum Group) 'Peve Droopy' - green as the Group, very compact, slow. Or: Peve Nursery. In: http://www.hulsdonk.com/index.php?item=acer-palmatum-peve-droopy_&action=article&aid=19369&lang=NL, accessed 10.11.2016

ACER056 - *Acer platanoides* SENSATION® 'Ulmers Sensation' - about 20% slower than 'Drummondii', hence more manageable in small spaces and gardens. Leaves broadly margined yellow quickly becoming cream-edged, chimera at 30-50% surface, much as 'Drummondii' but reverting less and having a brighter aspect.

AESC001 - *Aesculus pavia* 'Fishtail' (Mark Weathington, Raulston Arboretum)

AESC002 - *Aesculus turbinata* 'Marble Chip' (Broken Arrow Nursery) - variegated

AESC003 - *Aesculus hippocastanum* 'Lunar Patches' (Variegated Foliage)

AESC004 - *Aesculus glabra* EARLY GLOW™ 'J.N. Select' - reliable, earlier bright red fall color, glossy dark green summer foliage, typical yellow flowers. Very limited fruit production.

ALBI001 *Albizia j.* MERLOT MAJIK™ (Heritage Seedlings, new cultivar)

ALBI002 *Albizia j.* CHOCOLATE FOUNTAIN™ 'NCAJ1' (Dr. Tom Ranney, NC State University)

ALBI003 - *Albizia julibrissin* 'Ishii Weeping' ('Ishii Pendula' invalid post-1959 Latin nae). The name was changed from 'Ishii Pendula' as it appeared in the US trade and published as such in Hatch's Cultivars of Woody Plants in 2008.

ALBI004 - *Albizia julibrissin* 'Clemensis' - more cold hardy, tolerant in Vienna, Austria where typical species dies, possibly to -20 C.. Or: Mr. Bruckmoser

ALBI005 - *Albizia julibrissin* 'Evys Purple' - leaves green becoming rich reddish-purple similar to 'Summer Chocolate' but perhaps slightly red in summer. Flowers rich glowing pink, close to magenta up and down the pistils, not pale pink to near white as in 'Summer Chocolate' which is only a rich pink in the upper 20-30% of the pistils.

AMEL001 - *Amelanchier arborea* PINK DAMSEL™ 'Tift County' - 16 ft. tall x 20 ft. wide, grown as single or multi-trunk, flower buds pink opening to near white, leaves light to medium green, "finer textured" than typical of species, red to orange fall colors. Or: Tift Country, Georgia US where it handles very hot conditions.

ARBU001- *Arbutus* 'MBAV13' - variegated sport of 'Marina'

ARON001 – *Aronia arbutifolia* 'Hannah Coulter' – habit more compact. Fruit very abundant compared to species typical. Leaves bright orangish-red in fall. Proven more heat

and humidity tolerant. Found by Norman Bertels in Jackson County, North Carolina, named for his granddaughter. Camforest.com, accessed 4.23.2015

ARON002 - *Aronia melanocarpa* LOW SCAPE™ MOUND 'UCONNAM165' - 1-2 ft. tall x 2-3 ft. wide, dwarf, very low for this species, suitable for mass planting, edging, groundcover, and soil stabilization. Or: Dr. Mark Brand, University of Connecticut. In: www.springmeadownursery.com, accessed 2.28.2016

ARON003 - *Aronia melanocarpa* LOW SCAPE™ HEDGER 'UCONNAM166' - 3-5 ft. tall x wide, compact, erect to columnar, lower maintenance than 'Viking', leaves dark green, becoming yellow, orange, and red in fall. Or: Dr. Mark Brand, University of Connecticut. In: www.springmeadownursery.com, accessed 2.28.2016

Aucuba - our standard for 159 existing cultivars in Hatch's Cultivars of Woody Plants.

AUCU001 - *Aucuba japonica* 'Subaru' (Hawksridge Farms)

AUCU002 – *Aucuba japonica* 'Overlook' – leaves larger, very glossy, margined cream. Cistus.com, accessed 4.22.2015, their own selection as sport near Overlook, Oregon

AUCU003 – *Aucuba japonica* 'Merced'- 4 ft. tall x 3 ft. wide. Leaves mostly gold, slight green speckling. Cistus.com, accessed 4.22.2015, their own selection

AUCU004 – *Aucuba japonica* 'Lisa White' – Plant compact. Leaves 4-5 in. long, narrow, speckled yellow. Fruit "very pale", female clone. Cistus.com, accessed 4.22.2015, named for Lisa White via Ozzie Johnson

AUCU005 – *Aucuba japonica* 'Clear Picture' – 4 ft. tall x 3 ft. wide, dense, subglobose to erect. Leaves centrally marked gold to 80-95% surface, margins dark green with some gold speckling. Cistus.com, accessed 4.22.2015.

AUCU006 – *Aucuba japonica* 'Alabai' – leaves dark green, spotted creamy-yellow in a swirled pattern. Cistus.com, accessed 4.22.2015, their own selection

AUCU007 - *Aucuba japonica* var. *borealis* 'Bored Female' - 4 ft. tall x wide. Leaves very glossy, blackish-green. USDA 6b-7, more hardy as the variety. Female clone. Plantdelights.com, accessed 4.22.2015, their own selection

AUCU008 - *Aucuba japonica* 'Golden Girl' - 1m tall x wide, very compact, shorter internodes. leaves heavily mottled and spotted yellow, chimera 25-60% surface, variable, some young plants in spring are said to be mostly gold, 80-90% surface, still very sharp in the blade, apex very long acute to acuminate. Fruit red, a female clone. Peter Moore cross of 'Nana Rotundifolia' x 'Crotonifolia' in 1993, offered exclusively in the UK by New Place Nurseries, npnurseries.co.uk, Bredbypetermoore.co.uk, accessed 5.29.2015

AUCU009 - *Aucuba japonica* 'Petite Jade' - click link for USDA/USNA introduction PDF, offered by Monrovia.com

AUCU010 - *Aucuba japonica* 'Ova Easy' - 6 ft. tall. Leaves all gold, 4-6 in. long, "spring green and velveteen gold when exposed to more light". Or, in: www.cistus.com, Spring 2016 online catalog, accessed 3.29.2016, sport of 'Overlook' in all gold.

BACC001 - *Baccharis halimifolia* 'Baccador' (Minier Nurseries) - a unique gold-leaved clone

BERB001 - *Berberis thunbergii* SUNJOY® TANGELO 'O'byrne' - 36-48 in. tall, upright, "outwardly arching and mounding" (patent app), vigorous, freely branching. Leaves reddish-orange, thinly margined or ringed pale yellow to chartreuse, overall appearing a "zingy orange" from a distance in the landscape, yet stronger than other variegated cultivars. Rust resistant. Or, Pat: US# 26546 on March 29, 2016 to Ernest O'Bryne, Eugene, Oregon, USA as 'Aurea' x 'Rose Glow' in 2003.

BERB002 - Berberis thunbergii 'Lutin Rouge' (Plantarium.nl)

BERB003 - Berberis thunbergii SUNJOY® CITRUS 'Koren' - 2-3 ft. tall x 2-4 ft. wide, compact, subglobose, improved form over older 'Aurea'. Leaves bright yellow, subscorch resistant. US patent #24818. Springmeadownursery.com, accessed 4.30.2015

BERB004 - Berberis thunbergii SUNJOY® MINI SAFFRON 'Kasia' - 1.5-2.0 ft. tall x 2-4 ft. wide, dwarf, dense, mounded, smaller than CITRUS. Leaves bright yellow, new growth tinged orange, subscorch resistant, fall color adds orange to red shades. US patent #24817. Springmeadownursery.com, accessed 4.30.2015

BERB005 - Berberis TINY N' SPINY® 'Bokratin' - 40cm tall, low, compact, evergreen, designed as tough, weed-covering, woody ground cover Leaves bright green, slightly tinged bronze in new growth, generally green all year. Flowers light yellow. Rust resistant.

In: <http://www.boot.nl/en/text/89/Trees>, accessed 8.6.2016

BERB006 - Berberis thunbergii LAMBRUSCO™ 'BailElla' - 2-3 ft. tall x 3-5 ft. wide, compact, spreading-mounded, dense. Leaves light red becoming dark burgundy tones. Or, in: www.baileynurseries.com, accessed 6.24.2016, <http://www.firsteditionsplants.com/lambrusco-barberry>

BERB007 - Berberis thunbergii MOSCATO™ 'BailAnna' - 2-3 ft. tall x 3-5 ft. wide, compact, spreading-mounded, dense. Leaves bright green, thin peach orange margin, mostly medium green by summer

Or, in: www.baileynurseries.com, accessed 6.24.2016, <http://www.firsteditionsplants.com/moscato-barberry>

BERB008 - Berberis thunbergii 'Fireball' - 1-2 ft. tall x 1-2 ft. wide (5 years), later larger, dense, compact, subglobose to mounded. Leaves bright "fiery red", more of a pinkish-red to rose-red than a dark maroon-red of older clones. Rust resistant to date. Or: Czech Republic, US Patent #21000 Web:

<http://planthaven.com/plant/berberis-fireball/>, accessed 4.6.2016

BERB009 - Berberis 'Thunderbolt' - 2.0-2.5m tall x wide. Leaves very dark purplish-burgundy, hold color into summer, over evergreen in mild climates. Or: INRA.

BETU001 - Betula albosinensis BLASON (Minier Nurseries) - a curious orangish-red bark over most of the trunk, frosted too.

BETU002 - Betula costata CINNAMON CURLS™ (North Dakota State University). Li: <http://hortsci.ashspublications.org/content/51/7/950.full>, paid content

BETU003 - Betula utilis 'Jim Russell' (Arboretum Wespelaar, their own selection)

BETU004 - Betula PARKLAND PILLAR™ 'Jefpark' - 40 ft tall x 6-7 ft. wide, vigorous, columnar, more narrow, erect, and dense than DAKOTA PINNACLE®. Leaves dark green, fall color not notably showy. Found at Parkland Nursery, Alberta, introduced by Jeffries Nurseries c. 2014.

BETU005 - Betula utilis var. jacquemontii 'Tickle Creek' - 6 ft. x 4 ft. wide, slower, dwarf. Bark copper colored. Leaves "coarse, lacy, deeply cut". Or, in: Iseli Nursery, www.iselinursery.com, accessed 5.22.2016, their own new introduction 2015 as witches broom on a large mature tree at their Tickle Creek Farm.

BETU006 - Betula x plettkei 'Golden Treasure' - 2-4 ft. tall x wide, much as species, dwarf, yellow bright yellow becoming greenish-yellow, designed to be a "lollipop" patio tree. Bark silvery-white when grafted on standard of Himalyan birch. Useful as bright, dwarf shrub or patio container. Or: Michal Andrusiv, Czech Republic. In: www.springmeadownursery.com, accessed 2.28.2016

BETU007 - Betula pendula MAGICAL® GLOBE - 4-5 ft. tall x 3-4 ft. wide, dwarf, distinctly globose, compact, typically grafted on a standard of Himalyan birch, giving the trunk are pale, whitish to silvery look.. Or: Kolster. Web: <http://plantsnouveau.com/plant/betula-magical-globe/>, accessed 10.7.2016

BETU008 - Betula pendula 'Spider Alley' - branches somewhat twisted, curled, not pendulous but generally horizontal to irregular, overall a lightly contorted but not extremely twisted clone, quite a moderate and elegant plant, different, interesting, but not a freak. Leaves light green, yellow in fall, much as species. Pat: EURO PBR 21231 to Boomkwekerij John de Lepper on May 5, 2014.

In, ph: <http://www.newplants.nl/en/planten/b/betula-pendula-spider-alley/>, accessed 10.11.2016.

BETU009 - *Betula pendula* FASTIGIATA JOES® 'Jolep 1' - fastigiate to narrowly columnar, showy white bark after 4-5 years. Ns: while the Latin word "fastigiata" is Latin and banned in cultivar names, there are no prohibitions in Latin for trademarked names. Therefore this half Latin name is in good standing. In, ph: <http://www.frankpmatthews.com/catalogue/betula/12285>, accessed 10.15.2016. Pat: Euro PBR 20141206

BUDD001 - INSPIRED™ WHITE

BUDD002 - Buddleia 'Painted Lady'

BUDD003 - Buddleia 'Asian Moon' (Monrovia)

BUDD004 - Buddleia davidii GROOVY GRAPE (Bailey Nurseries)

REGISTRATION PENDING - Buddleia 'Crown Jewels', 'Glass Slippers', 'Dark Dynasty', 'Jousting Jester', etc. (Walters Gardens)

BUDD005 - Buddleia 'Pink Micro Chip' (Proven Winners, Dr. Dennis Werner, North Carolina State University)

BUDD006 - Buddleia 'Pink Pagoda' - habit upright-spreading to mounded. Flowers pink, in narrowly conical panicles, "continuously flowering". Seedless. US Patent #23214 to Peter Moore, England as cross of *B. weyeriana* 'Sungold' x *B. davidii* 'Pink Delight'.

BUDD007 - Buddleia 'Miss Violet' - 4-5 ft. tall x wide, compact. Flowers dark purplish-violet. Bred by Dr. Dennis Werner, North Carolina State University. Springmeadownursery.com, accessed 4.30.2015.

BUDD008 - Buddleia davidii MERRY MAGIC® ORCHID 'SMBDPB' - 4-5 ft. tall x wide, more compact. Flower panicles very narrow but densely flowered, rich purple to violet, highly floriferous. Springmeadownursery.com, accessed 4.30.2015.

BUDD009 - Buddleia davidii GULLIVER - 1.75m tall. Flower spikes to 30cm long, wide, thick, fully flowered, corolla lilac with small orange eye. Cold hardy to -18 deg. C. Eur. PBR to East Malling Research, UK.

BUDD010 - Buddleia HUMDINGER™ 'Magenta Munchkin' - 28-36 in. tall, dwarf, compact, neat. Flower panicles 7-8 in. long, "fuchsia-red" (photos appear deep violet-fuchsia to violet-lavender), small orange eye, blooms before a few weeks before MONARCH Series cultivars. Walters Gardens, intro. 2015.

BUDD011 - Buddleia davidii 'Sophie' - 30-60 cm tall x 50-80cm wide, smaller in containers, larger in open ground, very compact, unusual habit being a sphere of cascading long, flowering shoots. Flowers in long panicles, lightly scented, light purple to rich lavender. Leaves light green. In, ph: <http://www.newplants.nl/en/planten/b/buddleja-davidii-sophie/>, accessed 10.11.2017

BUDD012 - Buddleia HUMDINGER™ 'Orchid Annie' - 2.5-3.0 ft. tall x 3.5-4.0 ft. wide, compact, subglobose, neat, refined. Flower corolla orchid-purple, buds a darker purple, inflor. to 8 in. long. <http://www.waltersgardens.com/plants/view/?plant=2580>, accessed 10.11.2016. Walters Gardens 2015 intro.

BUDD013 - Buddleia HUMDINGER™ 'Little Nugget' - 2.5-3.0 ft. tall x 3.5-4.0 ft. wide. Flower corolla dark bluish-purple to violet-purple, panicle 5-6 in. long, very early in season compared to other clones, up to 4 weeks before others of this color. Leaves bright yellow, becoming more lime to chartreuse.

BUDD014 - Buddleia HUMDINGER™ 'Lavender Cupcake' - 3.5-4.0 ft. tall x 4.0-4.5 ft wide, compact. Flowers light-medium lavender to light purple, very long 12 in. panicles. Leaves grayish-green. Or: Walters Gardens, intro. 2015

BUDD015 - Buddleia HUMDINGER™ 'Little Angel'

BUDD016 - Buddleia 'Dreaming Lavender' - 8-20 in. tall x wider, low, dwarf, spreading to semi-pendulous. Flowers pale silvery-lavender to medium lavender. Sold under the BLOOMTASTIC!® trademark but since that spans more than one genus (*Buddleia*, *Agapanthus*, *Skimmia*), it is considered a marketing entity and not a taxonomic name,

hence not registered here.

BUDD017 - Buddleia 'Purple Splendor' - 8-20 in. tall x wider, low, dwarf, spreading to semi-pendulous. Flowers violet-purple to magenta-purple, eyezone white with gold ring. Leaves very silvery when new. Sold under the BLOOMTASTIC!® trademark but since that spans more than one genus, it is considered a marketing and not a taxonomic name, hence not registered here.

BUDD018 - Buddleia BLAZE PINK™'Bosblink' - 1.5-1.9m tall x 1.3-1.6m wide, flowers "first really hot pink Buddleia", medium pink but photos at Ball Ornamentals are clearly toned violet-pink, more magenta-rose to me, foliage silvery, very long bloom period. US Patent #25731

BUDD019 - Buddleia TRU-BLUE™ 'Bostulu' - 1.6-1.9m tall x 1.2-1.6m wide, plants erect, strong stems, flower color true blue slightly lavender-blue, reblooms well in summer, very low seedset, foliage very silvery-gray. US Patent #25708

BUDD020 - Buddleia VANILLA TREAT™ 'Grevantrt' - 3-5 ft. tall x wide, compact, neat. Leaves light to medium green. Flower corolla near pure white, light fragrance. Web: www.gardendebut.com, accessed 5.22.2016

BUDD021 - Buddleia 'Miss Pearl' - 4-5 ft. tall x wide, dense, compactflowers in dense panicles, floriferous, corolla pure white, slightly and pleasantly undulate. Seedless and thus not invasive from seed. Or: Dr. Dennis Werner, North Carolina State University as 2009 cross of 'Ice Chip' and 'Miss Molly'. In: www.springmeadownursery.com, accessed 12.23.2015. The entire cultivar release notes page from Werner and NCSU is found here: https://cals.ncsu.edu/hort_sci/research/expertise-pages/PlantBreedingBuddleja.php

BUDD022 - Buddleia 'Glass Slippers' - 3 ft. tall x 5 ft. wide, stems silvery-tinged, lower and more spreadint than some clones, flower heads compact, numerous, corolla periwinkle blue, secondary bloom until fall is common. Or, in: Walters Gardens, intro. 2014. This same firm also offers new introductions

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BUDD023 - Buddleia HUMDINGER™ 'Prince Charming' - "gumdrop-shaped" habit. Flower corolla rich cerise-pink, infl. to 10 in. long, more of a raspberry pink than a purplish-pink. <http://www.waltersgardens.com/plants/view/?plant=2646>, accessed 10.11.2016, introduced by Walters Gardens 2016

BUDD024 - Buddleia MONARCH® 'Princess Bride' - 3.0-3.5 ft. tall x 4.0-4.5 ft. wide, dense, compact, slightly wider than tall. Flower corolla white from pale green buds, strongly scented, panicle 8-10 inches long, secondary panicles numerous. Leaves darker green, especially for a white-flowered clone. In: Walters Gardens, intro. 2014. In, ph: <http://www.perennialresource.com/encyclopedia/view/?plant=2461>, accessed 10.15.2016

BUDD025 - Buddleia MONARCH® 'Queen of Hearts' - 2.5-3.0 ft. tall x 3.5-4.0 ft. wide, small, compact, neat. Flowers rich reddish-violet to magenta-red, panicles 7-9 in. long, very numerous. Or, in: Walters Gardens, intro. 2014. In, ph: <http://www.perennialresource.com/encyclopedia/view/?plant=2463>, accessed 10.15.2016

BUDD026 - Buddleia MONARCH® 'Royal Falls' - 2.5-3.0 ft. tall x 5-6 ft. wide, spreading and cascading when in flower. Flower corolla rich amethyst blue to bluish-lavender, rich scented, panicle 7-9 in. long. Leaves dark green. Or, in: Walters Gardens, intro. 2014. In, ph: <http://www.perennialresource.com/encyclopedia/view/?plant=2464>, accessed 10.15.2016

BUXU001 - Buxus microphylla var. japonica SPRINTER™

BUXU002 - Buxus microphylla 'Eseles' (image, Government of Canada, PBR)

BUXU003 - Buxus sempervirens 'Skywalker' (Concept Plants) - US# 22977 From Mark Ellerbrook of Beaverton, Oregon, is the vigorous clone (growth up to 30 in. a year for up to 6 seasons) that is "very columnar...with a low amount of lateral branching", keeping green color much of the year, and resistant to common boxwood root diseases. Dimensions at six years are 1.8 meters x 30-38 cm.

BUXU004 – Buxus sempervirens 'Jack Rudolph' – 6 ft. X 4 ft. wide In many years, arborescent, conical, slightly cascading branches. Ritas Rare Plants, Tennessee from her father's boxwood breeding program of 1940's-1050's. Camforest.com, accessed 4.23.2015

BUXU005 – Buxus sempervirens 'Ruth Rudolph' – 5 ft. tall x wide in many years, weeping. Rita's Rare Plants, Tennessee, from her father's boxwood breeding program.

Camforest.com, accessed 4.23.2015

BUXU006 - *Buxus sempervirens* 'Golden Swirl' - www.cistus.com, accessed 3.29.2016

BUXU007 - *Buxus microphylla* var. *koreana* EMERALD KNOLL® 'RLH-B1' - 1.5-2.0 ft. tall x 3-4 ft. wide, low, mounding-spreading, patent says "outwardly spreading to decumbent, billowy and mounding", vigorous, freely branching, flexible lateral limbs resist cracking and splits, very fine-textured, compact, far less tufted and congested compared to 'Morris Dwarf' and less rigid than it. Leaves rich emerald green all year, not bronzing in winter or cold weather. US Patent #24443 on May 13, 2014 to Robert and Lisa Head, Seneca, South Carolina USA as sport of 'Kingsville' in 1991.

BUXU008 - *Buxus microphylla* 'Little Missy' - 16 in. tall x 30-40 in. wide, densely mounded to flat-subglobose, 2-3 in. growth a year. Leaves dark green, glossy, all year, not bronzing, blade smaller than species typical clones (1.6cm long x 1.0cm wide).. USDA 5 hardiness. [US Plant Patent #24703](#) on July 29, 2014 to Norman H. Cole III as chance seedling, assigned to Cp Delaware Inc.

BUXU009 - *Buxus sempervirens* 'Thomas Jefferson' - 5 ft. tall x 2 ft. wide, or 6 ft. tall x 3 ft. wide (12 years), 12 ft. tall x 6 ft. wide (30 years), narrowly upright-ovoid to ellipsoidal to narrowly pyramidal, not always columnar, 45 deg. branch angle (wider than 'Dee Runk'), 3-6 in. growth a year, resistant, strong limbs resist snow and ice damage. Leaves glossy, dark green all year, not bronzing. [US Plant Patent #23869](#) on Sept. 3, 2013 to Thomas M. Patrick, Jr., chance seedling 1964, assigned to Saunders Bros. Inc., named for the US President as it was discovered in Charlottesville, Virginia, his home. An attempt to trademark this name or 'Mr. Jefferson' failed and is now marked as "CANCELLED - SECTION 8", which generally implies the name was not in use after 6 years or verified to be so.

BUXU010 - *Buxus sempervirens* 'Wonford Page' - new growth heavily suffused yellow (40-90%), becoming sectored and striped cream to light yellow at 30-50% surface. So: <http://www.bloomriver.com>, accessed 5.16.2016

BUXU011 - *Buxus microphylla* var. *japonica* BABY JADE™ 'Grejade' - 3 ft. tall x wide, subglobose to mounded, dense with maturity, shorter internodes than variety typical, averaging just 6mm, moderate growth rate.. Leaves small, 1.8cm long x 0.8 wide, elliptic, base cuneate, apex obtuse, dark green all year, not bronzing. USDA 5. Or, pat: US #26656 on April 26, 2016 to Jane Marie Kubala, El Campo, Texas, USA and Bill Bar, Rosenberg, Texas, USA as sport of 'Gregem' in 2010. Web: <http://www.gardendebut.com/plantName/Baby-Jade-Boxwood>

BUXU012 - *Buxus microphylla* PETITE PILLAR™ 'MonAlex' - 2-3 ft. tall x 2 ft. wide, dwarf to semi-dwarf, columnar, very dense, requiring little or no shearing as hedge or narrow column. Leaves glossy, medium green. USDA 5. Web: <http://www.monrovia.com/plant-catalog/plants/5162/petite-pillar-dwarf-boxwood> , accessed 4.6.2016

BUXU013 - *Buxus sempervirens* JADE PILLAR™ 'Furore' - 4-5 ft. tall x 2-3 ft. wide, columnar, useful for hedge purposes. Leaves dark green. US# 21319

BUXU014 - *Buxus* SHADOW SENTRY™ 'DSNJH 1216' - 8 ft. tall x 3 ft. wide, narrowly pyramidal, erect. Leaves medium green, holding color in winter. Ch: to -20 deg. F. In, ph: https://www.greenleafnursery.com/index.cfm?fuseaction=plants.plantDetail&plant_id=6951&typeID=&whichname=genus, accessed 10.11.2016

BUXU015- *Buxus microphylla* GREEN BORDERS™ 'Grebor' - 2-3 ft. tall x 3-4 ft. wide, fine-textured, horizontal. Leaves dark green. Or: Greenleaf Nursery. Web, ph: <http://www.gardendebut.com/plant/Green-Borders-Boxwood>, accessed 10.11.2016

CALL001 - *Callicarpa japonica* WHITE SPRITZER™ is one of the best variegated clones in the genus and the violet-pink new tips make it quite the glorious, tricolored creation. It has great vigor unlike a speckled sport of this same species I found in the 80's which never proved market worthy. This is truly one of the finest variegated, deciduous shrubs of any genus and makes a nicely fine-textured, compact pyramidal piece; never wild nor too crazy if given enough light. Click image to enlarge. Above image not part of OROC Data Sharing.

CALL002 - *Callicarpa kochiana* 'Yamaguchi Variegated' - leaves large, 4-8 inches long, 1.5-2.0 inches wide, elliptic, boldly sectoredly and marked in clean white to cream, 25-45% surface in strong plants,, other sectors, spots, and markings in lime or a paler green than the dark green base color, margins very finely serrulate with 20-32 teeth per side. Kniv from a specimen at the JC Raulstron Arboretum, also offered by nurcar.com, accessed April 2013.

CALL003- *Callicarpa* PEARL GLAM™ 'NCCX2' (*C. dichotoma* x *C. kwangtungensis*) - habit erect, neat (from second parent), leaves richly tinged purple (also from C.k.), fruit rich violet-pink, abundant, early (mostly from first parent). Or: Dr. Tom Ranney, NC State University in cooperation with Spring Meadow Nursery. In:

CALL004 - Callicarpa PLUMP AND PLENTIFUL™ PURPLE GIANT 'O5-132' - fruit purple, abundant, covering branches almost completely. Offered by www.heritageseedlings.com, online Wholesale Catalog 2015-2016 (PDF), accessed 2.16.2016

CALL005 - Callicarpa PLUMP AND PLENTIFUL™ LILAC - 5-6 ft. tall x 4 ft. wide. Fruit purplish-lilac, covering each branch, very abundant. Or: Kolster
Web: <http://plantsnouveau.com/plant/callicarpa-plump-plentiful-lilac/>, accessed 10.7.2016

CALL006 - Callicarpa PLUMP AND PLENTIFUL™ AMETHYST - 5-6 ft. tall x 4 ft. wide. Fruit violet-purple, very abundant, persisting into winter. Or: Kolster
Web: <http://www.plantsnouveau.com/plant/callicarpa-plump-plentiful-amethyst/>, accessed 10.7.2016

CALL007 - Callicarpa bodinieri IMPERIAL PEARL® 'Minpro2' - 1.5-2.5m tall x 1-2m wide. Fruit abundant, mauve-violet, very showy. Or: Minier Nurseries, France, intro. 2014

CALY001 - Calycanthus floridus 'Van der Geiseen's Choice' - Flowers of exceptional fragrance. Selected by Maarten van der of Geissen of Semmes, Alabama USA, Nurcar.com, accessed April 2013.

CALY002 - Calycanthus floridus 'Coker Cottage' - plants 10 ft. tall x wide, vigorous, strong, durable in USDA 7b (Chapel Hill, North Carolina). Flowers red, small but very numerous. Leaves a good yellow in fall. Originated from a notable tree at the Coker Arboretum, University of North Carolina, Chapel Hill, North Carolina. That same old arboretum on campus also holds the original tree of Liquidambar styraciflua 'Rotundiloba', a popular and unique tree that is fruitless with curiously rounded lobes, prized over the world.

CALY003 - Calycanthus (C. chinensis x C. floridus var. oblongifolius) 'Hongyun'. Flowers large, red, 2 whorls of tepals. Abstract: [Acta Hort. Sinica 41 \(8\): 1755-1756 \(2014\)](#).

CALY004 - Calycanthus floridus var. purpureus 'Burgundy Spice' - leaves glossy, rich chocolate-purple to reddish-purple. Or: Rich Heesellein, Pleasant Run Nursery, Allentown, New Jersey, USA. In: Star Roses and Nurseries c. 2015, https://issuu.com/starrosesandplants/docs/srp_catalog_2017_allpages, accessed 8.11.2016. It does not appear at <http://www.pleasantrunnursery.com>, when a search was run on 8.11.2016 nor when the "New Plants" bar was pressed.

CAMPS001- Campsis grandiflora 'Morning Calm' - Dr. JC Raulston's amazing selection that remains superior to most C. radicans and hybrid selections for corolla coloration, vigor, and a huge 1.5 to 2.0 inch wide trumpet face. If this looks like an impossible tropical flowering vine - it should not - for it does well in USDA 6-10. The huge trumpet is melon at times, in other portions of the day a richer orange, orange juice to Nasturtium, other times a somber, dark vermilion-orange, a delicately veined throat of gold and darker shades, and very often a blend of all these curious, prismatic pigmentations; showing reflective crystals in the tissue and odd tones from the very opening of each flower. Images above and below not part of OROC Data Sharing.

CAMPS002- Campsis x tagliabuana ORANGEADE® 'Tracamp' - from Sapho.fr has the first boldly bicolored, chimera-style flowers in this genus, contrasting rosy-gold with rich magenta pink at every toss of a shadow and sunbeam. Frankly, I thought we'd see gold veined red flowers or red-veined gold flowers before a chimeral bicolor beauty like this one. Click image to enlarge.

CAMPS003 - Campsis radicans ATOMIC RED™

CAMPS004 - Campsis 'Chastity' (Dr. Tom Ranney, North Carolina State University, triploid)

CAMPS005 - Campsis radicans 'PRN Redbird' (Pleasant Run Nursery, their own selection)

CAMPS006 - Campsis SUMMER JAZZ FIRE (Plantarium.nl)

CAMP007 - Campsis x tagliabuana GRENADINE® 'Rutcam' - flowers to 8cm wide, rich red to orangish-red corolla, tube on exterior more orange, effectively a true red from a distance, very floriferous until fall.
Or: John Ruter.

CARP001 - Carpinus betulus 'Stegemann's Primus' (Minier Nurseries) - conical, vigorous, regularly branched. Selected by J. Stegemann, Eur. CPVO to him 2005.

CARP002 - Carpinus betulus ROCKHAMPTON RED 'Lochglow' (Planteria.eu) - uniform crown. Leaves with reliably showy, colorful orangish-red to red call colors. Eur. CPVO to Geoff Locke 2014. Planteria.eu winner. See <http://www.planteria.eu/news/241/rockhampton-red-wins-for-batouwe>

CARP003 - *Carpinus japonica* 'Silver Lace' is a stunning entity among all cut-leaved trees, a fine recent introduction, quite a feathery to almost pin-like or ciliate sort of margin, bearing a pale silvery-green hue in the sun. The spiky, narrow blades carry a special, odd rugosity, the sort normally found only in herbaceous plants, where the long, convex bubble between the secondary veins turns into the thin, sharp tooth, making the lateral veins sunken, reflecting yet more white or pale green light. Anyone who knows, collects, and studies our lacinate trees and shrubs will know this is a very unique, useful release, cuter than cute, and prettier than your best girl in silver lace. Buchholz Nursery has it for one.

CARP004 - *Carpinus caroliniana* 'Stowe Cascade', a semi-weeping, elegantly drooping at least variant on that other species that rarely gets selected for cultivars. This beauty is shown at the JC Raulston Arboretum and originated about 4 hours to the southwest at the Daniel Stowe Botanic Garden in Charlotte, NC.

CARP005 - *Carpinus caroliniana* BALL O'FIRE™ 'J.N. Globe' - 15-20 ft. tall x wide, compact, globose. Leaves reliably showy, orange to red in fall, some yellow for contrast Selected from superior tree in wild, Waukesha, Wisconsin, USA by johnsonnursery.com.

CARP006 - *Carpinus caroliniana* FIRESPIRE™ 'J.N. Upright' - 20 ft. tall x 10 ft. wide, distinct erect. Leaves boldly coral-red to orangish-red in fall, interior canopy leaves often a dark burgundy. Johnsonnursery.com, accessed 5.2.2015.

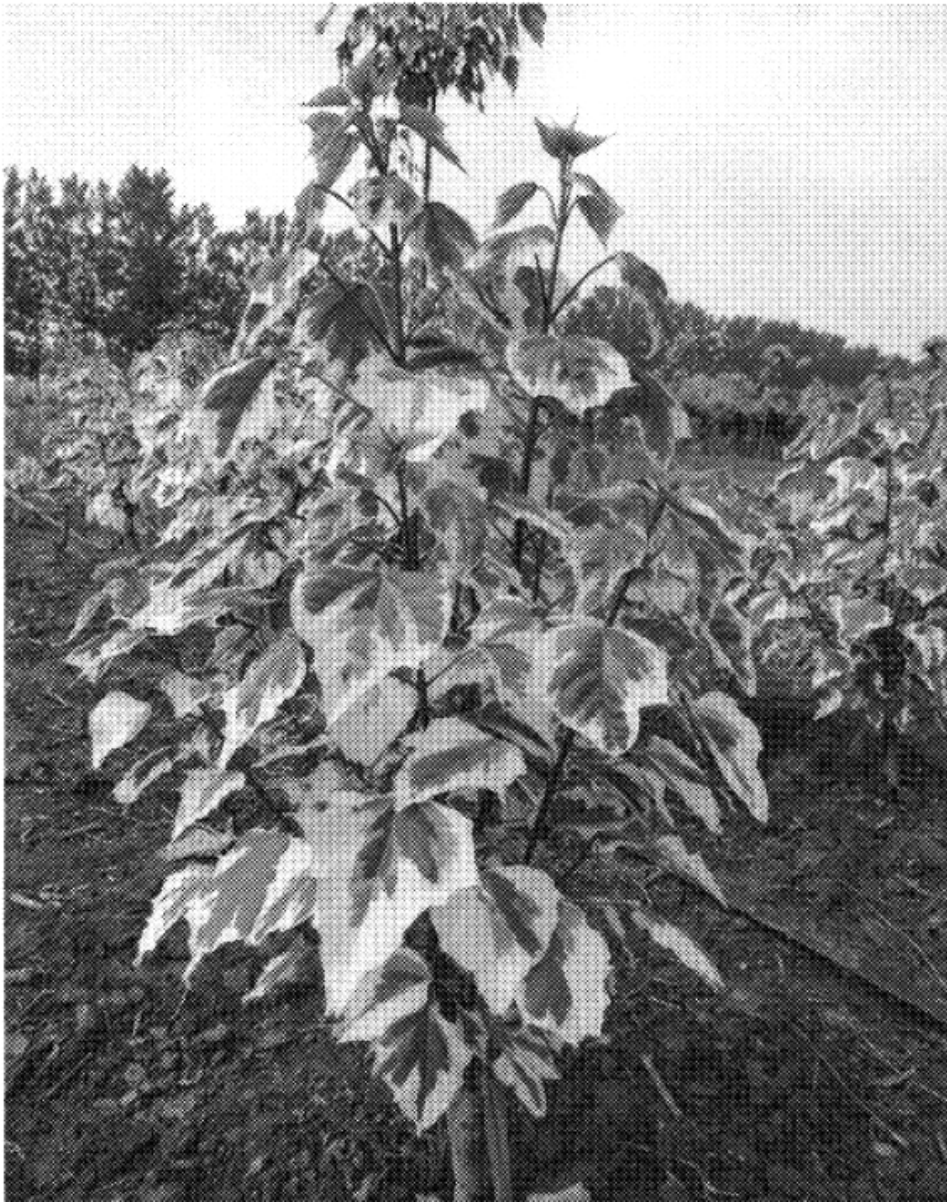
CARP007 - *Carpinus caroliniana* NATIVE FLAME® 'JFS-KW6' - 30 ft. tall x 20 ft. wide, upright, ovoid. Leaves dark green in summer, high quality texture, reliably orange to red shades, very showy in fall. jfschmidt.com, accessed 5.2.2015

CARP008 - *Carpinus betulus* ORANGE RETZ® - leaves very bright orange in fall. Eur CPVO to Jean Blondeau 2014.

CARP009 - *Carpinus caroliniana* RISING FIRE™ 'Uxbridge' - 30 ft. tall x 15 ft. wide, more narrow and upright than species typical, columnar to narrowly ovoid, vigorous, uniform. Leaves reliably bright red to orange shades with some yellow in fall. Hardy in Ontario, Canada where it originated.. So: www.jfschmidt.com, accessed 6.15.2016

CARP009 - Carpinus caroliniana 'Eisler' ('Eisler Select') - a listed name. "Select" is a term not permitted in cultivar names by the code.

CATA001 - Catalpa speciosa HEARTLAND® 'Hiawatha 2' (J.F. Schmidt) - 50 ft. tall x 25 ft. wide, "upright narrow oval", more narrow and more uniformly branched than species typical. Leave darker green than species typical. jfschmidt.com, introduced 2015, accessed 5.31.2015.



CATA002 - *Catalpa bungei* 'Menghuan' ("Colorful Manchurian Catalpa") - leaves margined rose-red at first, later becoming edged yellow and finely white in irregular width, margins "very wavy", adding to the interest, the chimera appearing to be from 15-55% of the leaf surface according to the US Patent application drawings, one of which is shown above. Or: mutation found on May 5, 2011 on road side in Long'an District, Anyang City, Henan Province, China. It was grafted on May 10, 2011 onto species stock. US Patent applied for on March 16, 2016 by Huaming Wang, Suiping, China. It is the opinion of our attorney and many others that US Patent application data is entirely in the public domain unless the applicant makes an order to copyright the known drawings, symbols, or images. Lacking such evidence to the contrary, we freely publish this image here, however asking it be attributed to the originator in a proper scientific manner.

CEDU001 - *Cedrus atlantica* 'Blue Fountain' - originators place the species *C. atlantica* under *C. libani*.

CEDU002 - *Cedrus deodara* FEELIN' SUNNY® 'MonKinn' - 5-12 ft. tall x 6-8 ft. wide (10 years) per Monrovia website, US Patent app states "plant height 62cm...diameter about 65cm...compact and low spreading...slow-growing, freely branched, dense and bushy...slower growing and more compact than than plants of 'Golden Horizon'...not as

mounding as trees of 'Golden Horizon', Monrovia's images, accessed 8.6.2016, show cascading plants and one grafted high on a standard so it remains unclear if it will be marketed as a classic pyramidal conifer or in other forms.. Leaves bright yellow most of the year including winter ("greyed yellow..becoming golden yellow" per US Patent app), sunburn resistant, internal or shaded foliage becoming lime and perhaps close to typical green. In: Monrovia Nursery, offered by them in 2017, <http://www.monrovia.com/plant-catalog/2017-featured-plants/>, accessed 8.2.2016. Pat, or: US# 23886 to Ron Damien Kinney on Sept. 10, 2013, sport of 'Feelin' Blue' in 2004 appearing in Dayton, OR, USA. assigned to Monrovia Nursery.

CEDU003 - *Cedrus deodara* STERLING FROST™ 'Grester' - 40-50 ft. tall x 20-30 ft. wide as young plants, tall, erect, weeping tips. Needles rich bluish-green, frosted with bluish-silver, overall nearly as blue as many *Picea pungens* while not being as dark and marine a blue as *Cedrus atlantica* f. *glauca*. Web, ph: <http://www.gardendebut.com/plant/Sterling-Frost-Deodar-Cedar>, accessed 10.5.2016

CEDU004 - *Cedrus deodara* 'Mt Buffalo' - habit miniature, very dwarf, thick branches and stems almost looking like small trunks, very low to prostrate. Leaves bluish-green.

CEDU005 - *Cedrus libani* 'Wells Roman Gold' - Or, in: <http://wellsnurseries.com/availability/>, accessed 10.7.2016

CEPH001 - *Cephalotaxus harringtonia* 'Gold Dragon' (Hawksridge Farms) - 2-3- ft. tall x 4-5 ft. wide. Leaves golden-yellow in new growth.

CEPH002 - *Cephalotaxus harringtonia* 'Gold Splash' - habit spreading-mounded, decumbent, much as 'Duke Gardens' but having golden-yellow shoot tips. So: <http://www.brokenarrownursery.com>, accessed 6.12.2016,

CERCID001 - *Cercidiphyllum japonicum* CLAIM JUMPER™ (Broken Arrow Nursery) - new leaves rose pink, becoming yellow

CERCID002 - *Cercidiphyllum japonicum* HANNA'S HEART® 'Biringer' - Habit erect, compact. Leaves darker green, rich yellow in fall, leaves held longer due to increased cold resistance. Cold hardiness greater. www.biringer-nursery.com, accessed 4.19.2015

CERCID003 - *Cercidiphyllum japonicum* 'Dawes Ascension' - 40-60 ft. tall x 20-30 wide. Young trees densely columnar, older plants more pyramidal, narrower than species typical. Or: Dawes Arboretum, bef. 1993, <http://dawesarb.arboretumexplorer.org/taxon-20758.aspx>, accessed 5.16.2016

CERC001 - *Cercis canadensis* 'Pink Pom Poms' (Dr. Dennis Werner, North Carolina State University, new cultivar, double flowers)

CERC002 - *Cercis canadensis* 'Vanilla Twist'- weeping with white flowers, a new combination.

CERC003 - *Cercis canadensis* RED FORCE® 'Minrouge3' (Minier) - leaves bright purplish-red, not purple as 'Forest Pansy'





CERC004 *Cercis canadensis* CAROLINA SWEETHEART™ 'NCCC1'. This outstanding cross of purple and variegated leaf genetics in redbud by Dr. Tom Ranney produced spectacular glowing pink hearts of new foliage. It is amongst the most colorful and pretty variegated trees on the planet, rivaling Japanese maples and sycamore-maple cultivars for flash and a designer aura of new tips. Image courtesy of and copyright owned by Tom Ranney.

CERC005 *Cercis canadensis* LUCIOUS LAVENDER™

CERC006 *Cercis canadensis* RADIANT LIPSTICK™

CERC007 - *Cercis canadensis* 'Alley Cat' - leaves heavily white-streaked and white-spotted, chimera about 35-50% blade surface, new growth slightly tinged copper to pink, more sun scorach resistant in warm climates, variegation very stable. Or: Allen Bush, Louisville, Kentucky, USA as chance seedling he discovered in an alley near his home. In: Harold Neubauer, Hidden Hollow Nursery, hiddenhollownursery.com, accessed April 2014. Our previous Book I incorrectly attributed origination to Mr. Neubauer as he was the first to propagated it. We thank Dr. Dennis Werner, *Cercis* geneticist extraordinaire and redbud scholar for this correction. It is considered as a superior clone to 'Floating

Clouds' and 'Silver Cloud' for sun tolerance and refined summer coloration.

CERC008 - *Cercis chinensis* 'Spring Snow' - flower corolla white, numerous. Introduced by www.wairere.co.nz, accessed 4.25.2015

CERC009 - *Cercis chinensis* 'Brandywine' - listed name, not described, www.bluehorizonnursery.com, accessed June 2015

CERC010 - *Cercis* SUMMER'S TOWER™ 'JN7' - 20-25 ft. tall x 10-12 ft. wide, habit "tight, upright vase-shaped", vigorous. Flowers pinkish-lavender over entire limbs. Web: <http://www.gardendebut.com/plant/Summers-Tower-Redbud>, accessed 9.20.2016. Or: Ray Jackson.

CERC011 - *Cercis* COTTON CANDY™ 'John Sjo' - 20 ft. tall x 30 ft. wide, close to species typical. Flower corolla pale pink, lavender striations, calyx darker pink. Leaves green, yellow in fall. web: http://www.gardendebut.com/index.cfm/fuseaction/plants.plantDetail/plant_id/6577/index.htm, accessed 9.20.2016

CHAE001 - DOUBLE TAKE™ Series (Proven Winners)

CHAE002 - *Chaenomeles speciosa* RED PREMIER™ 'Greredpre' - 3-4 ft. tall x 3 ft. wide, compact. Flowers very dark red., double but less so than DOUBLE TAKE Series, cupped, stamens gold and showy. Greenleaf nursery.com, accessed 5.4.2015

CHAE003 - *Chaenomeles* 'Green Ice' - flower corolla chartreuse in bud, later white tinged green, semi-double. Introduced by www.wairere.co.nz, accessed 4.25.2015

CHAE004 - *Chaenomeles speciosa* RED PREMIER™ 'Greredpre' - 3 ft. tall x 4 ft. wide, dense yet vigorous, compact with maturity, intertwining beanchlets. Flowers early, medium to medium-dark red, double, cup-shaped, showy golden stamens. Web: www.gardendebut.com, accessed 5.22.2016, https://issuu.com/gardendebut/docs/2016_catalog-online/1

CHAE005 - *Chaenomeles speciosa* MANGO STORM 'Mincha01' - Thornless. flowers semi-double, 5-8 cm wide, coral-orange as in mango fruit, gold stamens still visible unlike some fuller doubles. Seedless. Ns: there is no connection we can find between this name and 'Pink Storm', 'Orange Storm', and 'Scarlet Storm' of Dr. Ranney as it appears to be a European production from Minier in 2015.

Web: <http://www.pepinieres-minier.fr/fichePlante.php?codePlante=12468&route=plantes-nouveautes-research>, accessed 10.11.2016

CHAE006 - *Chaenomeles speciosa* RED KIMONO™ 'Ainoomoi'- habit erect, 1.5m tall, stems thornless. Flower corolla bright red, very showy. Pat: Euro PBR 20151486 In, web: <https://www.plantipp.eu/en/Plants/chaenomeles-speciosa-red-kimono-ainoomoipbr-2/>, accessed 10.11.2016

CHAM001 - *Chamaecyparis obtusa* 'Cooper's Gem' (RHS, Nomenclatural Standard, JSTOR)

CHAM002 - *Chamaecyparis obtusa* 'Sunny Swirl' (Iseli Nursery)

CHAM003 - *Chamaecyparis obtusa* NIGHT LIGHT™ (Star Roses) - I really had to get a grip when the patent application compared this globose, golden, plumose gem to "Grippsii" instead of the obvious 'Elmwood Gold', sport or seedling too of 'Crippsii'. I'm glad the US patent inspectors don't do road tests of cars because we'd be having a Lambo Aventador racing a Ford Fusion. They seem to have no clue what are legit comparisons (originators also spinning the match up to their end when the clone may or may not be unique at all) and miss the one, two, or three obvious benchmarks already in gardens and the trade too. The big Cripp's false-cypress is pretty and durable from USDA 5 to 8, handling Raleigh, NC with as much ease as Rochester NY. If this is half as good as the tales from the Cripps in gardens, it should be splendid indeed.

CHAM004 - *Chamaecyparis thyoides* BLUE ROCK® 'Versent' is as good as the dwarf Chamies of the Squarrosa Group and probably more cold hardy and less browning with age. We will see but this baby looks like a winner and glows with such lovely sapphire tones. This image is not part of OROC Data Sharing.

CHAM005 - *Chamaecyparis obtusa* 'Butter Ball' - habit dwarf, subglobose, fern-like in texture but more elegant than similar older clones. Leaves lemon-yellow, inner foliage lime to dark green, given some contrast. Iselinursery.com, accessed October 2013.

CHAM006 - *Chamaecyparis pisifera* (Filifera Group) 'Angel Hair' - habit dwarf, filiform texture as the Filifera Group, slower and thinner than classic clones of the group. Found in New York by Mike and Ken Yaeger, Hickory Hollow Nursery. Iselinursery.com, accessed October 2013.

CHAM007 - *Chamaecyparis obtusa* JADE WAVE™ 'MonYur' - 6-8 ft. tall x 3-4 ft. wide, compact, uniform, pyramidal, foliage units in waves, branches "gracefully curved...fern-like". As a long term student of the species (L. Hatch, Editor), this has a far more flat and plumose a spray than normal for this species, and I would imagine a seedling of 'Lycopodioides Aurea' crossed to the species might give a similar look, the branchlets very spread out and articulated into fine, ferny units. Tips don't curl down like many gold or near gold seedlings in this species.. Leaves bright to pale green, tips closer to lime, a sort of popular notion of a jade color, while that true stone covers everything from pale to dark green and some blues. USDA 4. In: <http://www.monrovia.com/plant-catalog/plants/5750/jade-wave-fernspray-false-cypress/>, accessed 8.2.2016

CHAM008 - *Chamaecyparis nootkatensis* 'Boykos Glitter Falls' - pendulous much as 'Pendula', foliage mottled cream to about 35% surface. Or: Jim Boyko.

CHAM009 - *Chamaecyparis obtusa* 'Bridget' - 8 ft. tall x 6 ft. wide, dwarf, broadly upright, tight scaly leaves but many shoot flat and fasciated, some shoots with the cockcombs and others without, deep green overall. In: www.iselinursery.com, online catalog 2016-17, accessed 10.5.2016

CHAM010 - *Chamaecyparis nootkatensis* (Pendula Group) 'Golden Waterfall' - highly weeping as the Group, long drooping arm, foliage richly suffused golden-yellow to yellow, showing perhaps 20-35% green, depending on the amount of light given. Appears to be more golden than previous clones of this category. In: <http://www.hachmann.de>, accessed 10.7.2016

CHAM011 - *Chamaecyparis nootkatensis* (Pendula Group) 'Wells Pacific Arrow' ('Pacific Arrow')- habit weeping as the Group but the apex extremely narrow and arrow-shaped, plants of 8-10 ft. perhaps as narrow as 12-18 inches, though become 20-30 ft. tall x 2-5 ft. wide in many years. It's classic super-narrow, "inverted column" type of weeping in the very extreme formation. Or: Wells Nursery, Mount Vernon, Washington, USA. In, ph: <http://www.progressiveplants.com/catalog.html?material=2568593&desc=Chamaecyparis+nootkatensis+Pendula+Wells+Pacific+Arrow>, accessed 10.7.2016

CHAMAED001 - *Chamaedaphne* 'Dew Drop' (Rare Find Nursery) - 1.5 ft. tall x 3 ft. wide at first, potentially 2-3 ft. tall x wide, very dense.

The full taxonomist record from Cultivars of Woody Plants follows. Photographs are available in the original CWP ebooks.

CHIO002 - *Chionanthus retusus* 'Arnold's Pride' (11/5)
ht: 30 ft. tall x 30 ft. wide (original tree)
fq: very floriferous
frq: self-fertile
or: Arnold Arboretum from the famous, very notable example planted 1901, raised from seed
or: collected at Emperor's Imperial Bot. Gard.

CHIO011 - *Chionanthus retusus* 'Botanicas Beauty'
fq: much more floriferous than species typical, blooms covering the entire canopy, also known to bloom well as young plants.
ft: typical petals longer and wider than species typical., also slightly more curved and elegant
web: <http://www.les-botaniques-du-val-douve.com/3673-16-val-douve-c-chionanthus-retusus-botanicas-beauty-plante-a-ecorce-decorative.html>, accessed 10.11.2016

CHIO003 - *Chionanthus retusus* 'China Snow' (11/5)
ht: 10-18 ft. tall and wide, 10 x 10 ft. as young trees
lc: glossy dark green
fq: floriferous
or: Don Shadow selected from notable tree in old Sanford Arboretum, Knoxville, TN USA.
or: Nurseries Caroliniana (online catalog, accessed 11.24.2012) says it is from an old tree
or: at the Arnold Arboretum.

CHIO004 - *Chionanthus retusus* 'Ivory Tower' (3/7)
ht: 15 ft. tall x 3 ft. wide
ha: strictly upright, columnar

ll: 4.0 in.
lc: very glossy green
infl: 2-4 in. panicles
so: www.hawksridgefarms.com (online catalog 2007)

CHIO005 - *Chionanthus retusus* 'Yadkin Creeper' (11/8)
or: presumed to be www.yadkinvalleynursery.com, not listed on website on 11.9.2008
lsp: Raulston Arb #030704 rec. 4/18/2003, 47 " tall in 2005

CHIO006 - *Chionanthus virginicus* 'Emerald Knight' (5/4)
lc: darker green by one report
so: www.highlandcreeknursery.com (online catalog 2003)

CHIO001 - *Chionanthus virginicus* 'Black Stem' (Buchholz)

CHIO007 - *Chionanthus virginicus* 'Groenendaal' (12/6)
ns, id: a clone listed in Europe, a seedling from Groenendaal Arboretum

CHIO008 - *Chionanthus virginicus* 'Floyd'
ha: denser, more upright than species typical
ft: 99% or more male flowers only
frq: virtually no fruit set, only the occasional one has been observed on larger trees
or: Sonnemann Experimental Station Garden, Vandalia IL USA c. 1945 as chance seedling
in, ns: named and introduced by Dr. J.C. McDaniel in honor of Floyd Sonnemann 1970. US trade about 1972-3
li: McDaniel, J.C. 1969. Proc. Int. Plant Prop. Soc. 19: 377-378.

CHIO009 - *Chionanthus virginicus* 'Pat's Variegated' (5/4)
lc: irregularly margined, mottled and sectored light yellow, some
lc: leaves all yellow or all green, very colorful to date
fq: seems to flower well for a variegated.
lsp: Juniper Level Botanic Garden, Raleigh, NC, first observed by me in May 2004.

Chionanthus virginicus [pink flowered]
fc: light pink
or: Dirr in his 1998 Manual relates that "a lady approached me and
or: mentioned she knew of red- and pink-flowered forms. Needless
or: to relate, I had abnormal heart palpitations. Arrangements were made
or: to propagate the forms...to this day I await the first scion."
or: Nicholson's *Arnoldia* article 50(4): 24-31 (1990) mentions a pink form found
or: in Virginia and perhaps other states.

CHIO010 - *Chionanthus virginicus* 'Spring Fleecing' (11/6)
ht: 12-20 ft. tall
ha: small tree, "superior form"
lc: glossy dark green
sex: male
fq: more floriferous

ff: nicely scented

so: www.nicholsgardens.com (online catalog 2006)

CINN001 - *Cinnamomum camphora* 'Yongjin' - HortScience 50: 762-764, an ornamental clone from China.

CINN002 - *Cinnamomum camphora* 'Xiaguang' - HortScience 50: 762-764

CINN003 - *Cinnamomum camphora* 'Yuhuang' - HortScience 50: 762-764

CLAD001 *Cladrastis kentukea* 'White Rain' (Wayside Gardens) - a new weeping clone - by the way there is no "c" in kentukea. It's a Latin thing and folks should know better.

CORN001 - *Cornus controversa* GARDEN DANCE™ (Wayside Gardens)

CORN002 - *Cornus sericea* ERIKA THE BLONDE™ (Song Sparrow Nursery, a Klehm original introduction)

CORN003 - *Cornus kousa* 'Empire', 'Pams Mountain Bouquet', and 'Red Steeple' (HortScience) - paid access. Registrations will be split upon receipt of further data.

CORN004 - *Cornus* LITTLE RUBY™ (*C. kousa* 'Miss Satomi' x *C. hongkongensis* 'Summer Passion') - Dr. Ranney's new breakthrough, the first semi-evergreen to evergreen, pink-bracted dogwood.

CORN005 - *Cornus kousa* MANDARIN JEWEL (Brotzman's Nursery) - orange fruit
--end of OROC Data Sharing

CORN006 - *Cornus mas* CLYDESDALE™ (Songsparrow Nursery, a Klehm original)

CORN007 - *Cornus kousa* SCARLET FIRE™ 'Rutpink' - flower bracts uniformly rich pink, holding this color up to 8 weeks, nearly all of the bract heavily pigmented, leaves clear and unmarked, fall colors red, and it is also considered the heaviest flower of all known pinks in this species (2016). Or: Dr. Tom Molnar, Rutgers University.

CORN008 - *Cornus drummondii* LEMON DROPS™ 'KNI-Yellow' - flowers "soft saffron yellow", fruit yellow maturing to burgundy, clean dark leaf. Offered by <http://www.klynnurseries.com>, 2013 Catalog/No Pricing, accessed 2.17.2016, their own introduction from selected seedling

CORN009 - *Cornus kousa* 'Rosy Curlycue' - habit growth rate very slow. Leaves twisted, pink, green, and white at first. In: <http://www.whistlinggardens.ca/05-downloads/141218-whistling-gardens-garden-centre.pdf>, accessed 10.3.2016

CORN010 - *Cornus kousa* 'Primrose Cloak' - leaves bright yellow in new growth, tinged red in light, slightly undulate, twigs pink and showy. Or, in: unknown origin, described and listed in the US and Canada by Broken Arrow, Rocky Dale, Handy, and Whistling Gardens Nurseries as 10.3.2016.

CORN011 - *Cornus kousa* 'China Curl' - habit slower, compact, shrubby at first. Leaves bright light green, narrowly elliptic to linear-elliptic, highly undulate and twisted, apex distinctly curled down and often in a loop. In:

http://www.bloomriver.com/home/br2/page_2304_16/cornus_kousa_china_curl.html, accessed 10.3.2016

IN, photo: http://www.davidsansjapanesemaples.com/shop/product/z_cornus_kousa_chinesis_china_curl__, accessed 10.3.2016

Ns: this "unique" plant appears identical to a clone of the species labeled as 'Medusa' some years ago (2005) at the JC Raulston Arboretum and documented in Cultivars of Woody Plants

CORN012 - *Cornus obliqua* RED ROVER™ 'Powell Gardens' - 48-60 in. tall x 48-60 in. side, compact, neat. Leaves rich dark purple shades in fall, later more red. Typical species white flowers and showy blue fruit. Ch: USDA 4. Web: <https://www.provenwinners.com/plants/cornus/red-rover-silky-dogwood-cornus-obliqua>, accessed 10.4.2016, new in 2016 trade in US



CORN013 - *Cornus hongkongensis* subsp. *melanotricha* 'Watashi no Ginga' - habit upright, outward spreading, vigorous. Leaves margined and sectored green, yellowish-green, and yellow. Flowers single to double (4-6, sometimes 8 bract), bracts greenish at first, later white. Pat. or: US Patent #26991 on August 2, 2016 to Masashi Shibamichi, Yuki, Japan as sport of subspecies appearing in Tsukuba City, Japan in 2004. Image above is from US Patent Application under which no copyright has been stated or asserted.

COTI001 - *Cotinus coggygria* 'Kanari' - fall colors reliably golden-yellow, showy. Flower plumes pale, nearly white. In, ph: <http://www.hkolster.nl/home-nl/+fotobestanden/+cotinus+coggygriakanari.htm>, accessed 10.11.2016

CRAT001 - *Crataegus succulenta* 'Gregory Canyon' - 3-4m, large shrub to small tree, green, Flowers, fruit very abundant. Or: named from a particularly good population in Gregory Canyon near Boulder, Colorado, USA. Not all stock seems to be as showy.

CRYP001 - *Cryptomeria japonica* 'Dinger' - 4 ft. tall x 3 ft. wide, compact, subglobose overall but like a medusa-head of many narrowly ramified limbs, being a witches broom from 'Araucarioides', irregularly and slightly twisted cord-like shoots, others more stable and bottle-brush like. Or: Japan. In: www.iselinursery.com, online 2016-17 catalog, accessed 10.5.2016

DAPH001 - *Daphne x houtteana* 'February Plum' (Monrovia) - 2-3 ft. tall x wide, subglobose, slow in growth. Leaves at first rich green, later very purple to blackish-green, sometimes near true black, species is called "Black-leaved Daphne", improved for darkness of leaf color. Flowers purplish-pink, a plum shade. USDA 6 HARDINESS, semi-evergreen in many climates. Web: <http://www.monrovia.com/plant-catalog/plants/2919/february-plum-daphne/>

DAPH002 - *Daphne odora* 'Maejima' (Wayside Gardens) - 3-4 ft. tall x wide, globose. Leaves broadly margined cream to light yellow, a wider margin than traditional marginate cultivar of this species, sometimes up to 25-35% of blade surface. Web: <http://www.monrovia.com/plant-catalog/plants/4479/maejima-variegated-winter-daphne/>



DAPNI001 - *Daphniphyllum teijsmannii* 'Mountain Dove', a ghostly marginated and sectored sport with contrasty violet-red petioles. Click image to enlarge. Image above is not

part of OROC Data Sharing and must not be used.

DAVI001 - *Davidia involucrata* 'Aya Nishiki' (5/6)

lc: wide creamy–white margins becoming mottled bluish–green,

lc: white, and green. On the Buchholz website the margins are rich yellow, some are submarginal with banding.

or, pat: Akira Shibamichi, Japan, as seedling, US Patent applied for 5/11/2006

so, ph: http://www.buchholznursery.com/plant_page.html?id=26c354

DAVI002 – *Davidia involucrata* 'China Compact' (2/10)

ha: smaller, more compact

so, in: <http://www.buchholznursery.com> (online catalog Feb. 14, 2010)

REGISTRATION PENDING NEW NAME – *Davidia involucrata* 'Columnaris' invalid post–1959 Latin name (6/7)

ha: upright

ns: requires a new, valid vernacular name if proven of interest.

so: www.bloomrive.com (online catalog 2007)

DAVI003 – *Davidia involucrata* 'Crimson Spring' (6/7)

lc: burgundy–red new growth, later more bronze–red, then more green

so: www.bigdipperfarm.com (online catalog 2007)

so: www.greergardens.com (online catalog 2007)

DAVI012 – *Davidia involucrata* 'Iseli Fastigiata' (10/2013)

ha: narrowly erect.

or: Iseli Nursery, Oregon, introduced 2013, from a distinct narrow seedling





DAVI013 – *Davidia involucreta* 'Lady Dahlia' – leaves irregularly centered yellowish–green to chartreuse aka "gold", marginal serrate tips reddish in sun, chimera about 20–55% of surface, very irregularly in terms of multi–branched sectors or a very open "tree" of paler tissue. Imaged at the Raulston Arboretum (April 2016). It is sold by Buchholz and Broken Arrow nurseries in the US this spring of 2016 as well as Esveld.nl in Europe. It should not be confused with 'Lady Sunshine' with a massively, truly yellow to creamy–yellow. If our math holds here, we now have a shocking seven cultivars of variegated *Davidia* and still not one that blooms from young, tiny trees! You get what can get, I suppose.

DAVI014 – *Davidia involucreta* 'Lady Sunshine'

lc: broadly and irregularly margined yellow, chimera about 25–45% surface, very large and wide, fading more to cream edges, the

lc: center more of an irregularly grayish–green and green sectored "tree" shape with maturity. New growth is very bright.

lc: This is a classic gold marginate sport and not like 'Aya Nishiki' which often shows submarginal banding of 2–3

colors.

lc: The blade has some texturing, rugosity or minute puckering which adds curious and lovely shadows.

Or: Crispin Silva, Oregon, USA

In, so: <http://www.bluebellnursery.com/catalogue/trees/Davidia/D/8733928>, accessed 10.12.2016

Ph: <http://florawonder.blogspot.com/2013/08/favorite-chinese-species.html>

DAVI004 – *Davidia involucrata* 'Kylees Columnar' (2/10)

ht: 10 ft. tall x 2 ft. wide (10 years)

ha: columnar, pillar-like

so, in: <http://www.buchholznursery.com> (online catalog Feb. 14, 2010)

DAVI005 – *Davidia involucrata* 'Platt's Variegated' (2/5)

lc: variably mottled and sectored white

or: Platt Garden, Portland OR USA as seedling

so: [Collectors Nursery](#) (online catalog 2005)

DAVI006 – *Davidia involucrata* 'Purpleleaf' (5/6) provisional name

lc: dark burgundy to purple new growth (RHS 79A,B becoming 79B with 136C)

or, pat: Akira Shibamichi, Japan, as seedling, US Patent applied for 5/11/2006

ns: simple descriptive cultivar names such as "purpleleaf" are not allowed under

ns: the modern code. This clone needs a new name.

DAVI007 – *Davidia involucrata* 'Shibamachi Variegated' (2/10)

lc: broadly margined yellow (to 35%0, red tinged edge in fall

so, in: <http://www.buchholznursery.com> (online catalog Feb. 14, 2010)

DAVI008 – *Davidia involucreta* 'Sonoma' ('Sonoma Clone')

ht: 30–40 ft. tall x 25–30 ft. wide (as species?)

fq: more floriferous than species typical

fd: white bracts to 10 in. long – some species variants are 8 in. at the most

ns: probably belongs to var. *vilmoriniana* which is more common in gardens.

or: Sonoma Hort. Nursery before 1984

DAVI009 – *Davidia involucreta* 'Sumako' (2/10)

so, in: <http://www.buchholznursery.com> (online catalog Feb. 14, 2010, name only, not described)

DAVI010 – *Davidia involucreta* 'Variegata' post–1959 illegit. name (2/2010)

lc: mottled and sectored (20–50%) in bright golden–yellow

so, in: <http://www.buchholznursery.com> (online catalog Feb. 14, 2010)

DAVI011 – *Davidia involucreta* 'White Dust' (2/2010)

lc: subtly spotted white and pale green (30–60%), no bold sectors

lc: or zones

so, in: <http://www.buchholznursery.com> (online catalog Feb. 14, 2010)

DEUT001 *Deutzia hookeriana* 'Carolyn Hardy' (RHS, Nomenclatural Standard, JSTOR)

DEUT002 - *Deutzia* YUKI SNOWFLAKE™ 'NCDX1' - Or: US PPAF, Dr. Thomas Ranney

DEUT003 - *Deutzia* YUKI CHERRY BLOSSOM™ 'NCDX2' - 24cm tall (3 years per US PPAF), expedted to be 2 ft. tall x 3 ft. wide in general landscape use, low-growing, arching-soreading, flowers white striped in pink, abundant, leaves tinged bronze-purple in fall. Or: US PPAF to Dr. Thomas Ranney, Raleigh, North Carolina on 1.28.2016 as cross of *D. gracilis* 'Nikko' x *D. x rosea* 'Carminea'. Appears to be the first very low, groundcover-sized cultivar with pink flowers. Web:

<http://www.ces.ncsu.edu/fletcher/mcilab/introductions/yuki-cherry-blossom-deutzia.html>

DIER001 - *Diervilla lonicera* EARLY BURGUNDY™ 'Gre Earl Bur' - 3-5 ft. tall x wide. Leaves dark burgundy red in new growth, becoming dark green. Flowers apparently typical. Web: www.gardendebut.com, accessed 5.22.2016, https://issuu.com/gardendebut/docs/2016_catalog-online/1

DIER002 - *Diervilla splendens* DIVA™ 'El Madrigal' - Leaves rich dark burgundy red to purplish-red, this dark color all summer, highly textured at times, giving much contrast to yellow flowers, even a richer red in fall. Pat: European PBR. In, ph: <http://www.newplants.nl/en/planten/d/diervilla-splendens-el-madrigal/>. accessed 10.4.2016

DIOS001- *Diospyros virginiana* MAGIC FOUNTAIN™ 'JN5' (Pleasant Run Nursery) - 10-12 ft. tall 5-10 ft. wide, distinctly weeping, inverted or columnar type weeper as young plants, apparently wider with age. Fruits present, female clone, maturing to yellow, edible after frost. Leaves red to yellow in fall, potentially semi-showy. Selected by Ray Jackson, Tennessee, USA.

DIOS002 - *Diospyros kaki* 'Shibamichi Weeping' - moderately to broadly weeping, a classic weeping, upper branches hooked and arching much as *Fagus sylvatica* 'Pendula', Fruit medium orange, a female clone. Selected by Akira Shibamichi, Japan, reported in the US c. 2014. It is readily distinct from MAGIC FOUNTAIN™ of another species by its wider, more open form, and much larger, more orange fruit. Web: <https://jcaulstonarboretum.wordpress.com/>

DISE001 - *Diselma archeri* 'Read Dwarf' -1 ft. tall x 2 ft. wide, groundcover conifer. Leaves rich green. USDA 8. Suitable where hardy like any dwarf *Chamaecyparis* or *Juniperus* clone. Or, in: Iseli Nursery, www.iselinursery.com, accessed 5.22.2016

DIST001 - *Distylium CINNAMON GIRL™ 'PIIDIST-V'* - 2-3 ft. tall x 2-4 ft. wide, mounded, somewhat decumbent, "a more refined look than other *Distylium* on the market" (originator). Leaves small, fine-textured, showy plum purple in new growth, maturing to bluish-green. USDA 7, survived 4-6 deg. F. in above ground container without injury. Or: www.plantintroductions.com, selected 2013-14. accessed 6.15.2016, see <http://www.plantintroductions.com/cinnamongirl8482distylium.html>

DIST002 - *Distylium LINEBACKER™* - <http://www.plantintroductions.com/linebacker8482distylium.html>

ELAE001 - *Elaeagnus x ebbingei* OLIVE MARTINI™ 'Viveleg' (Star Roses and Plants) - 10-15 ft. tall x wide, apparently typical species vigor, upright, dense, more upright and stronger in trials than 'Gilt Edge'. Leaves very dark olive green (base color darker than 'Gilt Edge'), margined light yellow at 10-20% surface, more stable chimera than 'Gilt Edge'. US Plant Patent #20177 on July 7, 2009 to Christian Vivies, France as sport appearing in Toulouse, France.

ELAE002 - *Elaeagnus x ebbingei* MARYLINE® 'Abrela' - leaves centered light yellow to 90% or more of surface, this chimera becoming dark yellow as leaf ages, uniform coloration and one of the most chimera-rich clones known in the genus. Or: Albert Breneliere.

ECARP001 - *Elaeocarpus decipiens* LITTLE EMPEROR® 'MonProud' - 6-8 ft. tall and wide, likely 10 ft. tall x wide with some age, compact, narrowly pyramidal to columnar, slower growth rate, shorter internodes than typical. Leaves elliptic, undulate, slightly twisting, 8.4cm long x 2.3 cm wide (smaller than either parent), venation more pronounced than species typical or either parent, bronze-colored at first, later glossy, dark green, some older leaves red before they drop. Ch: USDA 8 . Pat, Or: US# 17611 on April 17, 2007 to Andrew Scott Proud, Glendora, California USA as cross of two unnamed selections 2001.

ENKI001 - *Enkianthus campanulatus* 'Lipstick' (Rare Find Nursery) - flower corolla white, about 20-25% surface at the apex bright hot pink, not blushed but strongly marked, contrasting much. Rare Find Nursery selection.

ENKI002 - *Enkianthus campanulatus* 'Bruce Briggs' - flower corolla nearly 100% bright pinkish-red red, only the small green calyx giving contrast. Selected Weston Nurseries, Mass., USA by Chris Rogers, Propagator, 1980's, only recently in the the US trade under this name, c. 2015, sometimes called "Weston red seedling" or similar before. Westonnurseries.com, accessed 5.5.2015 does not mention it but shows 'Red Velvet' which we believe to have slightly pink tips over a mostly red corolla and not the same clone. Said to be named for the founder of Briggs Nursery, Washington, USA who list it .

EUCA001 - *Eucalyptus gunnii* FRANCE BLEU® (Sapho.fr) - one of the frosty blue clones ever.

EUCA002 - *Eucalyptus gunnii* AZURA® 'Cagire' - 4m (10 years) where cold hardy, habit neater ,more compact, branching more ornamental, and yet more vigorous than random seedlings. Leaves rich azure blue, appearing quite silvery-glaucous in bright light, darker in shade. More cold hardy in French trials, proven one of the most cold

tolerant clones in this species, handling up to -18 to -20 Deg. C. in France. It survived when other seedlings died. Roots in high percentages, even from coppiced shoots. Eur PBR to Afocel, France. It should be regarded as one of the most cold hardy and proven ornamental clones in the genus today (May 2015).



EUCA003 - Eucalyptus cladocalyx VINTAGE RED™ 'EUC78' - 6-8 m tall x 3-4 m wide as small tree, can be trimmed lower as shrub or hedge at 2-4 m tall. Stems dark red to blackish-red, maturing to purple and grey tones, bark smooth, grey, exfoliating with age. Leaves bright red at first, almost a coral-red shade, becoming rich dark burgundy and

effectively a dark purple from the distance as seen in the above image. It is the first red-leaved clone in this genus in terms of the entire canopy color (not just red tips) and this dark color persisting all year. Dr: high myrtle rust resistance. Photo above courtesy of and copyright owned by Oxbreed Nursery, In: <http://ozbreed.com.au/advanced-trees/vintage-red-eucalyptus-is-a-landscape-tree-with-red-foliage-advanced-trees-range/>, accessed 8.10/2016, grown on "elite understock" from CSIRO which improved on earlier trials where the top might outgrow the understock. If I did not know better I'd guess this was a new beech, *Fagus sylvatica* 'Rotundifolia Purpurea'.

EUON001 - *Euonymus fortunei* DAN'S DELIGHT 'Dandel' - 40cm tall x 60cm wide, compact, dense. Leaves very dark green, margined white to 50-90% or surface, on older mature leaves this white is very clean, bright, not creamy nor muddled in gray tones, one of the most white intense clones reported (May 2015), new tips a bit more yellow to cream in the chimera. Holds color all year where hardy. Selected by Dan Barnet, England, Eur PBR #2014-0121, intro. 2013

EUON002 - *Euonymus alata* 'Russell Milstead' (Song Sparrow Nursery, Klehm) - 3-5 ft. tall x wide (5 years), dense, subglobose. Leaves a very intense, bright ruby red in fall. USDA 4 hardiness.

EUON003 - *Euonymus fortunei* WHITE ALBUM™ 'Alban' - low, dense mound, better form than similar 'Emerald Gaiety'. Leafspot resistant. Leaves with very wide white to light cream margins. Springmeadownursery.com, accessed April 2013.

EUON004 - *Euonymus alatus* 'Firecloud' - 4-5 ft. tall, smaller than species typical. leaves dark green, "evenly splashed with cream". www.cistus.com, accessed 3.29.2016, named by them

EUON005 - *Euonymus japonicus* 'Yellow Pansy' - 1.5m tall (10 years). Leaves in spring bright "pansy yellow", later more typical green. In: <http://www.hkolster.nl/nieuw/sortimentslijst-uk.html>, accessed 10.11.2016

EUON006 - *Euonymus planipes* 'Gold Ore' - leaves mottled and selected gold to yellow, chimera up to 50% coverage. In: <http://www.hkolster.nl/nieuw/sortimentslijst-uk.html>, accessed 10.11.2016, best image at: <http://www.hkolster.nl/home-nl/+fotobestanden/+euonymusplanipesgoldore2.htm>

EUON007 - *Euonymus japonicus* EL DORADO™ 'BR2012' - 60cm x 25cm wide. Leaves larger, bright yellow, remaining so most of the year.

EUON008 - *Euonymus grandiflorus* (carnosus) RUBY WINE® - 1.5-2.5m tall x 1-2m wide. Leaves very showy dark wine red in fall. Fruit showy as the species. Or: Minier Nurseries, France, 2014.

EXOC001 - *Exochorda racemosa* 'Snow Mountain' - 5-6 ft. tall x 5-6 ft. wide, globose. Flowers 3-4cm wide, 5cm deep, very abundant, blooming from the bottom to the top of the plant, giving a more enduring, impressive show. Propagated easily with softwood stem cuttings unlike 'The Bride' which is somewhat difficult. USDA 4 hardy. US Plant Patent #25473 on May 28, 2015 to Herman Geers, Netherlands, a controlled cross 1994, selected in 1997 as the best seedling. Marketed in US by Blooming Easy, PPAF. 'The Pearl' has larger flowers but is much taller.

EXOC002 - *Exochorda* SNOW DAY® SURPRISE 'Niagara' - 36-48 in. tall x wide, a true dwarf, upright-mounded to loose spreading, yet compact. Flowers 3.3cm wide, inflor. to 5.2cm long, very abundant, mostly in large terminal racemes. Roots well from cuttings. US Plant Patent # 21665 to Herman Geers, cross of *E. macrantha* 'The Bride' and unnamed *E. racemosa* in 1994 assigned to Spring Meadow Nursery, widely sold by Proven Winners in 2015.



FAGU001 *Fagus grandifolia* 'White Lightning' (Mark Weathington, HortScience) - paid access to official cultivar release. The original data is from JC Raulston Arboretum website of their new, dwarf and weeping cultivar of the native, American beech species: <http://jcra.ncsu.edu/horticulture/our-plants/results-by-name-serial-number.php?serial=120165>

Ph: Image above copyright owned by and courtesy of Laurence C. Hatch, imaged at the JC Raulston Arboretum.

FAGU002 - *Fagus grandifolia* DIAMONDBACK™ (Ferncliff Cemetery). Legacy cultivar. Previously published in Cultivars of Woody Plants

FAGU003 - *Fagus sylvatica* 'Callista' - as 'Dawyckii' but slower, much denser, semi-dwarf, 2m tall in 10 years. Leaves typical green. hgeersnl, accessed 5.26.2015

FAGU004 - *Fagus sylvatica* 'Eugen' - a semi-dwarf form, often more spreading than typical species, thus may be wider than tall. Leaves with a distinct obtuse, more rounded apex. It is sometimes referred to as 'Fruticosa Eugen' (sophora.pl, accessed 5.31.2015) , in connection with a post-1959 Latin cultivar name for shrubby, dwarf forms called 'Fruticosa' (fruticose=shrubby in Latin). Thought to be of Czech origin.

FAGU005 - *Fagus sylvatica* 'Londal Kribbebuk' - very low contorted-weepers to spreading mound if grafted low, otherwise like a mix of 'Pendula' and 'Tortuosa' if grafted higher, a "cascading carpet" by one account.

FAGU006 - *Fagus sylvatica* 'Sandrode' - sport of the linear-bladed 'Mercedes', also semi-dwarf, dense, compact, can be upright to ovoid, but blades saw-toothed or boldly dentate, more like true 'Laciniata' than 'Asplendifolia' (ie. shallower incisions, symmetrical blade), also more undulate than 'Laciniata'. The name translate to "red sand", possibly because of the red to yellow fall colors?FAGU

FAGU007 - *Fagus sylvatica* 'Tur' - leaves very large to 11cm long, richly textured (sunken veins), very dark purple, more so than either 'Spaethiana'. Hulsdonk.com, accessed 5.31.2015

FAGU008 - *Fagus sylvatica* 'Goldzack' - leaves golden-yellow becoming green by summer.

FAGU009 - *Fagus grandifolia* 'Umbrella' - canopy shaped as the name implies, mounded, mushroom-like, irregularly branched. Should be compared to 'White Lightning' which appears to have very similar habit traits. In: <http://www.coniferkingdom.com>, accessed 10.12.2016

FARG001 - *Fargesia murielae* 'Elias' - 50-60cm tall x 100cm wide, compact, slower, not invasive, mounded with age. Or: Frank Schnuper.

FARG002 - *Fargesia* 'Obelisk' (*F. nitida* x *F. murielae*) - clump distinctly erect, columnar at first, compact, dense, not invasive. Ch: hardy to -25 deg. C. Or: Han Verweih, Het Grassnerf, intro. about 2014.

In, ph: <http://www.breederplants.nl/en/portfolio/shrubs/item/159-fargesia-obelisk-pbr>, accessed 10.15.2016

FATS001 – *Fatsia japonica* 'Spilt Milk' – glossy green, margined and splashed cream to white. Cistus.com, accessed 4.22.2015, their own selection

FATS002 – *Fatsia polycarpa* 'Needham's Lace' – 10 ft. tall or larger. Leaves suffused silver over green, major veins much whiter. Edward Needham selection.

FICU001 - *Ficus afghanistanica* 'Silver Lyre' - 20 ft. tall x 10 ft. where fully cold hardy, very vigorous. Leaves deeply lobed, incised, "snowflake-shaped", silvery silvery-green to light silver (much greener in species typical). USDA 7b. Sean Hogan (cistus.com), accessed 4.22.2015. This species is cold hardy in 7b and higher with distinctly incised and showy blades not unlike a cut-leaved mulberry or *Ficus carica* but usually smaller and quite artistic and showy as such.

FICU002 - *Ficus afghanistanica* 'Green Filigree' - 15-20 ft. tall, similar to species. Leaves "intricately lobed, filigreed...deep green". Or, in: www.cistus.com, accessed 3.29.201-
www.cistus.com, their own introduction

FICU003 - *Ficus afghanistanica* 'Dwarf Green Filigree' - 3 ft. tall in many years, smaller than species and 'Green Filigree'. Leaves finely incised, filigreed, lacy. Or, in: www.cistus.com, accessed 3.29.2016, their own introduction.

FICU004 - *Ficus carica* MISS LITTLE FIGGY™ 'MAJOAM' - 4-6 ft. tall x 3-4 ft. wide, dwarf to semi-dwarf. Leaves bluish-green, deeply lobed. Fruit dark purple. Ornamental-edible niche. <http://www.gardendebut.com/plant/Little-Miss-Figgy-Dwarf-Fig>, accessed 9.20.2016

FORS001 - Forsythia x intermedia MAGICAL® GOLD 'Kolgold' (Monrovia) - 3-5 ft. tall x 3-4 ft. wide. Flowers extra large, floriferous, covering nearly every stem of new and old wood, one of a few that bloom from both. Therefore useful as a long cut flowering spray. Leaves a rich green. Bred by Peter Kolster.

FORS002 - Forsythia x intermedia 'Nimbus' (Minier Nurseries) - compact (more so than parent 'Courtijau'), upright to outwarding spreading, vigorous (more than parent 'Courtijau'), freely branched, dense. Flowers numerous, longer blooming and also earlier than parent 'Courtijau'. *Phytophthora* resistant. US Plant Patent #23838 on August 20, 2013 to Patrick Pineau, cross of 'Courtijau' x unknown male clone, 2004, selected 2006, assigned to Pepinieres Minier.

FOTH001 - Fothergilla gardenii 'Bill's True Dwarf' (Rare Find Nursery)

FRAN001 - Franklinia alatamaha 'Ben's Best' (Rare Find Nursery) - "a particularly vigorous form" (RFN, website, accessed 10.2.2016). Or: Hank Schannen

GARD001 - Gardenia jasminoides (G. augusta) 'Golden Doubloons' named by Nurseries Caroliniana and seen here at the Raulston Arboretum Lathhouse is the first highly variegated, very gold clone. It looks rather lime and chartreuse here in spring 2014 but will get goldier with time. It's a very interesting new plant.

GARD002 - Gardenia jasminoides 'Cream Picotee' - 3-4 ft. tall x 2-3 ft. wide. Flowers semi-double, large, similar to 'Chuck Hayes'. Leaves "smallishg, shiny, green...both streaked and spotted creamy whites". Or, in: www.cistus.com, accessed 3.29.2016, their own intro. Gardenia jasminoides 'Cream Picotee' - 3-4 ft. tall x 2-3 ft. wide. Flowers semi-double, large, similar to 'Chuck Hayes'. Leaves "smallishg, shiny, green...both streaked and spotted creamy whites". Or, in: www.cistus.com, accessed 3.29.2016, their own intro.

GARD003 - Gardenia jasminoides COCONUT MAGIC™ 'Extra Large Cream' - 48 in. tall x wide, flowers large at 5-6. in wide, double, creamy-white. Ball Ornamentals exclusive, accessed 1.16.2016

GARD004 - Gardenia jasminoides BITTY BOUTONNIERE™ 'Leethree' - 2.5 ft. tall x 3.5 ft. wide, compact, mounded. Flowers single, radial ("daisy-like"), very small (5.5cm wide), highly scented. Intro. Home Garden TV (HGTV) 2015. Or, pat: Robert Lee, Independence, Louisiana, US PPAF files 8.11.2014, open-pollinated from 'Daisy'.

GARD005 - Gardenia jasminoides 'Leefour' - 60cm tall x 50cm wide, upright, vigorous yet remaining compact, more adpted to US southern gardens, more heat tolerant, larger and stronger than parent 'Daisy'. Leaves glossy, dark green, 6.0cm long x 2.8cm wide. Flowers highly scented. Or, pat: Robert Lee, Independence, Louisiana, US PPAF files 8.11.2014, open-pollinated from 'Daisy'.

GARD006 - Gardenia jasminoides ScentAmazing™ 'Leetwo' - 3-4 ft. tall x 4 ft., wide, habit compact, very dense, smaller and stronger than parent 'Daisy'. Leaves darker green and more glossy than parent 'Daisy'. Flowers small, very highly scented, single, radial petals, blooming early and over a long period. Very heat tolerant, more suitable for US southern garden conditions. Or, pat: Robert Lee, Independence, Louisiana, US PPAF files 8.11.2014, open-pollinated from 'Daisy'. Intro: Southern Living Plant Collection.

GARD007 - Gardenia jasminoides 'Genie-2' - dense, low-growing, 60cm tall (2 years). Leaves dark green, 60mm long x 15mm long. Flowers 5cm wide, petals 30mm long x 20mm wide, double in 3 whorls. Prop: roots easily from cuttings. Pat, or: US# 26734 on May 17, 2016 to Allyn Cook, Gainesville, Florida, USA as seedling of stockin Alachua, Florida.

GARD008 - Gardenia jasminoides var. radicans O SO FINE™ 'KEN04' - 30 cm tall x 100 cm wide, mounding to groundcover type, "dwarf form with softer appearance", short internodes, finely-textured. Flowers white, more numerous than typical for groundcover types. Or: Kenhurst Nursery, as sport. In: Oxbreed Nursery. Aw: Gold Award, Green Expo Sydney. Web: <http://ozbreed.com.au/hardy-exotic-range/o-so-fine-gardenia-is-a-finer-leaf-groundcover-plant-with-masses-of-white-flowers-hardy-exotic-range/>

GARD009 - Gardenia jasminoides SNOW GIRL™ 'CP14ER789' - 24 in. tall x 36 in. wide, compact, mounded, semi-dwarf. Leaves small, very dark green, typical of modern dwarf singles. Flowers single, 5-petaled. very floriferous. In, ph: <http://www.hawksridgefarms.com/viewplant.php?id=2109>, accessed 10.7.2016

GELS001 - Gelsemium JASMINE DUET® (G. rankinii x G. sempervirens) - said to combined the best traits of both southern US species, flowers very abundant, corolla as in both species, long bloom period into winter. In, ph: <http://gardenersconfidence.com/plants/jasmine-duet-jessamine>, accessed 10.11.2016. Ns: the choice of the trademark name is perhaps unfortunate as this genus is not a Jasmine in any sense but by southern traditional, botanical and by folklore, the "Jessamine".

Cultivars of Woody Plants is our standard for the previously known, existing 197 named cultivars.

GINK001 - Ginkgo biloba 'Jagged Jade' - leaves thicker than parent 'Jade Butterfly' (sport of) and with a jagged, irregular sawtooth margin of irregular sizes, perhaps 25-45 teeth per blade. So: www.mrginkgo.com, accessed 5.16.2016

GINK002 - Ginkgo biloba f. fastigiata 'Grindstone' ('Grind Stone') - 30 ft. tall x 5 ft. wide, fastigiata to narrowly columnar. Or: from a notable tree in Grinstone Lake, New York, USA.

GINK003- Ginkgo biloba 'Folkert' ('Folkert's Select' invalid) - slow, dwarf. Leaves smaller. So: www.handynursery.com, accessed 5.6.16.2016

GINK004 - Ginkgo biloba 'All Gold' - leaves golden-yellow in spring, summer, and more so in fall, can burn in sun. In: Brent Markus per Mesterhazy, Conifer Treasury, accessed 5.21.2016

GINK005 - Ginkgo biloba 'Snow Cloud' - leaves heavily suffused yellow over most of the blade in spring and into summer, unlike most summer-gold ginkgos this one has a cloudy, creamy or whitish upper leaf margin, some leaves quite a pale yellowish-white. In: www.coniferkingdom.com, accessed 5.22.2016

GINK006 - Ginkgo biloba 'Slovakian Princess' - miniature from witches broom, dense. Leaves tiny, only about 1 inch wide, not a full fan but still bilobed most of the time, new growth distinctly folded and cup-shaped though not fused. In, ph: <http://www.coniferkingdom.com>, accessed 10.12.2016

GLE001 - STREET KEEPER® 'Draves' (streetkeeper.net) - 45 ft. tall x 18-20 ft. wide (50 years), columnar to narrowly ovoid, central leader dominant, strong crotch angles, reminds us of the old 'Elegantissima' but denser, narrower, suitable for larger city streets with half or less than normal spread. Leaves dark green, more textured, yellow in fall. No fruit seen in 50 years. US Plant Patent #21698, Tom Draves, found near Buffalo, New York from a notable tree.

GORD01 - Gordonia lasianthus 'Swampy' - habit more vigorous. More cold hardy, selected from near Aiken, South Carolina, a more northern range than some nursery stock. Selected by Chuck Weeks, former employee with Nurcar.com, accessed April 2013.

GYMN001 - Gymnocladus dioica 'UMNSynergy' TRUE NORTH™ - vase-shaped, much narrower for small spaces (30-40 ft. vs. 40-60 ft. of species). Fruitless. University of Minnesota introduction.

HALE001 - Halesia carolina CRUSHED VELVET™ 'JFS-PN2Legacy' (J.F. Schmidt) - 20 ft. tall x 15 ft. wide, ovoid, more compact and slightly more narrow, finer textured branching. Leaves rich bluish-green, smaller dimensions, textured, and waxy, hence the trademarked name.

HAMA001 Hamamelis 'Foxy Lady' - flower tepals vark ruby red to dark violet-red, one of the darkest reds known in the genus (May 2015). Selected by Chris Lane.

HAMA002 Hamamelis virginiana 'Lemon Lime' (Rare Find Nurseries) - leaves very finely striped, speckled, and thinly sectored in typical green, lime green, chartreuse and light yellow, about 50% chimera and thus highly colorful.

HAMA003 Hamamelis vernalis ORANGE SUNRISE™ (Song Sparrow Nursery) - 5-6 ft. tall (10 years), flowers abundant, very fragrant, tepals orangish-gold, calyx a contrasting dark red. Leaves in dark red shades in fall. Roy Klehm selection.

HAMA004 Hamamelis GRAPE FIZZ™ 'KLMNN' (Song Sparrow Nursery) - 5 ft. tall x wide (10 years). Flower tepals an unusual lavender-purple. Leaves with gold colors in fall. Roy Klehm selection

HAMA005 - Hamamelis vernalis PURPLE PRINCE™ 'KLMKK' - 7-10 ft. tall x 6-8 ft. wide (10 years), erect, vigorous.. Flower tepals deep rosy lavender, appearing a lavender-purple to violet from a distance. Leaves green, becoming orange and red shades in fall, dropping cleanly before next spring's floral show. Or: Roy Klehm, introduced www.songsparrow.com, accessed 4.6.2016

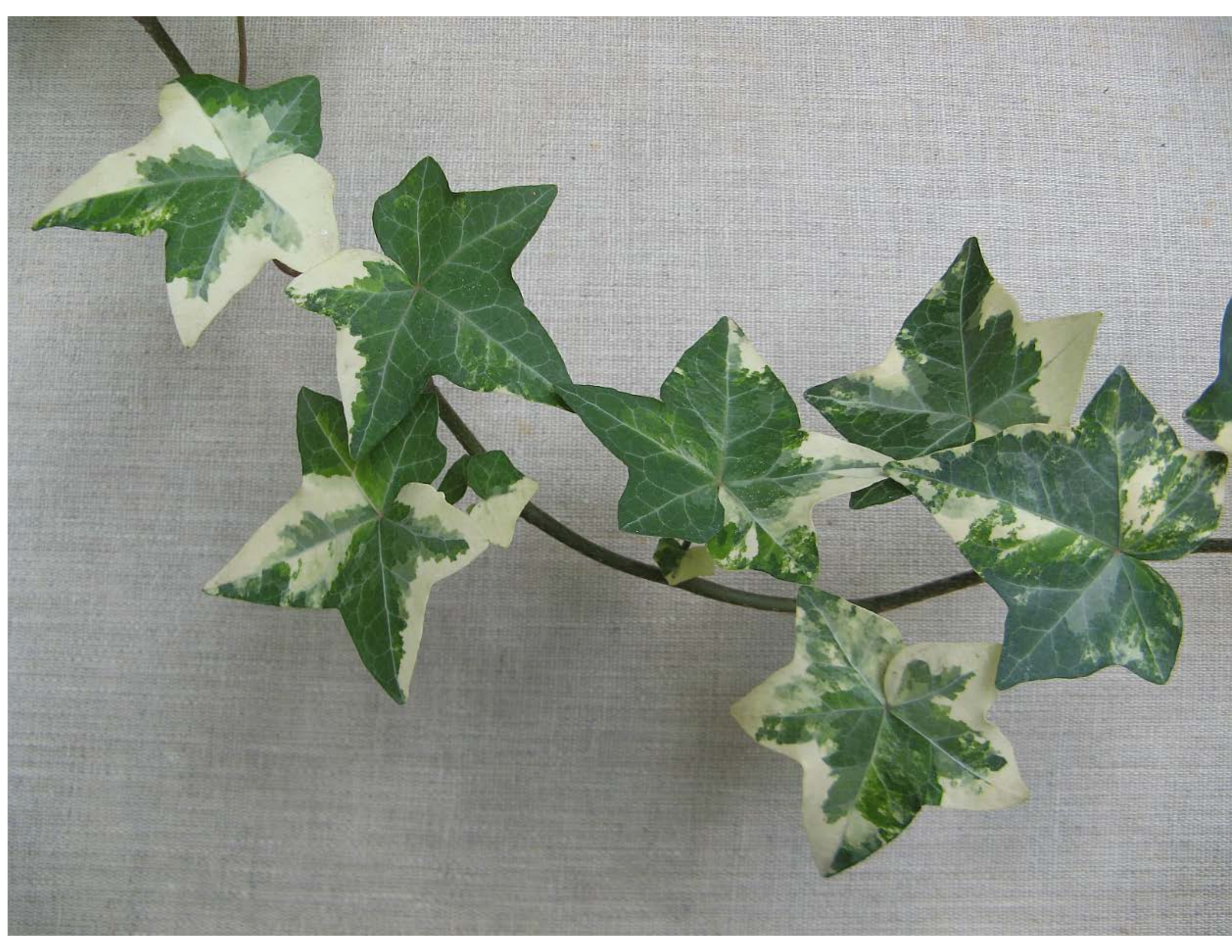


HEDE001 - *Hedera helix* 'Niliata' - click above image to enlarge. Habit slower, vinous. Stems red to reddish-violet or tinged so. Leaves 5-lobed, star-shaped, entire, blade very flat, terminal lobe dominant, 5cm long x wide (average), goldish-yellow to greenish-yellow, later becoming more light green to ivory depending on light and temperature, base deeply cordate, apex subacute. The originator says " 'Renton Gold' has more greenish, not gold color, not star-shaped leaves, with slightly undulate, not flat margin, and rounded, not subacute apex, and reddish-green not red as in the 'Nilita' stem. Our observations that the lobes are more narrow, less undulate, more uniform in color (less suffused green in early leaves), and far less rugose than the popular 'Buttercup'. Or: Andriy V. Yena, as sport of 'Surprise' in 2010, courtesy to originator for use of this photo and description. Not registered with the American Ivy Society.





HEDE002 - *Hedera helix* 'Yarik' - click image above to enlarge. Habit very slow, self-branching, dwarf, miniature class. Leaves lanceolate to narrowly three-lobed, lateral lobes 1-2, rarely absent, these lobes very small, reduced at times to large teeth or wide undulations of the margin, sometimes their upper surface at a right angle to the margin above, dark green, 2.5 cm long x 1.0 cm wide (average), base cunate, aboex bluntly obtuse. Considered resistant to *Xanthomonas hortorum* pv. *hederae*. The originator states it differs from 'Arguta' with it's greenish, not whitish veins, ribbed midrib [raised line], and more rounded apex. Or: Yaroslav A. Yena, as sport of 'Anake' in 2014, courtesy to originator for use of this photo and description.



HEDE003 - *Hedera helix* 'Papa Yena' - click image above to enlarge. Leaves palmately 5-lobed to medium depth (about 1cm), star-shaped due to about equal primary vein angles, entire, 5 cm long x wide, medium green with some brighter sectors of green, heavily mottled yellowish-cream at about 35-50% surface, many blades also irregularly margined in the same shade, deeply cordate, basal lobes often overlapping, apex subacute, terminal lobe wide and symmetrical. The originator states that 'Pittsburgh Variegated' less regularly mottled with almost no marginal chimera and has narrower blades with a longer terminal lobe. 'Harlequin' is similar but belongs to subsp. *hibernica*, a tetraploid. Or: Andriy V. Yena, found as sport of 'Mona Lisa' in 2011, name for the originator's father Prof. Vasily Yena. Courtesy to the originator for use of this image.



HEDE004 - Hedera helix 'Eny' - "Leaves narrow cordate to cordate, 4 cm long x 3 cm wide (average), light (limey) green with white and grey-green spots and mottles, apex rounded, stems and petioles red. 'Eny' could be compared to at least three cultivars: 'Eileen', 'Eugen Hahn', and 'Bruder Ingobert'. 'Eny' differs from 'Eileen' with its more flat, and typically narrow cordate leaves (not wavy, wide, five-lobed, or reniform as in 'Eileen'), gray-green spots and zones together with white spots and smears, never with the faint reddish tints (leaves of 'Eileen' spotted white or creamy with faint reddish tints). Leaves of 'Eny' are never colored dark green or produce acute lateral lobes as 'Eugen Hahn'. Rarely, similar narrowly cordate leaves can be produced by 'Bruder Ingobert' but typically its leaves are 3-5 lobed, dark green, less white spotted and much more gray-

green zoned". Or: Dr. Andriy V. Yena, Professor and Head of the Dept. of Phytobiology, Simferopol, Republic of Crimea, the previous description written by the originator.

HSYR001 - Hibiscus syriacus PURPLE PILLAR™ 'Gandini Santiago' - 10-16 ft. tall, columnar (officially "pyramidal" per US Plant Patent), neat. Flowers sterile, semi-double, somewhat open-faced to show markings, rich purplish-lavender, heavily marked and streaked red to violet-red, each zone orbicular with 7-12 claw-like or striped projections. Or: US Plant Patent #25568 on May 19, 2015 to Marinus van Aart, Oudenbosch, The Netherlands, as chance seedling found in Girona, Spain 2002. In: www.springmeadownursery.com, accessed 2.28.2016

HSYR002 - Hibiscus syriacus RUFFLED SATIN® 'SHIMCR1' - US Plant Patent #26222

HSYR003 - Hibiscus syriacus LIL' KIM™ 'SHIMRV24' - US Plant Patent #26374

HSYR004 - Hibiscus syriacus PEPPERMINT SMOOTHIE™ 'DS04PS' - 8 ft. tall x 4 ft. wide, dense, freely branched. Leaves dark green, Flowers fully double, petals and petaloides variable in size, somewhat undulate, mix of pale pink and darker pink shades to some near reddish-purple, effectively all pink from a distance but bicolored on close inspection, early season, uniform, floriferous, long bloom period. Or, pat: US# 26551 on March 29, 2016 to Don Shadow, Winchester, Tennessee as open-pollinated cross. Source, photo: http://www.greenleafnursery.com/index.cfm/fuseaction/plants.plantDetail/plant_id/6138/index.htm, accessed 4.6.2016

HSYR005 - Hibiscus syriacus LIL' KIM™ RED 'SHIMRR38' - 304 ft. tall x wide, compact, erect, vigorous, uniform. Flowers 5.75 cm wide, petals rich rose-pink to reddish-purple, distinct dark red eyezone. Leaves dark green. US Plant Patent #27195 on September 27, 2016 to Kyung Shim, Cheonan-si, Korea as part of a breeding program, cross made 2001, assigned to Spring Meadow Nursery. In, ph: https://www.greenleafnursery.com/index.cfm?fuseaction=plants.plantDetail&plant_id=7113&typeID=&whichname=genus, accessed 10.5.2016

HSYR006 - Hibiscus syriacus 'Gandini Santiago' - US Plant Patent #25568

HSYR007 - Hibiscus syriacus RASPBERRY SMOOTHIE™ 'DS03RS' - habit dense, compact, freely branching, more compact than 'Notwood3'. Leaves dark green. flowers rich raspberry-pink to pinkish-purple, double, numerous petaloids in center, no eyezone generally visible, long blooming period. Or, pat: US# 27196 on September 27, 2016 to Don Shadow, McMinnville, OR as open-pollinated seedling of unnamed parent 2007. Li: Althea `Raspberry Smoothie` Oklahoma Gardening Show Notes. Jul. 13-14, 2013. <http://www.oklahomagardening.okstate.edu/show-notes/2013/july-13-14-2013-show-notes> (2 pages). cited by US Patent examiner.

HSYR008 - Hibiscus syriacus 'Carpa' - Flower petals violet, double. Leaves broadly margined yellow (10D) in spring or new tips, fading paler (RHS 157D) Or, pat: US# 24965 on October 14, 2014 to Paul Van Der Kroft, Strathroy, Canada as sport of 'Ardens'

HSYR009 - Hibiscus syriacus FRENCH CABERET® PASTEL 'MINDOUB1' (FRENCH CABERET® BLUSH) - stronger, more vigorous plants than old clone 'Leopoldii'. Flowers fully double, informally so, white streaks in shades from violet-red to pale pink, many pink shades between these, this rich pigment about 10-40% petal surface but variable. Sterile. Or: Corinne Liquiere, Minier Nurseries, France, introduced 2014, widely sold 2015. Ns: the trademarked name is mostly with the world PASTEL in Europe but has been sold as BLUSH in the US, keeping the same 'MINDOUB1' true cultivar name. As the originator uses the PASTEL name, we accept this here as correct.

HSYR010 - Hibiscus syriacus FRENCH CABERET® PURPLE 'MINDOUV5' - flowers fully double, informal, rich violet-purple, fairly uniform in the one color. Eval: improved over old clone 'Souvenir de Charles Breton'. Or: Corinne Liquiere, Minier Nurseries, France, introduced 2015, widely sold 2016.

HSYR010 - Hibiscus syriacus FRENCH CABERET® RED 'MINDOUR1' - flowers fully double, informal, dark violet-red. Or: Corinne Liquiere, Minier Nurseries, France, introduced 2015, widely sold 2016.

HSYR011 - Hibiscus syriacus SUP'HEART® 'Monomb' - flowers white, quite wavy and undulate, more so than most red-eyed whites, small to medium dark red eye to 10% surface or less, diameter quite large Or: Minier Nurseries, 2012.

Editor's Note: Hypericum - there are numerous floricultural cultivars released each year, most for the cut fruit trade. You know...the flowers baskets you send to your grandma on her birthday and she asks what the round green things on twigs are. We are including only those cultivar known to exist in the outdoor, landscape trade and are proven for that culture.

HYPE001 - Hypericum calycinum GOLDEN RULE 'NCHCI' - photo courtesy of and copyright owned by Dr. Tom Ranney, NC State University. Please click image to enlarge. Above image is not part of OROC Data Sharing.

HYPE002 - Hypericum BLUE VELVET™ (Hawksridge Farms)

HYPE003 - Hypericum kalmianum COBALT-N-GOLD™ 'PIIHYP-I' - 2-3 ft. tall x 4-5 ft. wide, compact but not overly dense, somewhat open and natural-looking branch architecture, mounding, not splaying out or getting rough with age, not producing open or unkempt centers. Bark cinnamon-brown, exfoliating, semi-showy. Leaves silvery-green, effectively bluish-green as the trademarked name implies, fall tones yellow, red, and orange. Flowers bright yellow, small but numerous heads at the apices, bloom period long as in late spring to early summer. US Patent #25318 on Feb. 24, 2015 to Joshua Kardos and Dr. Michael Dirr of Georgia, USA, as open pollinated seedling. assigned to plantintroductions.com.

HYPE004 - Hypericum kalmianum BLUES FESTIVAL™ 'SMHKBF'- 24-36 in. tall x 24-48 in. wide. Leaves elliptic, distinctly bluish-green to - silvery-blue. Flowers to 1 in. wide, single, very long bloom period.

HYPE005 - Hypericum calycinum 'Fiesta' . . <http://www.plantdelights.com>, accessed 1.16.2016, new for 2016016

HYPE006 - Hypericum CORNFLAKES® 'Vappzalm' - 50-70cm tall. Rust resistant. Leaves retained in autumn. Fruit brownish-red, calyx lime green, later more black, lasting up to December. Flowers bright yellow.

HYPE007 - Hypericum androsaemum 'Matisse' - (Dr. Tom Ranney, North Carolina State University)

HYPE008 - Hypericum androsaemum 'Pollock' (Dr. Tom Ranney, North Carolina State University)

HYPE009 - Hypericum androsaemum 'Picasso' (Dr. Tom Ranney, North Carolina State University)

ILEX001 - Ilex pedunculosa 'Mountain Mist' (Raulston Arboretum, Instagram) - legacy name, registration requested

ILEX002 - Ilex 'Elizabeth Coleman' (Camellia Forest) - legacy name, registration requested

ILEX003 - Ilex x meserveae SCALLYWAG™ (Monrovia) - legacy name, registration requested

ILEX004 - Ilex vomitoria MICRON® (Garden Debut) - legacy name, registration requested

ILEX005 - Ilex vomitoria EUREKA GOLD™ (Garden Debut) - legacy name, registration requested

ILEX006 - Ilex crenata 'Adorned' (JC Raulston Arboretum) - legacy name, registration requested

ILEX007 - Ilex crenata BRASS BUCKLE™ - - legacy name, registration requested

ILEX008 - Ilex opaca 'Winter Sun' (Rare Find Nursery, Holly Ridge Nursery) - we are all used to red and some gold-berried American hollies but here's one of the few that bridge that gap with golden-orange to pale orange fruit colors.

ILEX009 - Ilex vomitoria 'Lances Weeper' - vigorous, pendulous. Based on JC Raulston Arboretum, accession #040566 in 2004.

ILEX010 - Ilex verticillata 'Firestorm' - see [American Holly Society Registration](#)

ILEX011 - Ilex 'Baltimore Blaze' - see [American Holly Society Registration](#)

ILEX012 - *Ilex x attenuata* 'Blackwater' - 15 ft. tall x 8-10 ft. wide, vigorous, open branched unless heavily pruned, best trained in conical form. Stems purplish at first, later grayish-brown. Seedling of 'East Palatka' but resembling 'Foster No. 1', having more drought and soil saturation tolerance but it. Female clone, fruit heavily. Panhandlegrowers.com, accessed 5.9.2015.

ILEX013 - *Ilex cassine* 'Dodds Yellow' - 12-15 ft. tall x 8 ft. wide, open, erect. Leaves dark green, toothed. Fruit yellow, showy. Tom Dodd. Panhandlegrowers.com, accessed 5.9.2015.

ILEX014 - *Ilex cassine* 'Tensaw' - 15-20 ft. tall x 10-15 ft. wide, more heavily branched than some forms, narrowly to moderate pyramidal, crown often rounded with age. Leaves light green, very ovate, darker green with maturity. Panhandlegrowers.com, accessed 5.9.2015.

ILEX015 - *Ilex vomitoria* 'Miss Allentown' - 10 ft. tall x 4 ft. wide, dense, multi-trunked, narrower, very heavily branched. Leaves smaller, dark green. Fruit small, abundant. female clone. Selected by PGI. Panhandlegrowers.com, accessed 5.9.2015.

ILEX016 - *Ilex vomitoria* 'South Harbour' - 12-14 ft. tall x wide, very dense, wider as most species form. Leaves dark green, slightly purple in new tips. Selected by PGI from Little Sabine Bay, Pensacola Beach, Florida, USA. Panhandlegrowers.com, accessed 5.9.2015.

ILEX017 - *Ilex opaca* 'Brotzmans Male' - proven male pollinator. Selected by Brotzman's Nursery, Ohio, USA.

ILEX018 - *Ilex x meserveae* 'Little Gloss' - 50-150cm tall x 50-100cm wide, slow, dense, shrubby. Leaves bright medium green becoming dark green, very glossy, the name suggesting a little plant with gloss not a low amount of luster. Male clone, no fruit, good pollinator. Bred by K. Hibbers, Kranenburg, Germany.

ILEX019 - *Ilex maximowicziana* var. *kanehirae* IMPALA® (*Ilex mutchagara* hort.) - 1.5-2.5m tall x 0.5-1.0m wide, erect. Stems purplish, semi-showy. Foliage much as *Ilex crenata* but a sharper apex in general, 2-3 cm long, elliptic, serrulate, light green becoming darker. USDA 6. One reference states "it's correct Latin name is faqr too long and a bit complicated to pronounce and spell, hence its modern trade name IMPALA holly". Thus one might propose this a mere rename of the species but in the course of rooting this material it invariably becomes a popular clone of the species, and surely not it's sole representation worldwide, and may be regarded as a typical name names. First seen by us at havlis.cz, accessed 5.16.2015.

ILEX020 - *Ilex vomitoria* 'Scarlet's Peak' - 20 ft. tall x 3 ft. wide, fastigate to narrowly columnar, very dense, much narrower than 'Will Flemming', the current and popular evaluation standard for narrow Yaupons, a clone which often splits and sends out odd arms after being injured or flopping in portions in a very ungraceful manner, requiring regular pruning, this new clone with branches also much stronger than this standard. Leaves smaller than species typica (23-25mm long x 9.5-12mm wide), very dark green. Fruit red, sometimes numerous (20-35 per later branch), a female clone, not a male fruitless clone as 'Will Flemming'. USDA 7b-8 hardiness. Said to be replacement for the coniferous Italian cypress by some growers. US Plant Patent #20581 to Daniel Batson as cross of unnamed seedlings, selected 2005, patent assigned to Unique Plants Inc.

ILEX021 - *Ilex crenata* LUXUS® GLOBE 'Annys 5' - 60cm tall x 50 cm wide, densely subglobose to mounded, usually wider than tall in photographs, said to combine the best traits of *Buxus* and dwarf *Ilex*. Leaves short, dark green, glossy, mostly flat, about 3-5 small minute teeth per side, holding green color all winter. Ch: to -22 deg. C. Pat: Euro PBR 42629, bred by Andre van Nijnatten of Zundert.
Web, ph: <https://www.plantipp.eu/en/Plants/ilex-crenata-luxus-globe-annys-5pbr-2/>, accessed 10.11.2016

ILEX022 - *Ilex crenata* LUXUS® SPIRE 'Annys 4' - 175cm tall x 50cm wide, narrowly pyramidal, strong, spire-like if trained well. Leaves flat, dark green, glossy all year, not discoloring. Sex: male, no fruiting. Ch: -22 deg. C. Pat: Euro PBR 43630 to Andre van Ninjatten of Zundert.
Web, ph: <https://www.plantipp.eu/en/Plants/ilex-crenata-luxus-spire-annys-4pbr-2/>, accessed 10.11.2016

ILEX023 - *Ilex aquifolium* RED TIPS™ 'Spek 02' - leaves broadly margined a true gold, chimera 10-25% surface, new growth a very distinct and dark ruby red, very showy, if trimmed regularly these new tips provided a rich tricolor effect unlike most variegated hollies. Pat: US# 26088, Euro PBR 20131968. In: <http://www.newplants.nl/en/planten/i/ilex-aquifolium-red-tips/>, accessed 10.11.2016
Best image: http://globeplanter.com/illustration/catalogue/large/ilexredtipscope_0.jpg

ILEX024 - *Ilex x meserveae* 'David Carroll' - 30cm tall x 27cm wide as young plants, compact, rounded, freely branching, dense, bush, slower than parent 'Blue Princess'. Leaves bright yellow to yellowish-green (RHS 151C abd 151D, 184A, 176C, 143C)., 3.5-4.0cm long x 2.4cm wide, petioles 6mm long x 1m wide, ovate, apex acute, base

obtuse to truncate, margins serrate with short spines. Pat, or: US# 26926 on July 12, 2016 to David Carroll, sport of 'Blue Princess;', found November 2003 on plants in Wayne Township, PA, USA. patent assigned to Spring Meadow Nursery. Google Patent: <https://www.google.com/patents/USPP26926>, accessed 8.6.2016

ILEX025 - Ilex glabra 'Gold Mine' - sport of 'Shamrock' with golden margins. Or: Gabe Cesarini, US Patent #14233

ILEX026 - Ilex crenata 'Golden Rock' - habit upright, slight open, reasonably compact. Twigs dark, contrasting with bright foliage. Leaves effectively all yellow, in fact suffused yellow over green, mottled gold, and also all gold. In, ph: <http://www.newplants.nl/en/planten/i/ilex-crenata-golden-rock/>, accessed 10.4.2016

ILEX027 - Ilex crenata 'Glorie Dwarf' - 50cm tall x 70 cm wide (5-6 years), dense, dwarf, compact, somewhat irregular tufted surface, possible Buxus replacement, 30% slower than parent 'Glorie Gem'. Leaves smaller and darker than parent 'Glorie Gem'.Or: Germany as variation of 'Glorie Gem'. In, ph: <http://www.newplants.nl/en/planten/i/ilex-crenata-glorie-dwarf/>, accessed 10.4.2016

ILEX028 - Ilex aquifolium 'Glanzzweg' - 10-50cm tall, dwarf, pyramidal with time, leaves very dark green. In, ph: <http://www.hachmann.de>, accessed 10.6.2016, appears to have been in the European trade for several years.

ILEX029 - Ilex crenata 'Shogun' - Stems light red, slightly showy. Habit generally spreading, wider than tall, subglobose or otherwise trained for hedging or large groupings. Leaves bright green, fairly small, reminding us at least of a Microphylla Group leaf aka 'Helleri' but on a much stronger plant. Or: Frank Schnupper, Germany as seedling. Pat: Euro PBR 2015/1015 In, ph: <http://www.newplants.nl/en/planten/i/ilex-crenata-shogun/>, accessed 10/7/2016. Originator's website: http://www.schnupper-baumschule.de/de/Sortiment/Ilex_Samurai_und_Shogun_.html

ILEX030 - Ilex crenata 'Samurai' - i80cm tall, vigorous, very quite size, easily shaped and trained, narrowly pyramidal to columnar, Buxus substitute. Leaves light green, finally darker. Pat: Euro PBR 2015/1014. Or: Frank Schnupper, Germany as seedling. In, ph: <http://www.newplants.nl/de/planten/i/ilex-crenata-samurai/>, accessed 10.7.2016. Originator's website: http://www.schnupper-baumschule.de/de/Sortiment/Ilex_Samurai_und_Shogun_.html

ILLI001 - Illicium anisatum 'Allard' - flower tepals white.

ILLI002 - Illicium anisatum PURPLE GLAZE™ (Nurseries Caroliniana) - new growth very glossy, dark purple as if varnished in a dark blackish-purple sheen, later green, still glossy, eventually very typical and less glossy.

ILLI003 - Illicium parviflorum 'Florence' (Plant Dellghts)

ILLI004 - Illicium floridanum MISS SCARLETT® 'JCJC' - Habit denser than species. Leaves more rounded. flower rich pinkish-red (lkight to medium red), more strongly scented that species.James Fleming selection, introduced as a Southern Living Collection before April 2014.

ILLI005 - Illicium parviflorum BananAppeal™ 'PliIP-I' - 3-4 ft. tall x wide, compact, habit not gangly or irregular as 'Florida Sunshine'. Leaves yellow to greenish-yellow, bright, appear to be wider than 'Florida Sunshine', not bleaching as much as winter. Web: <http://www.plantintroductions.com/bananappeal8482smallanisetree.html>, accessed 10.4.2016

JASM001 - Jasminum mesnyi 'Sunglo' is absolutely one of the finest vine-like or long-branching shrubs for rich gold color. It is unfortunately not hardy for many of our readers (USDA 6b-7) but would certainly make a killer conservatory shrub if given strong enough light. It is also strong enough to make a summer outdoor treat if overwintered in a northern greenhouse. It's habit is quite different from FIONA SUNRISE™ and these colors tend to be richer in the new tips and more green with maturity of the leaf.

JASM002 - Jasminum beesianum 'Marshall Olbrich' (Cistus Nursery)

JASM003 - Jasminum sambac SUMMER SOUL® 'Monhariklia' - 6-8 ft. tall x 3-4 ft. wide where fully hardy, more upright and neater (less loose, vining) than 'Grand Duke'. Flowers larger, very full double (25+ unfused petals), petals and tepals highly congested, center of bloom slightly yellowish to lime, otherwise classic white to ivory of species, fully white at maturity (not as greenish as 'Grand Duke'), highly scented, 3.0 cm wide, 3.9 cm deep. USDA 9 hardiness. Pat, Or: US# 27171 on September 20, 2016 to Eugenia Tzioros, Matthews, North Carolina, found as mutation on plant in Volos, Greece. Web: <http://www.monrovia.com/plant-catalog/plants/3953/summer-soul-arabian-jasmine/>,

accessed 9.26.2016

JUNI001 - Juniperus scopulorum SKY HIGH™ - legacy name, registration requested

JUNI002 - Juniperus virginiana (x horizontalis?) GREY GUARDIAN (Garden Debut) - - legacy name, registration requested

JUNI003 - Juniperus x media LEMON PFIZZ (Plant Haven) - - legacy name, registration requested

JUNI004 - Juniperus x media SEA OF GOLD (Monrovia) - legacy name, registration requested

JUNI005 - Juniperus x media ETERNAL GOLD™ - legacy name, registration requested

JUNI006 - Juniperus horizontalis GOLDEN FUTURE™, accessed 4.12.2015

JUNI007 - Juniperus rigida var. conferta 'Osaka Dwarf Blue' - Nurcar.com, accessed January 2013.

JUNI008 - Juniperus x media 'Girard Millenium' - as SAYBROOK GOLD™ but slightly mottled white, a chimeral mutation. Girard Nurseries, sport of their own SAYBROOK GOLD, found 2000, intro, 2014.

JUNI009 - Juniperus squamata 'Green Star' - Girardnurseries.com, 2014, this firm now closed.

JUNI010 - Juniperus STAR POWER™ 'J.N. Select Blue' - 6-7 ft. tall when similar J. chinensis 'Ames', 'Iowa' and J. virginiana 'Caneartii' were just 4-5 t. tall at the same age, hence very vigorous, narrow upright, narrowly ovoid to narrowly pyramidal, dense, rich silvery blue. Leaves highly-divergent, similar to J. communis and juvenile foliage of J. chinensis, many star-shaped green leaves with star-shaped tips appearing, bright stomatal bands very apparent on the upperside. Michael Yanny, 1998 found as possible cross of J. communis x J. chinensis, introduced johnsonsnursery.com, Wisconsin. The images are not consistent with ordinary juvenile J. chinensis forms and so a cross to J. communis is likely.

Li: http://www.deckersnursery.com/wp-content/uploads/2012/01/JNInc_StarPowerFlyer.pdf

JUNI011 - Juniperus squamata LITTLE JOANNA® - much as (Meyeri Group) 'Blue Carpet' but even more compact, slower, low-spreading and not tufted nor mounded as 'Blue Star' which is much more vertical and decumbent. Eur. CPVO PBR to Boomkwekerijen Gebr. Visser, Netherland, "active: under procedure" when accessed 5.2.2015. This appears to be best available image of it, given the originator (Visser) has no posts (5.2.2015): <http://www.newplants.nl/typo3temp/pics/0173415259.jpg>

JUNI012 - Juniperus squamata 'Tropical Blue' - very dense, dwarf, compact-mounded, similar to 'Blue Star' but a more silvery-blue tone, sometimes with aqua notes (hence "tropical"), leaves shorter and sometimes slightly twisted about the stem but only moderately so, not a contorted clone but with nice subtle, irregular leaf twist. Older plants tend to have outwardly cascading shoots than 'Blue Star' but is not a wide-spreading clone in general.

PENDING - Juniperus rigida var. conferta 'Golden Wings' - Habit loosely procumbent to low, irregular decumbent, much as species in Western gardens. Leaves medium green, to pale blush-green, in the foliage mass variegated with a scattered chimera in light to medium yellow, 10-25% of branches and foliage mass. It appears identical to 'Sunsplash' from Brookside Gardens and of US and could be either a parallel mutation or rename. The use of this appears from web searches to concentrate mostly with Polish nurseries (may 2015).

JUNI013 - Juniperus x media 'Blue Chiffon' - elegantly spreading, some limbs erect, tufted long limbs, reminds us of a larger, arching J. sabina 'Blue Tam' overall. Leaves mostly divergent or adult type, bluish-green to light blue. Bluehorizonnursery.com, their own selection, accessed 6.2.2015.

JUNI014 - Juniperus horizontalis 'Copper Harbor' - as 'Bar Harbor' but newer shoots light to medium yellow, older foliage blue and contrasting, due to the parent cultivar's height differences, taller than 'Wiltonii' gold sports and yet shorter than LIMEGLOW, winter coloration a lovely mix of copper, orange, blue, bronze, and gold tones. bluehorizonnursery.com, their sport, accessed 6.2.2015

JUNI015 - *Juniperus procumbens* 'Peve Spikkel' - compact, typical of the 'Nana' or slower clones in form. Foliage mass mottled 40% of surface in light yellow to cream, most variegated sections large and covering many secondary branchlets.

JUNI0016 - *Juniperus virginiana* 'High Schoals' - informally pyramidal, nice lacy look due to long shoot tips and good vigor, not overly dense yet neat, reliable green winter color, female clone and known to produce showy blue cones. Or: Ray Tate found outside Watkinsville, Georgia. In: www.boldspring.com, accessed 2.28/2016

JUNI0017 - *Juniperus virginiana* 'Greenbelt' - broadly pyramidal, bright rich green colors, developed for ease of transplanting, and we have seen as many as 50% of redcedar plantings in commercial settings fail. In: www.boldspring.com, accessed 2.28/2016

JUNI0018 - *Juniperus scopulorum* 'Woodward' - 20 ft. tall x 2-4 ft. wide, fastigiate, handling "snow loads with grace". Foliage dark green turning more greyish-blue in winter. It appears to be paler than 'Spartan' which while usually sold as a *Juniperus chinensis* is actually a *J. scopulorum* when the foliage and cones are subject to taxonomic scrutiny. A comparison of the two is warranted. Web: <http://plantsselect.org/plant/juniperus-scopulorum-woodward/>, accessed 3.20.2016

JUNI0019 - *Juniperus horizontalis* [Plumosa Group] JAZZYJEWEL™ - as the Group but foliage very heavily mottled yellow to gold at about 25-40% of the foliage mass, this being a departure from several known mutants of 'Plumosa' and 'Andorra Compact' which are mostly mottled white to cream in low coverage rates (usually 5-24% foliage mass). This clone also appears to have a richer gold chimera color and more massive chimeral coverage than the 'Variegata', the species' first known variegated clone.

JUNI0020 - *Juniperus scopulorum* BURLY BLUE™ - 24 in. tall x 6-8 ft. wide, habit low-mounded to spreading, grafted on standard per Monrovia site but they state "excellent replacement for Blue Creeper Juniper". Leaves richly frosty, bluish-grey. USDA 3. The habit suggests it may be a cross to *J. horizontalis* (which occurs in the wild within the *J. scopulorum* range and is well documented as a hybrid to it) or if from cultivation one of many low junipers which can breed to the tall species. In: <http://www.monrovia.com/plant-catalog/plants/5507/burly-blue-juniper/>, accessed 8.2.2016

JUNI021 - *Juniperus* (Hetzii Group) 'Izabelin' - as parent 'Hetzii' in silvery-blue, erect-arching, but a sport mottled creamy-yellow, growth 3-6 in. a year. Or: Sami Saidi, Poland, as known as *J. x media* 'Hetzii Variegata' in post-1959 Latin. Li: Mesterhazy, Z. 2010. Conifer Treasury of Poland. www.conifertreasury.org, accessed 10.3.2016. Ns: the Hetzii Group is not aligned with any one species but is a cross of *J. virginiana* 'Glaucua' and *J. x media* 'Pfitzeriana', being a tricontinental hybrid of *J. sabina*, *J. chinensis*, and *J. virginiana*.

JUNI022 - *Juniperus x media* 'Kiss Mityu' - 4-6 ft. tall x wide, erect-arching, much larger than a typical golden Pfitzer clone, foliage rich yellow. Or: Kiss Milhaly, Hungary. Li: Mesterhazy, Z. 2010. Conifer Treasury of Hungary. www.confertreasury.org, accessed 10.3.2016

JUNI023 - *Juniperus x media* 'Savaria Gold' - spreading Pfitzer type, shoots very lace, slightly open but plant overall quite dense, yellow foliage under rich golden to bright yellow tips, later chartreuse and green by the second year. Photo: <http://ns4.cpanel.hu/~egzota9/tarolo/conifertreasury/ren/Hungarian%20conifers/Juniperus%20media%20x%20Savaria%20Gold%20N%E9meth%20Imre%20%2020732.jpg>
Web: <http://diszfa.hu/?product=juniperus-chinensis-savaria-gold-arany-terulo-boroka>, accessed 10.3.2016

JUNI024 - *Juniperus chinensis* 'Richcrop Yellow' - habit dense, irregularly globobose to globose-pyramidal, foliage juvenile and adult, appears to be of Japonica Group morphology, foliage rich yellow, later a bright green, dark green in the canopy, female strobili abundant. Or: Jozsef Hodi Toth of Hungary collected seed from China, original plant now in the Arizonica Arboretum, Hungary, selected about 2014. Li: Mesterhazy, Z. and J. Hodii Toth. 2014. Conifer Treasury of Hungary 4.0, accessed 10.3.2016. Web, photo: <http://www.sophora.pl/katalog-roslin/juniperus-horizontalis/pigmalion-p435>

JUNI025 - *Juniperus horizontalis* 'Pigmalion' - 20cm tall after many years, miniature to pygmy, dense, tufted, foliage rich blue as parent 'Wiltonii', foliage mostly divergent and juvenile to various degrees, derived from a sport of juvenile foliage of 'Wiltonii'. It is similar to 'Blue Pygmy', another super slow, pygmy juvenile selection but appears to be of more recent origin, the older clone known from Mr. Neumann of Jeddolph Nurseries, Germany. The origin of this newer clone is undetermined.

JUNI026 - *Juniperus chinensis* 'Shimpaku Fish Tail' - as 'Shimpaku', a dwarf, small-leaved, generally mint green to dark green plant or perhaps cultivar groups, this bonsai clone has more procumbent stems in a fishtail pattern, 4-6 inches a year. In, web: <http://www.stanleyandsons.com/product/jun-4055/juniperus-chinensis-shimpaku-fish-tail.html>, accessed 10.5.2016. Ns: in Japan the name "shimpaku" tends to refer to very old, "pre-bonsai" of no particular taxa collected in the crags of high, revered, ancient Japanese mountains and not the Western concept of a specific type dwarf, mint-green, tiny-leaved, scaly (adult type), semi-irregular form of *J. chinensis* sold in the bonsai trade that is

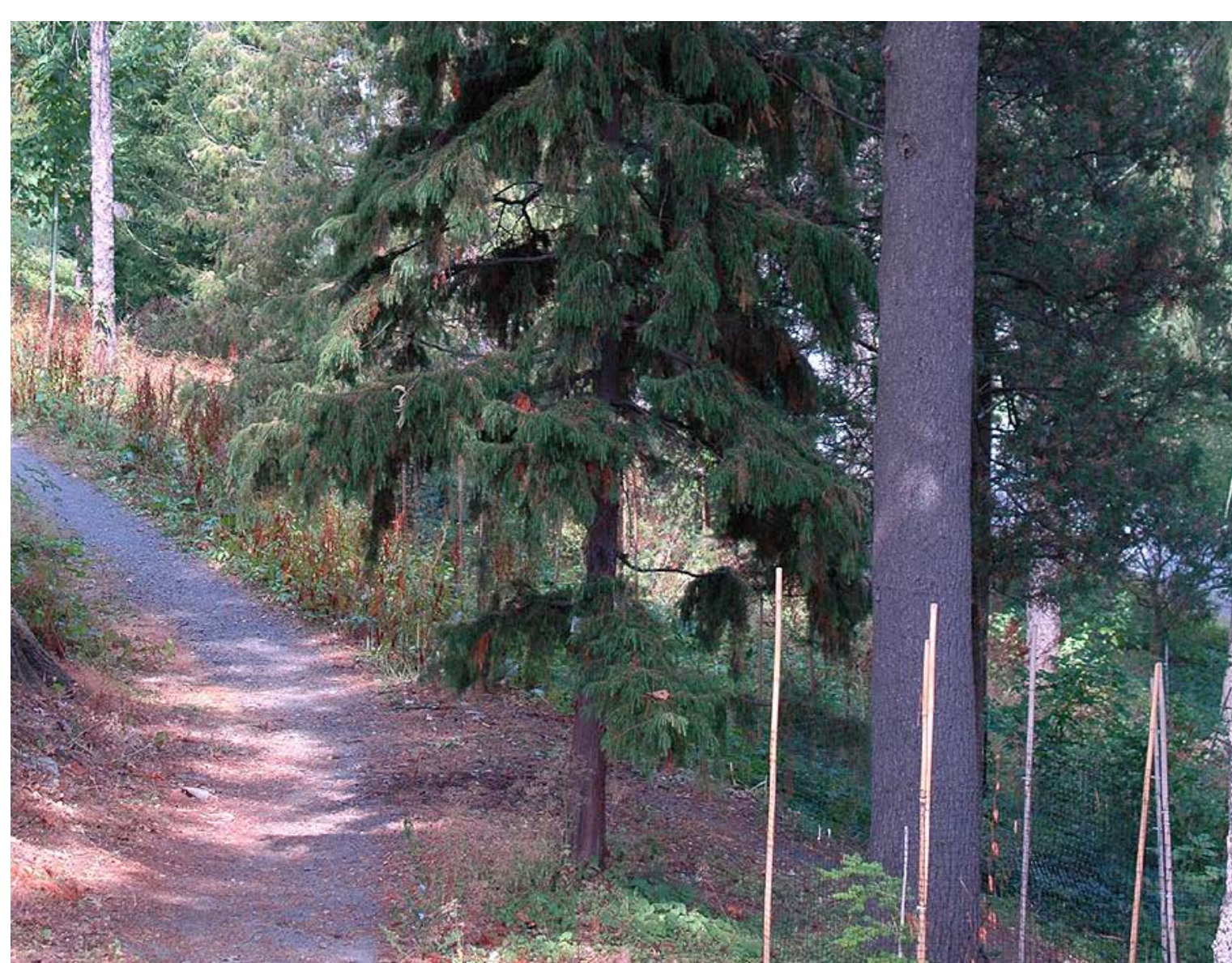
generally recognized by one common clone, now best considered a cultivar group, and several variations upon it in clonal form. It is very likely the Western 'Shimpaku' came from one of those Japanese collections and likely from a notable bonsai tree or twenty but we have very little clarity as to its origin. The Shimpaku Group as a whole is related to the 'Plumosa' types for the dwarf habit, small needles, and mint green color but unlike our Western concept of 'Plumosa' the typical 'Shimpaku' is not erect nor arching but a low mounded thing, quite irregular, wider than taller, often by 2-3 times, and quite informal.





The old Morris Arb tree, the oldest known weeping example in the US if not the Western world. Sourced from Cob Cob Nursery in 1935.





The oldest Cornell example from Chase Bros. Nursery 1941 and part of the Great One's (Liberty Hyde Bailey) renowned research and teaching collection called the Conifer Slope at Cornell Plantations.



JUNIPERUS RIGIDA S. & Z.

Wilson gave this plate as his typical *J. rigida* and some we know today are even more erect, conical, and dense, with fewer outward facing tips. This is clearly not our Weeping Group defined below.

JUNI027 - *Juniperus rigida* Weeping Group ('Pendula') - habit pendulous, often with long, horizontal arms (secondary branches) from the trunk outward, these may or may be slightly angled up at the apex, in some cases arching up and in other cases quite drooping to the very end, these secondaries 3-6 ft. long, the drooping branchlets below them easily 12-22 inches long, in the manner of *Chamaecyparis nootkatensis* 'Pendula' or Pendula Group in the widest, least erect or conical variations, with tertiary limbs hanging down vertically or nearly so, forming olive green curtains which please the eye and mind. Leaves rich olive-green, not as bluish-green or medium green as some more erect versions of the species which show stomatal bands due to the vertical or more erect positioning of the sprays. Older, more shaded, or cold-stunted specimens may have vertically pendulous tertiary limbs just 6-14 inches long. The typical clone in the US is female, bearing numerous waxy, glaucous cones after 10-20 years. There is another clone similar in habit which shows no cones nor does it show male strobili and this requires additional study. The majority of commercial *J. rigida* sold in the US are of this pleasing, weeping variety while in the wild the typical species in some semi-weeping at the tips and more often conical or erect and pyramidal. Our view of this species is very tainted in the US by the popularity of one or perhaps a few similar, very pendulous clones. The origin of this group and the familiar female clone of it remains unclear. The oldest tree clearly of this variation is at the Morris Arboretum (see image above) and was received Cos Cob Nursery in 1935. There is a gaunt, lonely, and thin tree on the Conifer Slope at the Cornell Plantations which was sourced from Chase Brothers Nursery in 1941. I have viewed many Chase catalogs and not found even the species listed

so perhaps the great Dean and Professor L.H. Bailey who built that collection got it as a special favor. If anyone can or will fund a DNA study of these known materials we would be grateful and perhaps a cultivar name or two would be in order. The epithet 'Pendula' was not published prior to 1959 and therefore cannot be the basis of a cultivar group. I have previously published this group in *Garden Junipers* and later *Cultivars of Woody Plants* but as OROC has a sometimes wider, more general audience this is a good opportunity to register the name with additional clarity and distribution.



Juniperus x ambigens (*J. horizontalis* x *J. virginiana*) Cedarug Group among 'Wiltonii' is one of its more typical phenotype combinations, that being greenish-blue, slightly less frosty than 'Wiltonii', very long, loose, open shoots with small, adult, appressed leaves and far more open than any known cultivar, except perhaps 'Jade River' in the shade. This is the only example I know that is mature in terms of cones, these being small, yellowish, male strobili. This sparse, overtopping of open shoots is very typical what you will find with Cedarugs. This is seedling CR01.

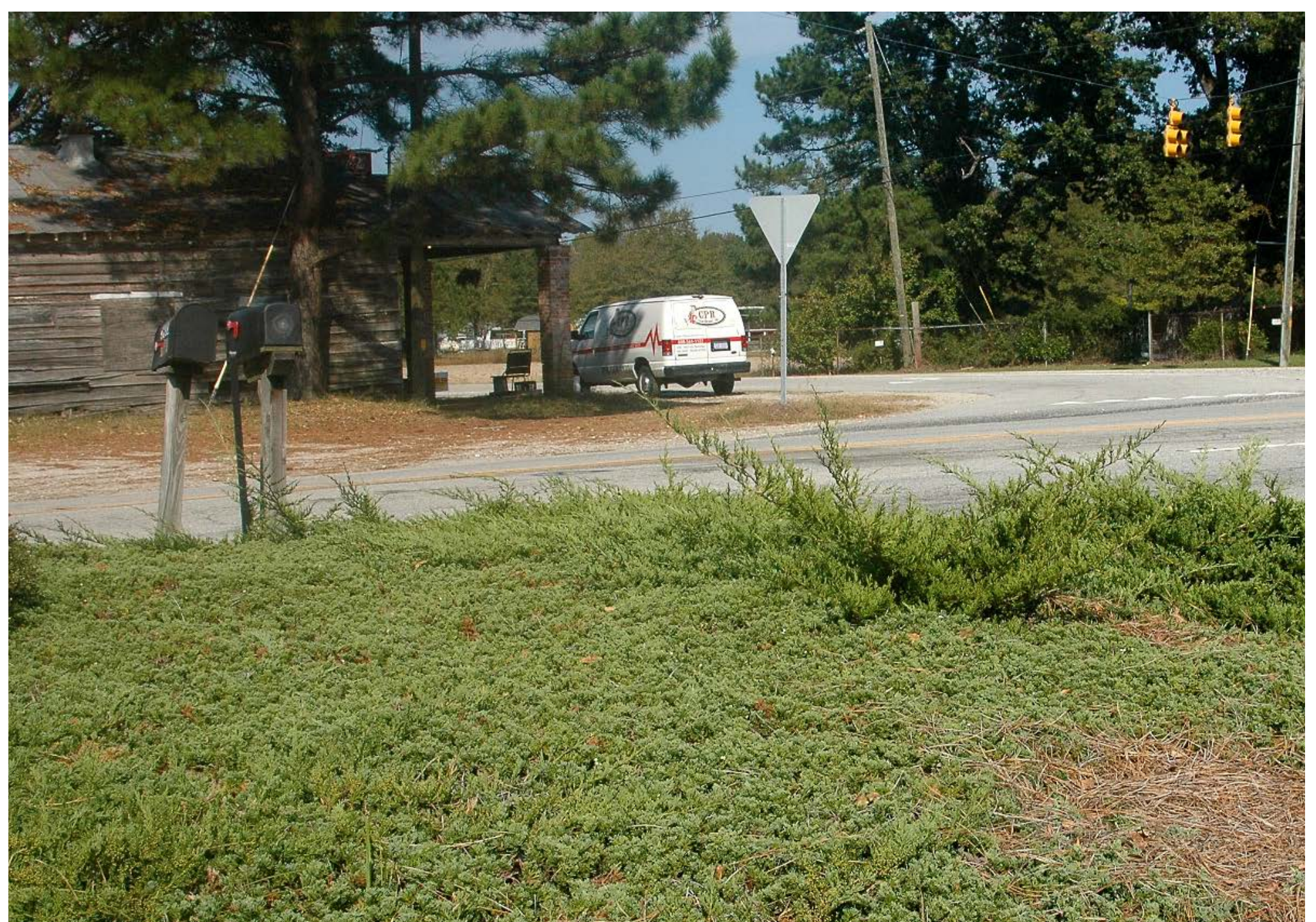


This image shows two of the *J. horizontalis* 'Wiltonii' x native *J. virginiana* seedlings in a very long 'Wiltonii' that is at least 30 years old. Seedling CR03 is similar to CR01 shown above but a tad greener. Seedling CR02 is very curious. It has very short, highly divergent (juvenile, prickly, sharp) needles not unlike a young eastern redcedar

seedling, most of which are persistently juvenile for up to five years or so. It is very rich green and something like a small-needled 'Andorra Compact' (also from *J. horizontalis*) and I made sure it was not a planting error. It is far more loose and shorter-leaved than anything in the Plumosa Group but slightly suggestive of it overall. Think of it as perhaps a redcedar seedling with some procumbens to horizontalis habit genes.



This is seedling CR04 and it reminds me of the named clone 'Hermit' (also of this same cross) we grew at the Raulston Arboretum in 1982 as part of my Master's Thesis on *Juniperus horizontalis* cultivars. That collective had over 52 named cultivars and lots of odd sports and such, one of which became the widely sold LIMEGLOW™. The CR04 type Cedarug clearly shows the erect genes of redcedar but carries the pretty frosty blue of 'Wiltonii' and is about as glaucous as it. Yet is has nothing much in common with the juvenile, erect clones like 'Blue Forest'.





Population CR05 here is from a rural BP gas station where the blue rugs are long-established and full of cones. These very gaunt things are clearly at 45 degrees (typical of an erect x prostrate species cross) but are very green like the thousands of Jv's the neighborhood. There may be as many of five of these seedlings and while these are unlikely to put any Pfizers out of a job, it is curious. Again, there is no existing cultivar in the US trade, surely not where this place is buying, like it.



This is CR06, very open and more vigorous than kudzu and much greener than 'Wiltonii'. There is nothing in the North Carolina that could have been confused with it. It has some of the aspects of the old, original 'Plumosa' but that has not been sold for decades in these parts and the foliage is not nearly as divergent as the Plumosa Group. Is this pretty enough for a name? We will see. And of course we need to give them a try in more stable evaluation gardens.



Here's another view of CR06 with it's rich green needles amid it's mother 'Wiltonii' which here is loaded with female cones. How fun and fascinating is this mix of colors and genetics.

JUNI028 - Juniperus x ambigens (J. horizontalis x J. virginiana) Cedarug Group NEW CULTIVAR GROUP - In 1945 the great botanist Fassett noted (Bull. Torrey Bot. Club 72:

380) that *Juniperus virginiana* crossed with *J. horizontalis* in the wild and he called these *J. virginiana* var. *ambigens*. Today we form hybrid species names differently so this taxon is best called *Juniperus x ambigens*. We later found out the two species cross back and forth in the wild in what is called "recurrent introgression". Some of the low-growing garden clones of *J. virginiana* around today (I'm thinking 'Royo') may belong to this cross (DNA work is needed) and there was one introduced years ago called 'Hermit' from a wild population (if memory serves) in Maine. It was kind of raw and ugly but very blue, never sold well. Some years ago I noticed that old plantings on *Juniperus horizontalis* 'Wiltonii' in ordinary cultivated locations like grocery store parking lots, universities, gas stations, parks, banks, malls, and abandoned malls often produced regular cones, that is female cones, for that cultivar is female only and dioecious (only one sex per plant) as is the entire genus. They cannot self fertilize to our knowledge. With observations I noted there were very long, unruly, long and arching sprouts (8-24 in. tall) from these plantings and to date I know over 18 beds of origin and about 30 plants. Landscape crews just cut them down into the low 'Wiltonii' canopy. These long sprays are not sports as I originally thought (perhaps high-vigor gibberlin mutants?) but standalone plants, likely seedlings. The only thing which could provide male pollen in these areas is....you guessed it...native and cultivated eastern cedars or *J. virginiana*. As expected, these seedlings range from near green to bluish-green to emerald-blue and only occasionally near the frosty blue of 'Wiltonii'. Some want to arch up and others want to be very robust but cascade a bit. They are trying to find a way - evolve in cultivation if you will. Their diverse variation is almost proof of hybridity. My only terror is a landscape supervisor who advises ripping them out because of knowledge of what 'Wiltonii' ought to be.

By the way, the male clone 'Bar Harbor' has not as yet produced such hybrids in my realm of observation and it reaching *J. virginiana* would be a far harder thing. Also beware of finding 'Bar Harbor' plants which get mixed in with 'Wiltonii' in some plantings and could appear like a taller seedling but in fact are clearly referable to this other clone and not nearly so variable in color, vigorous, or long-shooted as the Cedarug Group. They are also planted as rootballs and not loose seedlings. Now with knowledge of more than 30 such seedlings, I am confident these cultivated crossings deserve a name and evaluation of the best seedlings in stable, garden conditions with as much scientific scrutiny as possible. I do not think these most will be ornamental blockbusters since the trade has already embraced prostrate x conical crosses from *J. virginiana* 'Glauca' x *J. x media* 'Pfitzeriana' with vigor and beauty called 'Hetzii' and 'Grey Owl' for many decades now. I'm pretty darn sure the lovely and useful *J. virginiana* 'Royo' (frosty blue, low spreading mound) is one these creatures and if not surely with the big parent is frost king *J. scopulorum*, a cross which is known as *J. x fassettii* (*J. scopulorum* x *J. horizontalis*). Some of this new material may become interesting and valuable if we evaluate as many as possible. And yes my friends these will all be US natives for people sensitive to crazy exotic hybrids. Anyone on board? I need folks to propagate, distribute, and give trial to the "Cedarugs". Write me at ornamentals@lycos.com.

JUNI029 - *Juniperus chinensis* 'Swampscott Gold' - spreading, rich golden-yellow. Or: Brent Markus found as sport. Given the habit of spreading it may prove to be a *J. x media* sport. In, ph: <http://www.coniferkingdom.com>, accessed 10.12.2016

KALM001 - *Kalmia latifolia* 'Ginkona' (Esveld Nursery)

KALM002 - *Kalmia latifolia* 'Mitternacht' (Esveld Nursery)

KALM003 - *Kalmia latifolia* 'Red Bandit' - Registered with the Kalmia Society

KERR001 - *Kerria japonica* 'Chiba Gold' gives interest even when this fine, flowering species is not in gold bloom. In fact, it's true gold flowers contrast it bit poorly and awkwardly with the limey-chartreuse and pale lemon tones of the leaves. It is best as a misty blast of pale coloration in an other dark or blue border. It's not among the finest gold-leaved shrubs but it is different, fairly new, and rare.

KERR002 - *Kerria japonica* CAT'S EYE™ 'Shandale' - 2-3 ft. tall, flowers large, showy, golden-yellow as parent 'Shannon', leaves thinly margined white. Or, in: http://springmeadownursery.com/plants_details.php?id=52240, accessed 12.27.2015, as sport of 'Shannon'.

KOEL001 - *Koelreuteria paniculata* SUMMERBURST™ (J.F. Schmidt)

KOEL002 - *Koelreuteria paniculata* GOLDEN CANDLE™ (Upshoot) - 35 ft. tall x 4 ft. wide, narrowly columnar. Leaves rich gold in fall

KOEL003- *Koelreuteria paniculata* 'Beachmaster' - legacy name, registration requested, previously documented in Cultivars of Woody Plants

LAGE001 - *Lagerstroemia* BLACK DIAMOND Series, a cultivar group.

LAGE002 - *Lagerstroemia* PRINCESS HOLLY ANN™ 'GA 0701' - 3-4 ft. tall x wide, semi-dwarf, mounding at first. Leaves copper-red at first, later dark green, purplish-red in fall. Flower corolla rich pinkish-red, similar to common watermelon red cultivars overall, described as "cherry red" but all official show a brighter, more pink shade or red. Cold

Hardy to USDA 6 or better . Dow Whiting Hybrid.

LAGE003 - Lagerstroemia PRINCESS KYLIE™ 'GA 0803' - 3-4 ft. tall x wide, semi-dwarf, mounding at first. Leaves grayish-green, undulate margins. Flower corolla rich magenta pink, intense and bold but not too harsh.. Cold Hardy to USDA 6 or better . Dow Whiting Hybrid.

LAGE006 - Lagerstroemia PRINCESS LYLA™ 'GA 0804' - 2-3 ft. tall x wide, dwarf, mounding at first. Leaves medium to dark green, gold in fall. Flower corolla light ot medium pink. Cold Hardy to USDA 6 or better . Dow Whiting Hybrid.

LAGE004 - Lagerstroemia PRINCESS ZOEY™ 'GA 0702' - 4-5 ft. tall x 3-4 ft. wide, semi-dwarf, mounding at first. Leaves very dark green, reddish-purple in fall.. Flower corolla very finely crisped-frilled, pink to rich rose-red, bicolored as the whole inflorescence in genera.. Cold Hardy to USDA 6 or better . Dow Whiting Hybrid

LAGE005 - Lagerstroemia 'Miss Frances' - HortScience 50: 1721-22 (2015) - Refer to <http://hortsci.ashspublications.org/content/50/11/1721.full.pdf+html> to purchase.

LAGE006 - Lagerstroemia 'Miss Gail' - HortScience 50: 1721-22 (2015). The following USDA document is useful: www.ars-grin.gov/npgs/images/na/docs/Miss_Gail_CM223.docx

LAGE007 - Lagerstroemia 'Miss Sandra' - HortScience 50: 1721-22 (2015)

LAGE008 - Lagerstroemia speciosa 'Big Pink' - HortScience 50: 1593-1594 (2015)

LAGE009 - Lagerstroemia BARISTA™ Series - www.waltersgardens.com, accessed 12.26.2015

LAGE010 - Lagerstroemia RED ROOSTER™ 'PIILAG-III' - 8-10 ft. tall, medium-sized, upright. Leaves very dark green, mildew resistant. Flowers a true bright red. Pat: US#23178.

LAGE011 - Lagerstroemia PURPLE COW™ 'GAMAD IX- habit medium-sized for genus. Leaves very dark green. Flowers said to be "deep purple" but all images we have seen show magenta-violet tones and not a true grape purple. Web: <http://gardenersconfidence.com/plants/purple-cow-crapemyrtle>, accessed 6.25.2016. Pat: US# 23560.

LAGE012 - Lagerstroemia PINK PIG™ 'GAMAD VIII' - Habit mid-sized for the genus. Flower petals light pink, a clean pastel shade, calyx and stems rich red and contrasting well.
Pat: US# 23499. Web: <http://gardenersconfidence.com/plants/pink-pig-crapemyrtle>, accessed 6.24.2016

LAGE013 - Lagerstroemia indica 'Jinhuang' - 1.7 m tall x 1.8m wide (11 years), semi-dwarf, stems reddish-purple becoming grayish-brown. Leaves bright yellow (RHS 25A, 1A), some red in new tips, later more green, 3.3 - 5.3 cm long x 2.2 - 3.7 cm wide. Flower corolla deep pink (RHS N57B), panicle 9-18 cm long x 7.5-17 cm wide. Or: Institute of Botany, Jiangsu Prov. & Chin. Acad. Sciences, sport 2003. Li: Wang, Shu'an. 2016. HortScience 51: 595-6. First known cultivar in species to have golden or yellow leaf color.

LAGE014 - Lagerstroemia indica BLACK SOLITAIRE® Group - Leaves dark blackish-purple, near black when mature. registrations of the individual cultivars will be split at a future time.

LAGE015 - Lagerstroemia indica WITH LOVE® VIRGIN 'Milabla' - habit compact, 60cm tall x 40cm wide, useful for flowering shrub borders. Flower corolla pure white, pedicel red showy. Leaves dark green. Pat: Euro PBR 20141482. Or: Piero Frangi, Italy.
In, ph: <https://www.plantipp.eu/en/Plants/lagerstroemia-indica-with-love-virgin-milablapbr-2/>, accessed 10.11.2016

LAGE016 - Lagerstroemia ENDURING SUMMER™ RED 'PIILAG-V' - <http://www.gardendebut.com/index.cfm/fuseaction/plants.kwsearchpost/variety/Lagerstroemia/index.htm>, accessed 10.12.2016

LAGE017 - Lagerstroemia ENDURING SUMMER™ FUCHSIA 'PIILAG-III' -
<http://www.gardendebut.com/index.cfm/fuseaction/plants.kwsearchpost/variety/Lagerstroemia/index.htm>, accessed 10.12.2016

LAGE018 - Lagerstroemia ENDURING SUMMER™ LAVENDER 'PIILAG-IV' - <http://www.gardendebut.com/index.cfm/fuseaction/plants.kwsearchpost/variety/Lagerstroemia/index.htm>, accessed 10.12.2016

LAGE019 - Lagerstroemia ENDURING SUMMER™ PINK 'PIILAG-II' - <http://www.gardendebut.com/index.cfm/fuseaction/plants.kwsearchpost/variety/Lagerstroemia/index.htm>, accessed 10.12.2016

LAGE020 - Lagerstroemia ENDURING SUMMER™ WHITE 'PIILAG-I' - <http://www.gardendebut.com/index.cfm/fuseaction/plants.kwsearchpost/variety/Lagerstroemia/index.htm>, accessed 10.12.2016

LAGE021 - Lagerstroemia DRURY CRIMSON™ 'GV1125' - <http://www.gardendebut.com/index.cfm/fuseaction/plants.kwsearchpost/variety/Lagerstroemia/index.htm>, accessed 10.12.2016

LAGE022 - Lagerstromia 'Ebony Fire' - <http://www.gardendebut.com/index.cfm/fuseaction/plants.kwsearchpost/variety/Lagerstroemia/index.htm>, accessed 10.12.2016

LAGE022 - Lagerstromia 'Ebony Embers' - <http://www.gardendebut.com/index.cfm/fuseaction/plants.kwsearchpost/variety/Lagerstroemia/index.htm>, accessed 10.12.2016

LAGE022 - Lagerstromia 'Ebony Flame' - <http://www.gardendebut.com/index.cfm/fuseaction/plants.kwsearchpost/variety/Lagerstroemia/index.htm>, accessed 10.12.2016

LAGE022 - Lagerstromia 'Ebony and Ivory' - <http://www.gardendebut.com/index.cfm/fuseaction/plants.kwsearchpost/variety/Lagerstroemia/index.htm>, accessed 10.12.2016

LAGE022 - Lagerstromia 'Ebony Glow' - <http://www.gardendebut.com/index.cfm/fuseaction/plants.kwsearchpost/variety/Lagerstroemia/index.htm>, accessed 10.12.2016

LARI001 - Larix kaempferi 'Stiff Weeper' (Esveld Nursery) - legacy name, registration requested

LARI002 - Larix laricina 'Emerald Curtain' - dwarf, weeping, usually grafted high to cascade down. Found at the Memorial University Botanical Gardens, Newfoundland. Introduced Iseli Nursery 2014.

LARI003 - Larix kaempferi 'Paper Lanterns' - 8-10 ft. tall x 3-4 ft. wide (10 years), narrowly upright, slightly twisted branches and branchlets. Needles showy yellow to orange in fall. Female strobili abundant, appearing as many papery, thin-scaled in dark orange to dark red tones, hence lantern-like in appearance. Selected by Ed Wood.

LARI004 - Larix laricina 'Iron Rod' - vigorous, fastigiate to columnar, foliage blueish-green. In: <http://www.coniferkingdom.com>, accessed 10.12.2016

LAUR001 - Laurus nobilis EMERALD WAVE® 'Monem' - 12-15 ft. tall at fist, later to 20-35 ft. compact, pyramidal. Leaves narrower, distinctly linear-lanceolate to narrowly linear-elliptic, very undulate, 7-12 waves per side, apex narrowly acute to acuminate, appearing sharper than typical. In: Monrovia Nursery.

LAUR002 - Laurus nobilis LITTLE RAGU™ 'MonRik' - 6-8 ft. (10 years), smaller. Leaves brighter green, finely undulate, more showy than typical blades, "fabulous fragrance". In: Monrovia Nursery. Ns: name cannot be considered an infringement in any way on the famous pasta sauce maker's name as the term "ragu" is a long-existence culinary term for sauce that contains bay leaves and other herbs.

LAUR003 - Laurus nobilis 'Bay Junior' - compact, slower habit. Leaves medium to wide elliptic, well-scented.

LAUR004 - Laurus nobilis 'Brilliant Times' - stems of reddish at first, contrasting, showy. Leaves bright yellow, new growth faintly tinged red on the margins, later yellowish-green. Or: Japan.

LAUR005 - Laurus nobilis 'Chicester' - leaves mottled and sectored, sometimes marginally spotted white to cream. Leaves narrowly elliptic to linear-elliptic similar to an 'Angustifolia' with a chimera.

LAUR006 - Laurus nobilis 'Goldstein' - leaves slightly undulate, whitish midrib.

LAUR007 - Laurus nobilis 'Hex Brilliant' - leaves irregularly margined white to cream, usually a very thin margin, sometimes mottled too, irregularly twisted, very asymmetrical, often appearing deformed as with variegated Ardisia blades.

LEUC001 - Leucothoe fontanesiana WHITEWATER® 'HOWW' - 2-3 ft. tall x 4-5 ft. wide, slightly more compact and slower than species. Leaves thinly margins white, tinged bronzish-red in the new growth, chimera about 3-5% blade surface, this color sometimes as 2-3 small sectors from the apex into the blade but the sport is largely marginal in position. Or: Bob Head, Head Ornamentals, USD Patent #18396.

LEUC002 - Leucothoe fontanesiana 'Little Flames' (Esveld Nursery) - 50cm tall x 30cm wide, dwarf, compact, suitable as a colorful hedge. Leaves very bright red in new growth, later more medium to pale green. Cold hardy to -20 deg. C. Eur. PBR 20110116 to Boomkwekerij van Opstal, Zundert.

LEUC003 - Leucothoe keiskei BURNING LOVE® 'Opstal50' - 30-40cm tall x 30-60cm wide, low, compact, much smaller and neater than older 'Royal Ruby' with similar new growth colorations. Leaves rich burgundy red to bright medium red in new growth, seemingly longer, more narrower and more acuminate than some species variants, blades maturing to rich medium to dark green. Flowers generally not showy. Ron van Opstal, Zundert hybrid, introduced 2013. Eur PBR 20131363.

LEUC004 - Leucothoe keiskei LEAFSCAPE™ BURNING LOVE® "Opstal50" - 30-40cm tall x wide, new growth very bright yet rich burgundy red to dark violet-red. Or: Boomkwekerij van Opstal, Zundert, Eur. PBR

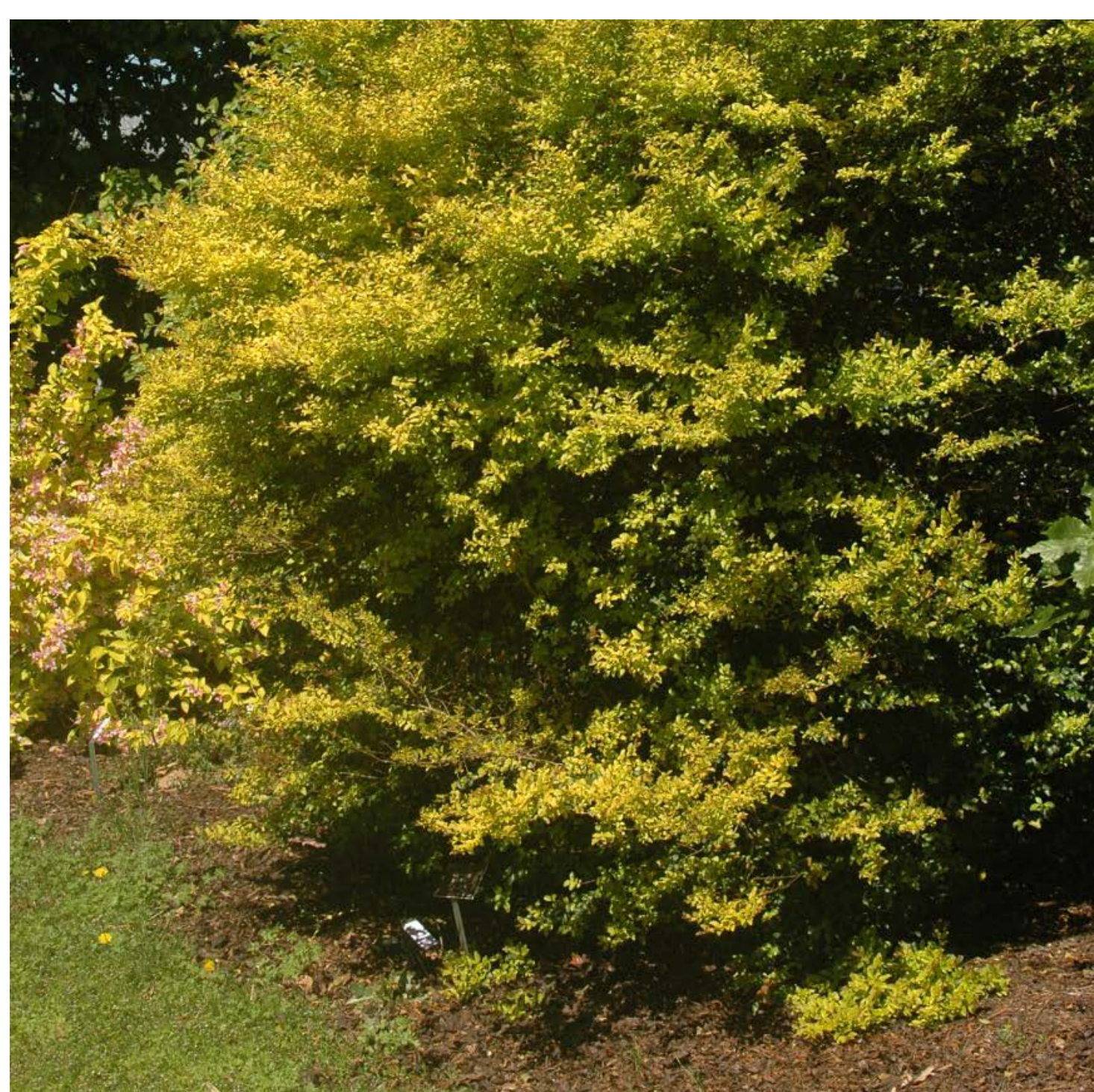
LEUC005 - Leucothoe fontanesiana LEAFSCAPE™ 'Little Flames - leaves sharply acute to acuminate, sharper than species, very intense bright red in new tips, slowing becoming more bright green, then finally bright green. Or: Boomkwekerij van Opstal, Zundert, Eur. pbr GRANTED

LEUC006 - Leucothoe keiskei HALLOWEEN 'Opstal16' -75cm tall x 25cm wide. Leaves more narrow than typical, giving a finer texture, new growth rich bronzish-orange to dark orange, becoming typical green.Or: Ron van Opstal, Zundert, Netherland, Eur. PNBR granted.

LIGU001 - Ligustrum GOLDEN TICKET™ (Spring Meadow Nursery) - a super gold privet that is also seedless and thus never L invasive. Bred by Dr. Tom Ranney, North Carolina State University.

LIGU002 - Ligustrum japonicum 'Harmony Dwarf' (Nurseries Caroliniana)





LIGU003 - Ligustrum sinense 'Sunshine' (JC Raulston Arboretum) - image above: copyright owned by and courtesy of Laurence C. Hatch, imaged at the JC Raulston Arboretum on April 28, 2016. Images are not part of OROC Data Sharing.

LIGU004 - Ligustrum japonicum 'Hirose' (Esveld Nursery)

LIGU005 - Ligustrum japonicum ARLEQUIN™ 'Briseize' - 2m tall x 1.5m wide, dense, compact. Leaves much longer, narrower, generally not flat, often slight folded up, more long acute than species typical, distinctly margined cream to light yellow (5-10% surface) tips slightly tinged pink to orange, yet not tricolored.

LIGU006 - Ligustrum japonicum COLUMBINE™ 'Briquinze' - much as 'Briseize' but new growth tips more pink, margins closer to white, having a similar narrow, sharp folded blade too. As COLUMBINE is a trademark name it does not fall within the cultivar naming guidelines to avoid using a genus name, common or Latin.

LIGU007 - Ligustrum ovalifolium NANTUCKET PRIVET™ 'Grenanpriv' - 10-15 ft. tall x wide, vigorous, semi-evergreen where hardy. Leaves dark green, yellowish-green below, pale green overall. USDA 5 hardy. Web: www.gardendebut.com, accessed 5.22.2016, https://issuu.com/gardendebut/docs/2016_catalog-online/1

LIGU008 - Ligustrum delavayanum 'Verstappen Gold' - Habit strong, vigorous, not dense. best is pruned regularly. Leaves irregularly margined golden yellow, becoming margined a paler creamy-yellow, chimera 30-50% at first, later more 20-35%. In, ph: <http://www.newplants.nl/en/planten/l/ligustrum-delavayanum-verstappen-gold/>, accessed 10.4.2016

LIGU009 - Ligustrum ovalifolium 'Green Diamond' - compact, 60cm growth a year possible at first, slower but steady, restrained form, generally erect to ovoid, suitable for large hedge. Leaves bright, medium green. Pat: Euro PBR CPVO #20152183 to Josa Selecties BV on September 18, 2015.

LIND001 - Lindera umbellata 'Togarashi' - leaves bright yellow, subtle green flecks and spots, this overlaid with orange and red tones in fall.. Registration based on specimen at the JC Raulston Arboretum and documented at <https://jcrraulstonarboretum.wordpress.com/2013/05/24/pic-of-the-day-lindera-umbellata-togarashi/>

LIQU001 - Liquidambar styraciflua 'Fame4ever' - leaves with narrower, longer lobes, thus more deeply lobed in appearance, rich dark red to dark purplish-red in autumn: Or: Roemer, Holland. In: Esveld Nursery among other European firms.

LIQU002 - Liquidambar styraciflua 'Worby Rose' (Esveld Nursery)

LIQU003 - Liquidambar styraciflua 'Oakville Highlight' - 15m tall x 4m wide, fastigate. Flemings.co.au, accessed 4.12.2015.

LIQU004 - Liquidambar styraciflua 'Little Richard' - 4m tall, pyramidal, very compact, semi-dwarf to slower. Leaves rich red, sometimes with orange in fall, smaller than species typical, often more narrowly lobed and more coarsely dentate when young. Thought to be of Australian origin.

LIQU005 - Liquidambar styraciflua 'Summer Storm' - leaves blackish in late summer, remaining so into fall with inner, shaded blades in yellow to red shades

LIQU006 - Liquidambar styraciflua MILESTONE™ - 10-20 ft. tall x 6-8 ft. wide, semi-dwarf, subglose to short ovoid. Fruit absent (fruitless). Warren County Nursery.

LIQU007 - Liquidambar styraciflua 'Gold Beacon' - Habit slightly slower than species typical. Leaves light green at first, maturing to light yellow to golden-yellow, remaining so all summer, apparently the reverse of 'Shocking Gold' aka 'Shock Gold' which is more yellow becoming green, fall colors red to orange, hence not an anthocyanin deficient sport as many gold trees. Selected by Charles Allen, Green Biz Nursery, Fayetteville, NC USA. heritageseedlings.com, accessed 5.10.2015, asked by originator to market this for him. It is also sold by Forest Farm and Buchholz in 2015.

LIQU008 - Liquidambar styraciflua 'Naree' ('Naree Yellow') - leaves smaller than typical, fewer serrations than 'Gold Beacon' on preliminary evaluation, golden-yellow, fall colors orange, gold, and dark red. Australian origin. Forestfarm.com, accessed 5.11.2015. We found one Aussie grower (Kigi Gowers) in 2015 listing 11 year old stock so it must be at least that old.

LIQU009 - Liquidambar styraciflua 'Savill Torch' - intense, reliable shades of red, orange, and gold in fall compared to other plants nearby. Based on a notable tree at Savill Garden, Windsor Great Park, UK as seedling c. 1930-40's. It was removed after damage in 2002 but already grafted and now available in the European trade, not yet seen in US catalogs (May 2015).

LIQU010 - Liquidambar styraciflua 'Black Parking' - fall color a very rich, dark blackish-red.

LIQU012 - Liquidambar styraciflua 'Dark Autumn' - leaves very dark, rich burgundy-red to maroon-red in fall. In, ph: <http://www.esveld.nl/html/daen/l/lisdau.htm>, accessed 10.7.2016

LIQU013 - Liquidambar styraciflua 'Wintergreen' - leaves about typical=, 5-lobed, basal lobes tending to be small, medium green with paler veins, petioles mostly yellow tinged red. The name does not imply a "winter green" or evergreen condition. In, ph: <http://www.esveld.nl/html/daen/l/liswin.php>, accessed 10.7.2016

LIND001 - Lindera umbellata 'Togarashi' - leaves bright yellow, subtle green flecks and spots, this overlaid with orange and red tones in fall.. Registration based on specimen at the JC Raulston Arboretum and documented at <https://jcrraulstonarboretum.wordpress.com/2013/05/24/pic-of-the-day-lindera-umbellata-togarashi/>

LIRI001 - Liriodendron chinense 'J.C. Raulston' - Leaves 10-14 in. long, very massive for this genus, thicker darker green than some seedling, however more of a medium olive-green, midrib and half of secondary veins a paler, usually yellow shade, silvery-gray below, the dark upper surface contrasting nicely with the reverse quite unlike most anything from L. tulipifera.

LIRI002 - Liriodendron tulipifera EMERALD CITY™ 'JFS-Oz' (PDF data sheet, nursery website, J.F. Schmidt)

LIRI003 - Liriodendron tulipifera 'Edward Gursztyn' - 1.8m tall x wide (parent tree, 15 years), ;like 2-3m tall x wide in some decades, slower, compact to semi-dwarf, distinctly globose, very symmetrical crown, marketed as a street or small yard tree. Leaves close to species dimensions, some smaller, but not with thicker, reduced blades as 'Ardis'. Random seedling at Gursztyn Nursery, Braniewo, Poland.

LITS001 - Litsea populifolia ASIAN ESSENCE™ 'DJHC8059' - 18 ft. tall x 10 ft. wide, pyramidal, deciduous tree (as species), form upright open. Leaves aromatic (as species), decidedly rounded, suborbicular, petiole red, reminding me a bit like Fagus sylvatica 'Rotundifolia' or some Cotinus. Flowers yellow in small umbels (as species). USDA 7. Or: Dan Hinkley collected in western Sichuan. In: <http://www.monrovia.com/plant-catalog/plants/5877/asian-essence-litsea/>, accessed 8.2.2016

LONI001 - Lonicera nitida OPHELIA™ 'Brilliance' - 4 ft. tall x wide, low, compact, mounded to spreading, suitable for mixed borders and even rockeries. Leaves lime green to chartreuse, tinged more gold in stronger light, maturing to medium green, not a classic golden honeysuckle, not burning in strong sun. US Patent #20761 to Andre Briant in 2010 as sport of 'Briloni' 2004.

LONI002 - Lonicera sempervirens RED CHARM™ 'Grerdch' - Leaves "clean green", apparently slightly glaucous as the species. Flower corolla rich coral-red to scarlet-red, stamens very yellow to gold, much exerted and complimenting with contrast of hues. Introduced by Greenleaf Nurseries c. 2014.

LONI003 - Lonicera pileata LITTLE LEMON ZEST - details pending.

LONI004 - Lonicera CANDY SWIRL 'Inov41' - 8 ft. tall x wide, vinous, leaves dense, evergreen, resistant to blackspot, flowers pink and orange. USDA 5. Or: French Nat. Instit. Agri. Res. (INRA).

LONI005 - Lonicera periclymenum GROUNDHUGGER 'INOV205' - 48-60 in. tall x 72 in. wide if grown as mounded shrub or low maintenance ground cover, flowers white, yellow, and violet-pink at once. US Plant Patent #25702

LONI005 - Lonicera japonica 'Gold Nancy' - leaves uniformly "warm golden on orange-red stems", flowers typical. www.cistus.com, accessed 3.29.2016, their own introduction, sport of species found there, named for their friend Nancy Goldman of Portland.

LONI006 - Lonicera acuminata 'Green Junkie' - Very vigorous. Flower corolla mostly pink from redder buds, showy. This cultivar is being promoted as a "pollution absorber" to remove urban toxins such as nitrogen dioxide, carbon dioxide, and even particulates due to larger, more hairy leaves in its genetics. The biomass which absorbs the material is then harvested for other purposes, the main plant continuing to regrow and repeat the cleansing process in spaces where trees cannot scrub the atmosphere. A massive pollution absorbing park aka "green corridor" is planned for Amsterdam with this as one of the central taxa. Pat: Euro PBR CPVO #20151750 on July 24, 2015 by Ed Bertoen. Youtube: <https://www.youtube.com/watch?v=Rn8KORnA9vU>, accessed 10.15.2016

LORO001 - Loropetalum chinense var. chinense 'Tokyo Weeping' - 4-5 ft. tall x 4-6 ft., weeping to low-spreading, best raised as a high-grafted plant unless you wish a low, procumbent creeper or mound. Leaves medium green, not generally dark as new cultivars. Flowers creamy-white, fairly typical of species in tone and abundance.

LORO002 - *Loropetalum chinense* var. *rubrum* PURPLE PIXIE®. This is almost certainly the best of the low, very dark purple mounds and spreaders (this November 2014 at least) in terms of long-term density, tiny textured foliage, and persistence of the color into summer. The jury, at least for me, is out on the flowers as they seem to be sporadic and oddly distributed (magenta as with var. *rubrum*) on the foliage and not strictly necessary for a good display. The foliage and form are so near perfect here, though sufficiently variable plant to plant not to be dumb, resembling domes, flowers are just a glowing icing the already lovely cake. Here is a fine example of very useful Asian genetics made much more interesting and creatively lovely by persistent American breeding over these last 30 years or so since var. *rubrum* came to our shores.

LORO003 - *Loropetalum chinense* var. *rubrum* 'Plum Glamorous' - shorter, compact. Leaves very dark plum-purple (187B). Flower tepals bright plum-pink (RHS 187D), not magenta. Plant Growers Australia, intro. 2012, as cross of 'China Pink' x 'Daybreak's Flame' in 2007.

LORI004 - *Loropetalum chinense* GARNET FIRE™'sPg-3-017' - 4-5 ft. tall. Leaves dark burgundy-purple from maroon red tips, color lasting all summer. Flowers reddish-magenta to reddish-pink, not harsh as some magenta clones. In: Greenleaf Nursery

LORI005 - *Loropetalum chinense* 'Cherry Blast' - 6 ft. tall x wide, vigorous yet dense over time. Leaves dark purplish-red. Flowers near true cherry red. (Greenleaf Nursery)

LORI006 - *Loropetalum chinense* 'Burgundy Blast' 6-8 ft. tall, outward-arching, vigorous. Leaves tips red to burgundy, becoming greenish-red, then finally reddish-green or green suffused red shades, one of the most green leaves known in a magenta-flowered clone. Flowers rich magenta-pink to hot pink, very numerous, covering branches, highly floriferous, giving a contrast of green and magenta like few other clones. In: Greenleaf Nursery

LORI007 - *Loropetalum chinense* JADE CONFETTI™ 'DSNH 1206' - 6-8 ft. tall x 4-6 ft. wide. Leaves palish green, shades of jade, sometimes suffused a paler green over medium, certainly not dark green under foliage is very mature, being a brighter foliage mass than modern dark green clones. Flowers white in dense heads, something like confetti clusters, these rarely open as species and most white cultivars, sometimes appear tufted. - In: Greenleaf Nursery

LORI008 - *Loropetalum chinense* 'Shang-Green' - 60cm tall, habit erect, dense, remains neat leaves green and smaller than typical, denser and more erect than 'Shang-White'. Or: US PPAF on 2.11.2016 to Robert E. Lee, Independence, Louisiana

LORI009 - *Loropetalum chinense* PURPLE DAYDREAM™ - 2-3 ft. tall x 3-4 ft. wide, mounded, dwarf, compact. Leaves dark maroon-red. Flower reddish-magenta. In: Southern Living Plant Collection, intro. 2016

MAAK001 - *Maackia amurensis* MaacNIFICIENT® (J.F. Schmidt) - 30 ft. tall x 22 ft. wide, upright-vase form, decidedly more upright than typical (globose to subglobose-spreading), most vigorous clone known to J.F. Schmidt in their many years in tree growing and selection. Leaves green with silvery tints (apparently species typical). Cold hardy to USDA 3.

MAGN001 - *Magnolia* 'Fancy Dude', a gold-margined 'Big Dude' (Rare Find Nursery)

MAGN002 - *Magnolia* 'March Til Frost' (Rare Find Nursery)

MANG003 - *Magnolia laevifolia* 'Free Spirit' (Cistus Nursery, their 2013 introduction, still very rare)

MAGN004 - *Magnolia* 'Ginter Spicy White' ((*M. tripetala* 'Bloomfield' x *Magnolia* R20-1 (*M. sieboldii* x *M. ashei*)). Flowers tepals near white, fairly flat, narrowly obovate to broadly elliptic, rich lemon-mint scent of the spicy variety, Intro. Lewis Ginter Bot. Gard., Richmond, Virginia, USA c. 2012, bred by Bill Smith bef. 2010. To learn more about Bill's *Magnolia* breeding please view these videos:

MAGN005 - *Magnolia grandifolia* PURPAN® - very vigorous, said to be fastest clone known in Europe, up to 50cm a year growth once established. Leaves thinly rusty-tomentose below. Flowers 20-24cm wide, very well scented. While this name is new (about), it is said to be based on a vigorous clone from France known since 1735 in Toulouse, proving cold hardy over decades. The derives from a well-known French college of the same tree where and they feature the cultivar on their school website as Tree of the Year 2013. Their School of Agriculture registered the trademark. We currently believe this clone to more than a historical named stock (forbidden by the ICNCP) from a famous tree of no horticultural merit. Its vigor and large flowers along with cold survival suggest it does have potential garden merit and is not merely a name from a famous tree.

MAGN006 - Magnolia 'Canary Charm' - 8-10 ft., tall x 6-8 ft. wide (10 years). Flowers numerous, "consistent heavy bloomer each year", tepals light to light-medium yellow, paler yellow in warm weather, more dark on cold days, nicely scented. USDA 4, floral bud quite cold resistant. - Or: Dennis Ledvina as cross of M. acuminata x 'White Rose'. In: www.songsparrow.com, accessed 3.29.2016

MAGN007 - Magnolia 'Sunset Swirl' 10 ft. tall x 8-10 ft. wide (10 years). Flowers large, well-scented, tepals appearing to be a blend of cream, pink, and yellow, sometimes with a salmon-pink look overall. in close inspection a creamy to yellow tepals very finely flecked and suffused in dark pink shades. irregular tulip form becoming a wide, swirling pinwheel of tepals. Or: David Ledvina, cross of 'Pink Royalty' x 'Daybreak'. In: www.songsparrow.com, accessed 3.29.2016

MAGN008 - Magnolia floribunda 'Fansipan Furry' - Leaves "wonderful reddish palmate foliage", later bronze, and finally green. Flowers white, aging to pink. In, or: www.crug-farm.co.uk, accessed 2.16.2016 as FMWJ13340, their own selected clone.

MAGN009 - Magnolia MERCURY™ 'NCMX1' - 25 ft. tall x 15 ft. wide, habit refined, upright, pyramidal, a true tree, strong central leader, suitable for street or specimen use. Flowers very late, up to a month after M. x soulangeana, avoid late spring frost damage, very large, tepals long, obovate, strap-like, reddish-magenta to near red in bud, opening more bright reddish-pink shades on the reverse, paler pink shades on the inside, eventually maturing to bright lavender-pink as the flower expands to show more of the paler inner tepal colors. Leaves dark green, clean in appearance, new growth often tinged purple to red, midribs paler and yellowish-green, adding some merit, certainly a very dark tree when in leaf only. Or: Tom Ranney, NC State University. In: J.F. Schmidt and Son Nursery, <http://www.jfschmidt.com/pdfs/mercurymagnolia.pdf>, Web: <https://www.ces.ncsu.edu/fletcher/mcilab/introductions/mercury-magnolia.html>.

MAGN010 - Magnolia virginiana GREEN MILE™ 'MVHH' - habit more erect, neater, evergreen, flowers most of summer. Leaves more glossy than some clones and appears more sharply acute as well. Or: Alex Neubauer, Hidden Hollow Nursery, Tennessee.

MAGN011 - Magnolia kobus MARACZI 'I sis' - 5-10 m tall x 2-3 m wide, narrowly erect, new twigs more yellow, showy in winter. Leaves rusty-colored becoming green. Flowers at 3-4 years, much as species with 6 tepals in pure white, stamens pink. Pat: Euro #29997

MAHO001 - Mahonia BLACKFOOT® 'Bokrafoot' - 60cm tall, ground cover function, very compact. Flowers in dense heads, yellow, very showy. Leaves evergreen, dark glossy dark green, purplish in winter. Or: bred from M. repens and much improved from the species typical.

MAHO002 - Mahonia SIOUX® 'Bokrasio' - 60 cm tall, low-spreading. Flowers densely formed in golden-yellow panicles. Leaves dark green, glossy, purple tinged in winter. Rust resistant. (Esveld Nursery)

MAHO003 - Mahonia 'Soft Touch' - legacy entry, previous described.

MAHO004 - Mahonia confusa INDIGO FLAIR™ 'S-fg-3-018' - 3-4 ft. tall x wide, compact, subglobose. Leaves bluish-green. Flowers, fruit abundant. Web: www.gardendebut.com, accessed 5.22.2016, https://issuu.com/gardendebut/docs/2016_catalog-online/1

MAHO005 - Mahonia 'Marvel' - flower heads very large in massive whorls, typical yellow. Leaves dark green, notably "frond-like", blades appear to be somewhat short and narrow from the images. In: Southern Living Plant Collection, intro. 2016.

MALU001 - Malus AMERICAN SALUTE™

MALU002 - Malus AMERICAN SPIRIT®

MALU003 - Malus AMERICAN TRIUMPH™

MALU004 - Malus CINDERELLA®

MALU005 - Malus sargentii 'KNI S-1' and also as 'Pendula', a post 1959 invalid Latin name. 2-3 ft. tall x 4-6 ft. wide as grafted, horizontalis to weeping, often in a flat mound. Offered by <http://www.klynnurseries.com>, 2013 Catalog/No Pricing, accessed 2.17.2016, their own introduction

MALU006 - Malus sargentii TINA'S BLUSH™ 'KNI B-1' - Offered by <http://www.klynnurseries.com>, 2013 Catalog/No Pricing, accessed 2.17.2016, their own introduction

MALU007 - Malus sargentii TINA'S CHARM™ 'KNI B-6' - Offered by <http://www.klynnurseries.com>, 2013 Catalog/No Pricing, accessed 2.17.2016, their own introduction

MALU008 - Malus sargentii TINA'S RUBY™ 'KNI B-6' - Offered by <http://www.klynnurseries.com>, 2013 Catalog/No Pricing, accessed 2.17.2016, their own introduction

MALU009 - Malus sargentii TINA'S WEEPER™ 'KNI B-9' - Offered by <http://www.klynnurseries.com>, 2013 Catalog/No Pricing, accessed 2.17.2016, their own introduction

MALU005 - Malus SPARKLING SPRITE™ 'JFS-KW207' - 12 ft. tall x wide, compact, dense, globose, summer foliage bright green, remaining clean and neat, flowers white from pink buds, fruit yellow to orange shades, 0.25 in. wide. Excellent scab, mildew, cedar-apple rust, and fireblight resistances. In, or: <http://www.jfschmidt.com/>, accessed 12.26.2016, 2016 intro

MALU006 - Malus x domestica 'Rosalie' - habit columnar, 2.8m tall x 0.4m wide, moderate vigor, ornamental. Flowers form shallow cup, petal ovate (not elliptic as parent 'Maypole'), petals overlapping, reddish-purple 9RHS 63A, below 63B becoming 63B to 63C), showy. Fruit 50-55mm wide (mean), 61g (mean weight), broadly globose-conical, medium red, red in flesh, weakly scented, not generally considered edible, larger than on most ornamental Malus, fruit persisting long than 'Maypole' parent. Scab resistant. Or, pat: US# 25501 on 5.5.2016 to J. Tupy, Otto Louda, and J. Zima, Insitute of Experimental Botany As, Czech Republic as 'Aneta' x 'Maypole' in 1994. Web: <https://www.google.com/patents/USPP25501>.

MALU007 - Malus RED OBELISK® 'Dvp Obel' - 3-5m tall x 2m wide at most, plants have been measured at 4m tall x 1.2 wide when young, compact, columnar to very upright, very narrowly pyramidal with some age. Flower buds magenta pink, later medium to light pink, opening near white on the inner side, reverse may be white tinged pink for some time, sweet scent. Fruit conical, red, useful for crab apple jelly, not edible for fresh. Leaves 3-5 lobed, purplish-brown in tips, becoming dark green, fall color may contain yellow shade Or: Belgium. Web: <http://www.publicgreen.be/catalog/pdfuk/151.pdf>, accessed 8.6.2016

MALU008 - Malus hupehensis ARIE MAURITZ® - 7m tall, strong growing small tree, upright. Flowers light pink, opening pinkish-white. Resistant to scan and powdery mildew. Eval: highest rate crab apple in street tree use by Applied Plant Research, Wageneningen University. In: <http://www.boot.nl/en/text/89/Trees>, accessed 8.6.2016, introduced in Holland about 2010. Web: http://www.greenkeeper.nl/upload/documenten/04_jan_p_mauritz_-_de_juiste_boom.pdf

MELIA001 - Melia azedarach f. umbraculifera 'Caroline' - as the forma, 10 ft. tall x 8 ft. wide bvut grafted from superior selection for uniformity. Flemings.co.nz, accessed 4.24.2015

MELIA002 - Melia azedarach 'Lilac Lady' - flowers more abundant. Leaflets distinctly incised to 3-7mm deep, thus irregular serrate to sharp-dentate. Flemings.co.nz, accessed 4.24.2015

MELIA003 - Melia azedarach 'Elite' - non-fruiting clone. Metropolitan Tree Growers, New Zeand bef. 2015

META001 - Metapanax delavayi 'Stout' - erect, strong, perhaps sturdier clone, "rather thickened compound leaves, more schefflera-like than it's brethren" in the same seed bed. www.cistus.com, accessed 3.29.2016, their own clonal selection from seed

Hatch's Cultivars of Woody Plants is our nomenclature standard for 41 previously known cultivars in Metasequoia

METAS001 - Metasequoia glyptostroboides JADE PRINCE™ 'JFS-PN3Legacy'- 70 ft. tall x 25 ft. wide, upright, pyramidal, dense, upright branching is improved, along with a strong central leader. Leaves bright green, very lush and feathery, rusty orange in fall.

META002 - Metasequoia glyptostroboides 'Golden Guusje' ('Kools Gold') - leaves darker yellow than 'Ogon', more sun tolerant than it, and best with full sun for rich gold color. Nelis Kools, Bueme, Netherlands selection. Marketed in the US as 'Kools Gold' which so far is only used in cultivar form. It would be logical to make that name a trademark because a cultivar can have only one cultivar name but it can have other trademarked or marketing names.

META003 - *Metasquoia glyptostroboides* 'Hamlet' ('Hamlet's Broom') 8 ft. tall x 6 ft. wide (many years), dwarf, from witches broom, compact overall but all mottled creamy-white, becoming more normal green by summer. In: www.iselinursery.com, online 2016-17 catalog, accessed 10.5.2016

META004 - *Metasequoia glyptostroboides* CHINA GROVE™ 'CP14C0792' - narrowly pyramidal, loose, erect, somewhat more dense. Leaves dark bluish-green, not a bright green shade.
In: <http://www.hawksridgefarms.com/viewplant.php?id=2118>, accessed 10.7.2016

META005 - *Metasequoia glyptostroboides* 'Blue-ish' ('Blue Dawn') - needles light bluish-green, fairly pale and glaucous for this species.

MICR001 - *Microbiota decussata* 'Carnival' ('Boyko's Variegated') - foliage mass mottled yellow to about 30% surface, some sections large, covering many secondary and tertiary shoots, interesting winter coloration, showing a patchwork of yellow and purplish-violet or yellow and bronzish-purple tones, a very unique combination for any conifer genus.

MICR002 - *Microbiota decussata* 'Clouded Carpet' - foliage mass mottled yellow, 25% surface or so, comparisons to 'Carnival' are not yet known.

MICR003 - *Microbiota decussata* 'Filip's Pretty Pride' - slowerr, compact, but not dwarf, foliage masses more symmetrical and uniform than species typical. Edwin Smit Conifers, their own selection, 2004, not widely seen until 2010's.

MORU001 - *Morus alba* 'Ho-O' - documented in Cultivars of Woody Plants prior to OROC initiation.

MORU002 - *Morus* 'Lincoln Trail' (*Morus alba* x ?) - very compact, low-spreading dome to fslightly flat-topped, multiple trunks. View website: http://www.montgomeryparks.org/activities/things_to_do/fall/documents/shf_presentation.pdf

MYRI001 - *Myrica cerifera* 'Soleil' (JC Raulston Arboretum)

MYRI002 - *Myrica cerifera* 'Escarosa' - 16-20 ft. tall x 8-10 ft. wide, a strong, large forn, thick with 8-14 breaks per major limb, these shoots mostly flush with the canopy. Leaves darker green. Selected by PGI from seed collected at Escartosa Bay. Pannhandlegrowers.com, accessed 4.9.2015.

OROC Book III will continue with woody plant genera N to Z and is planned for publication in November of 2016.