

INTERNATIONAL REGISTER OF ORNAMENTAL PLANT CULTIVARS

**Woody Plants
Spring 2020**



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Chief Registrar**

INTRODUCTION

Here's 231 new and fun plants to collect and study. We thought the 2020 haul might reach 100 since our past Registers were in catch up mode, covering 2014 to 2019, covering hundreds of things forgotten or not reported in one place before. But the tsunami of creativity, genetic breakthroughs as well as "us too" clones continues. I would not have it any other way!

Warm thanks to all who have shared their cultivar data with the Open Registration Of Cultivars (OROC) project. This is our latest edition and we are proud of this work. **More than 102,000 people** ("unique visitors" in nerd webmaster speak) have either viewed or downloaded the OROC Registers from more than a hundred countries over the world. This continues to affirm the need for this project and the demand for free, updated cultivar data of this kind. I started online with cultivar sources in 1993 with the New Plant Page and that same Tripod website which now features Cultivar.org just broke the 14 million pageview mark. It is truly a honor to learn from and assist such a wide, international audience with as much to share as we share with you.

OROC+NOW

Beside sharing data, we very much need your financial support for this work to continue. Currently, OROC is funded entirely through sales of our Cultivar Encyclopedia at www.cultivar.org. When you subscribe to Cultivars of Woody Plants (CWP) you will have free access to the **OROC-NOW** webpage which shows our woody plant registrations in progress throughout the year. Everything goes into CWP over the weeks and months but OROC-NOW gives you a first, exclusive look as new data pours in. The annual register, such as this edition, will always be free to the public and offered once a year in a more formal, finalized form.

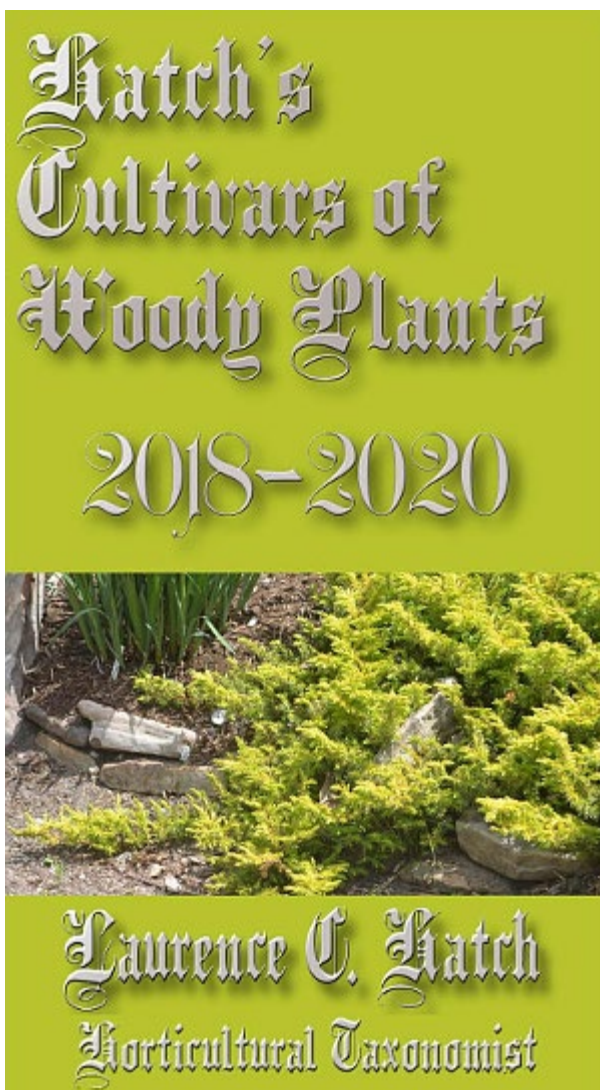
Taxonomy Of Ornamental Plants > TOOP

And speaking of free books, I want to plug my own 172-page ebook, **Taxonomy Of Ornamental Plants (TOOP)**, a guide to the latest research and techniques in the identification, nomenclature, and classification of landscape and floricultural crops. This PDF book is 100% free at Cultivar.org. Even if you are not a taxonomist (or perhaps generally hate that profession with it's infernal, eternal name changes), some of the discussed papers on how to separate out cultivars by DNA, chemical, cytological, and morphological techniques will likely interest anyone who loves tree and shrub varieties. There's lot of good information on cultivar identification and some of mine own original research in the mix.

INTERNATIONAL REGISTER OF COLEUS CULTIVARS

More free stuff. **The International Register of Coleus Cultivars** is now free online at www.cultivar.org. It covers more than 1600 named variations from 1852 to 2020. Just a few years ago that important genus was out of control, sometimes with 3-4 clones and seed strains bearing the same name. The International Coleus Society (ICS) has worked diligently to sort out these differences and this new register has numerous catalog scans, leaf scans, and full plant shots to help sort everything out to a new degree of precision. This is the new standard for reliable Coleus information and while we also present alternate opinions for the reader to evaluate, it can be cited as an international standard in nomenclature, cultivar history, and descriptive taxonomy. The days of "green with a pink center" are gone

and you'll get much more detail here.



We often get emails of thanks from readers but some ask "great list...but where's the rest?". The rest is here:

Cultivars of Woody Plants (CWP) has the other cultivars as part of its 6540 page contents. If you need or want the bigger picture, the everything on the bagel, please subscribe and while doing that you support the OROC work. CWP describes 547 *Acer palmatum* cultivars, over 1200 *Juniperus*, 88 *Acer rubrum*/x *freemannii*, 173 *Aucuba*, 403 *Lonicera*, 85 *Nandina*, 185 *Betula*, 75 *Taxodium*, 159 *Juniperus horizontalis*, 446 *Thuja*, 318 *Buddleia*, 103 *Cercis*, 351 *Chamaecyparis obtusa*, 613 *Cornus*, 209 *Ginkgo*, and I could go on. Almost all these cultivars are described and have origin data. CWP is not another name list of dubious merit from a bunch of paid compilers who can't spell. I've put 41 years and a small fortune into it to get it right. If you like what Krüssman, Bean, and Rehder wrote on woody plant varieties years back, this is intended to be a modern, up to date version with their kind of quality and detail.

Why are registers of this kind important and useful?

1. They stabilize nomenclature by discouraging duplicate or too similar epithets.
2. They establish origins and traits of cultivars as a document of record which can be cited
3. They get these great new plants sold by going before thousands of influential buyers and collectors in 100+ countries. Free marketing is never a bad thing. Yes, there are many new varieties articles and websites but OROC is often a favorite "go to" if you want more of the picture and not just a sampling of new material from one or two countries.
4. Curators use our OROC editions as documentation of their living accessions. Very few reference books, not even mine right now, have these new cultivars on their pages. Yet. With our OROC Data Sharing policy any author and garden writer can borrow text from our documents under specific, flexible terms.
5. They help breeders know what is already out there and whether they should do something similar or not. One feller wrote me that he read about a new cultivar and thought it would greatly improve his breeding stock as it were, giving his efforts new diversity and some fresh goals. We like to hear that.
6. Help collectors find new plants to purchase. I know some of you play the "got it...don't have it...don't want it" game, checking off the listings. If you collect most everything in a particular genus or species, OROC might well be of interest. Some of you know all about your genus already, that I grant you, but few of us know all of the groups. Everybody finds something new and interesting.
7. Digital references do not effect valid publication under the ICNCP code but digital works of this type are still cited in both academic and popular publications. All the Ivy League universities accept internet references in dissertations and journals and have specific rules of citation now. Indeed, some of their own journals are mainly distributed in digital PDF format like this file. Can't accept that life-saving medical procedure...it's not validly published in print form. How silly all that.
8. They establish a sort of Who's Who® and who's doing what, part of our horticultural history. New plants are part of many people's biographies as much as the courses they teach, nurseries they run, and gardens they create. OROC tries to be as international as possible and have brought in more resources about eastern European and Asian cultivars in this edition. That means alot of translations, free and bought, correspondance, phone calls, expensive articles purchases, and searching far places on the web.
9. They provide a starting place for experts to update their books and evaluations of a particular genus, leaving

nothing out. I hear from some of you that OROC has helped you select your taxa list for plant trials and evaluations. That is encouraging to us. I sometimes read with amusement in a patent application that applicant X is the only dwarf, variegated, or gold-leaved cultivar of the species. At ain't necessarily so!

I want to put in a **word of sincere praise** for the hundreds of plant breeders, cultivar developers, and also ordinary people who just notice and propagate a nice tree or sport they found. Many of you are very creative in what you select from, deliberately cross, or how you organize your selection criteria. All of you make our world more beautiful, fascinating, diverse, and economically prosperous. I'm not talking jobs for patent and trademark lawyers (though that does help beach Realtors and Porsche dealers) but employment for horticulture students, research technicians, marketing experts, interns, designers, landscape pros, and nursery workers. It also amuses and keeps up the occasional garden writer. This is not to say we need more Bradford-stupid trees to keep arborists fed; they'll be fine and would rather work on safer trees anyhow. You plant inventors also make the world cleaner and safer by innate resistances that reduce chemical spraying, genetics that limit invasiveness and fruit mess, and selections which reduce the need for water, and conserve architectural energy. There are no or fewer needs for expensive soil modifications, and artificial fertilizers. Zero or low maintenance plants save countless amounts of human, machine, and vehicle energy that would be otherwise wasted for gasoline, vehicle upkeep, corrective pruning, trimming, staking, irrigation, and deadheading. Then there's all that noise that is not created! A superb, truly stunning landscape with fancy, really good looking new plants can, I am told, add 5-10% to the value of a property, that occasionally being some very big money. The edible-ornamental is a wonderful invention of you geniuses in the cultivar invention field, giving us eye candy and literal candy of a healthier kind and salads and gourmet fixings for our kitchens in neat small, nearby spaces. Many of your fine new plants also feed wildlife during cold, barren winters and rough patches of dry, summer; quite literally saving some creatures and nourishing others in preparation for their spring babies. Some of your work benefits charities too (into the millions of dollars now) and it also benefits countless schools where students learn from your craft and can be funded by new plant royalties. There are scholarship programs funded by new plants and that is a wonderful thing.

New plants also bring people together for commerce, discussions, shows, trading, and garden visits. Plant people are amongst the most generous and friendly on earth and new plants fuel these social interactions like little else. Humans by our nature are endlessly curious about new things, products like plants in particular, especially when they might amuse us or benefit our homes and work places in some tangible way. If I had a dollar for each time a stranger at work said "ohhh...what is that?" speaking about my new cultivar houseplant and help make a new friend. We humans all need stimulation and a change of pace. Be the change of pace! New plants, whether just slightly better than the old or massive breakthroughs, excite us and delight us and rescue us from boredom. A wise man said "pain and boredom are the two main enemies of human happiness". Add in some healthy herbs and we have both of those covered. Plants are as much fashion as the latest Paris runway show and our green designs are not immune from generic copies and cheap knockoffs either! ("It's like an unpatented so-and-so" I hear from time to time). Every major university and major grower needs their full cultivar lineup just like every brewer needs an IPA, DIPA, NEIPA, Pils, stout, red ale, porter, blueberry sour, etc. They all need a purple-leaved dwarf and a columnar dense clone along with a double pink thing and gold-margined one to match the competition. Expect more of that. Complete, diverse lines are keeping some of you very busy. That is good because more competition brings out the best from everyone and more choices for the consumer. And kudos also to the unbiased or less biased cultivar trial coordinators who give us the analytic and photographic truth in these comparisons and contrasts.

Capitalism has a way of improving science and plant breeding and selection are absolutely part of those pressures, temptations, calculations, and set of values. Fortunately things are not yet like two botanists of the 19th century who pulled pistols on the other for the right of introducing a new species they found the same day in the same woods. You smaller inventors be not discouraged. Sometimes superior marketing of an inferior product works for a time - but seldom forever and the best usually wins out. Take that to heart those of you with better clones but no multi-million marketing department to call on. Good cultivar hype in the form hard metrics and truth in this age of social media can benefit even the small guy or gal or student on a mission to improve a certain species. It equalizes the small and big folks more than before. We humans require and adore stimulation, motivation, the idea of novelty, and drama in our lives. Plants being everywhere, in and out of doors, are easily part of this shifting, dynamic environmental theatre. There is a little fun with being the first to display a new plant or just keeping up with the Joneses too! Plant breeders and originators: what you do is so important, so vital, inspiring, nurturing, compelling, and very much appreciated. Keep it up my friends. Do keep it up!

Best wishes for a splendid and spectacular garden in 2020, full of new plants, scores and scores of them,



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THE REGISTER

Our nomenclatural standard for the genus *Abies* cultivar is CULTIVARS OF WOODY PLANTS, containing 489 different cultivars. We also use the www.conifertreasury.org for additional witches broom clones.

Abies koreana 'Forest Child' - 60cm tall (10 years) but sold grafted at different heights, dwarf, slow, flat-globose to mounded, numerous short lateral branchlets. Needles shorter, very stiff, quite radial in arrangement (not upright as species), dark green, slightly glossy, wide stomatal bands. Or: Jan Nowaczyk, Poland 2017. Web: <https://zszp.pl/en/plants/plant-novelties-competition/plants-novelties-competition-2019/#abies-koreana-forest-child-2>, accessed 12.19.2019

Thuja occidentalis 'Hurricane' - 3m tall x 1m wide, columnar, similar to it's parent 'Smaragd' ('Emerald') but more twisted branchlets, suggesting the spin of a hurricane storm in green. Web: <https://newplants.nl/en/planten/T/thuja-occidentalis-hurricane/>, accessed 12.19.2019

Carpinus betulus MINOR GLOBE 'Minoor1' - irregularly subglobose to globose, compact. Leaves highly lobed and incised as 'Quercifolia' but this interesting foliage style found in a smaller, neater habit. Web: <https://newplants.nl/en/planten/C/carpinus-betulus-minoor1-minor-globe-pbr-/>, accessed 12.19.2019

Betula pendula 'Cacao' - Habit drooping as 'Youngii' from which it was selected as a seedling. Bark dark brown, hence the name, contrasting white lenticels. Web: <https://newplants.nl/en/planten/B/betula-pendula-cacao/>, accessed 12.18.2019

Robinia 'Anna Irena' - 8-10m tall, vigorous, upright as species, perhaps more open, flower corolla bicolored on close view, white keel, pink wing, yellow mark on wing, effectively a medium to light pink from a distance, can repeat in September. Or: Stefan Wlodarczyk, Poland as hybrid, marketed by Szholka Szmit, the famous nurserymen of the same country. Image: <https://zszp.pl/en/plant-novelties-competition-2019/robinia-anna-irena-2/>, accessed 12.19.2019

Sambucus SUNNY DAYS 'Jonsun' - leaves yellow, lightly incised, appears to be less bright and less deeply incised than LEMONY LACE, based on images presented to date.

Acer truncatum 'Volcano' - "In spring, the plant has beautiful dark pink volcano like shoots", mature foliage yellow tinged red and gold tinged orange, veins remaining yellow. Or: Poland. <https://newplants.nl/en/planten/A/acer-truncatum-volcano/>, accessed 12.20.2019

Abelia x grandiflora 'Jackpot' - leaves light olive, broadly margined and sectored in true gold, maturing to medium green margined cream, chimera to 50% in new tips, later mostly 10-20% surface. Pat: Japan # 14184 in 2006 to Sakaue Katsuya

Acer rubrum BUILT TO LAST® - 30-50 ft. tall x 30-40 ft. wide, ovoid to subglobose, 10-20% faster than OCTOBER GLORY but more heat tolerant, similar fall color and foliage traits, leaves medium green, glossy. Or: sport of OCTOBER GLORY. web: <http://www.selecttrees.com/trees/built-to-last-red-maple/>, accessed 5.9.2019

Aesculus hippocastanum 'Schuch' - 100cm tall x 150cm wide, dense, dwarf, leaves variegated in yellow.

Weigela florida LIME MONSTER 'BRS1' - 1.5 m tall. Leaves larger, to 25cm long, colored light olive green to chartreuse to lime shades, tinged red to orange in fall. Flowers mostly white. Or: Poland. Web: <https://newplants.nl/en/planten/w/weigela-florida-brs1-pbr-lime-monster/>, accessed 12.19.2019

Buddleia davidii 'Magda Gold Knight' - similar to 'Black Knight' in flower but adding golden foliage. Web: <https://newplants.nl/en/planten/B/buddleja-davidii-elstb1-magdas-gold-knight/>, accessed 12.19.2019



Cercis canadensis GOLDEN FALLS™ 'NC2015-12' - distinctly pendulous, hanging-drooping if trained, commercially raised on stakes with one main leader for more upright effect as 5-6 ft. tall young trees, leaves bright gold at first becoming pale yellow, lime green, and finally a light green with maturity, not overtly bicolored but showing a slow transition of gold to green. The best gold color diminishes after mid-July or when temperature become very hot. Flowers typical of species. Or: Dr. Dennis Werner, North Carolina State University, controlled cross of 'Covey' and 'Hearts of Gold' in 2009, producing F1 that were non-weeping and green. These F1 were intermated using national pollinators and the seed obtained in 2013. This was the best of 5 seedlings with both gold leaf and weeping architecture. Image copyright owned by and courtesy of the originator. In: licensed to Star Roses.

Cornus kousa 'Pink Lips' - leaves highly twisted, undulate, appearing long and narrow as a result, most white at first, heavily speckled and sectorial dark green (30-50% surface), this variegation tinged bright pink in summer and fall both, flower bracts white tinged pink to age.

Cornus kousa 'Teresa' - floral bracts very narrowly ovate to long-tapered and subtriangular, more elongated or prolonged at the apex than normal, leaves thinly margined cream to white (5-8% surface), a very light and subtle chimera.

Juniperus communis 'Lemon Carpet' - prostrate to procumbent, very low spreading, branches distinctly radiating in all direction, hence very different look than decumbent golden cultivars of *J. rigida* var. *conferta*, light yellow to greenish-yellow color throughout, not very gold nor bright at time.

Cotoneaster 'Bronfire' AUTUMN INFERNO™ - 5-6 ft. tall x 4-5 ft. wide, leaves cup-shaped, slightly twisted, glossy dark green, becoming rich dark red in fall, sometimes also orange, very showy. Dark red fruit can also be ornamental. USDA 3. Pat, or: US# 30493 on 14 May, 2019 to Vincent Bron, Grand Forks, California as chance seedling of unnamed *C. lucidus* material, thought to be a cross to *C. apiculatus* based on morphology in 2010 Web: <http://www.firsteditionsplants.com/autumn-fire-cotoneaster>, accessed 6.17.2019.

Distylium myricoides BLUESCAPE™ - 1-2 ft. tall x 3-4 ft. wide, low and mounding, less erect and denser than 'Lucky Charm', lower and not as mounding as 'Vintage Jade', also less vigorous than it, freely branched, leaves greyish-blue, smaller and refined in appearance, new growth tinged bronze. USDA 7. Pat, or: US# 30514 on 21 May, 2019 to Robert H. and Lisa J. Head, Head's Select Inc., Seneca, Georgia, crossed of 'Lucky Charm' and unnamed seedling 2008. Web: <http://www.gardendebut.com/plant/Bluescape-Distylium>, accessed 6.17.2019

Cornus 'Eric Genat' ('Eric Gennat') - bracts held wide open (less cupped), large, lemon-cream in bud, maturing to light pink to blush, heavily tinged violet-pink, suborbicular to broadly ovate, overlapping much, Kousa-like but this clone is thought to be an interspecific cross. Or: unknown, details requested, seems to be listed most often by Australian nurseries.

Lonicera nitida SCOOP 'Chalons' - 1m tall x wide, subglobose to short ovoid, shoot distinctly erect to outfacing. Leaves much smaller than typical, refined fine texture that reminds one of an herb plant or *Juniperus communis* too, useful as a low hedge and *Buxus* replacement, medium olive green in color. Ch: to -12 deg. C. Or: Pierre Dummouchel de Premare, Frankrijk, France. Pat: EUR20190837. <https://www.plantipp.eu/en/Plants/Lonicera-nitida-scoop-chalonspbr-2/>, accessed 12.18.2019

Cotinus coggygria 'Lilla' - like a smaller version of 'Royal Purple', 1m tall 1.5m wide, subglobose to globose, leaves purple in spring and summer, rich orange-red tones in fall, panicles dusky red to reddish-pink. Or: Miklosne Jozsa, Hungary 2010. Web: <https://www.andre-briant.fr/en/the-novelties/access-to-our-new-plants/4200-cotinus-coggygria-lilla.html>, accessed 12.21.2019.

Pittosporum tenuifolium DARK DIVA 'Hutdiv' - 2.5m tall x 2m wide, vigorous, subglobose to short ovoid, leaves glossy, very dark blackish-purple, darker and denser than old 'Purpureum'. Web: <https://www.andre-briant.fr/en/the-novelties/access-to-our-new-plants/4529-pittosporum-tenuifolium-dark-diva-hutdiv-.html>, accessed 12.21.2019

Cornus alternifolia 'Andre Giraud' - leaves with very fine, "delicate" white speckling and subtle paler suffusions, a soft milky, hazy look.

Corylus avellana 'Syrena' - leaves dark purple, showy. Unusual as fruit is both large and edible.

Aesculus hippocastanum 'Alek' - more upright, leaflets narrower, male and fruitless by one report.

Gardenia jasminoides DIAMOND SPIRE™ 'Leefive' - habit columnar to narrowly ovoid, 3-4 ft. tall x 2 ft. wide, flowers single, reblooming throughout summer and fall, leaves very glossy green, texture, broadly elliptic-ovate to suborbicular. Or: Buddy Lee

Gardenia jasminoides SWEET STAR® - subglobose, compact, flowers single, reblooming in late summer to fall, fruit orange, showy, leaves glossy green, reliably cold hard to USDA 6b-7 due to seed parent's origins in China via the Beijing B.G. Proved cold hardy in Athens, Georgia in 2013-2014 with minimal damage. Ns: marketed under the FIRST EDITIONS® name which is a multi-generic trademark and not a taxonomic name nor unit. In: Plant Introductions Inc. via baileynurseries.com

Camellia sinensis 'Christine's Choice' - Leaves darker, longer, appearing narrow, ornamental. Web: www.camforest.com, accessed 12.23.2019

Camellia sinensis 'Dave's Fave' - Internodes shorter, leaves very dark green, wider, distinctly glossy, serrate. Or: David Parks. Web: www.camforest.com, accessed 12.23.2019

Camellia sinensis 'Fuiiri' - irregularly margined and sectored cream to white. Web: www.camforest.com, accessed 12.23.2019

Camellia sinensis 'Yellow Tea' - Slower growth. leaves irregularly splattered and sectored medium yellow, blades large at 7.5 in. long x 3.5 in. wide. Web: www.camforest.com, accessed 12.23.2019

Sciadopitys verticillata 'Shine A Light' - Needles tips white, cream, and tan. <https://www.kvbc.nl/sciadopitys-verticillata-shine-a-light/?lang=en>, accessed 12.20.2019

Acer platanoides 'Warmia' - 7-8m tall (10 years), narrowly columnar, slimmer than 'Columnare', vigor typical of species, strong leader, short side branches. Leaves 5-7 lobes, sharp teeth, dark green, yellow in fall. Or Lucjan Gursztyn, Poland, introduced 2019. Web: <https://zszp.pl/en/plants/plant-novelties-competition/plants-novelties-competition-2019/#acer-platanoides-warmia-2>, accessed 12.19.2019

Buddleia BLUE SARAH 'SRPBUD989' - 0.8-1.0m tall x wide, suitable for medium to large containers, dense, compact, subglobose. Flowers in wide, short spikes, corolla violet-blue. Or: Star Roses and Plants, USA. <https://www.plantarium.nl/novelties-search/>, accessed 12.18.2019. Ns: has been sold in Europe with the SUMMERLOUNGE® series that also includes LILAC TURLE, PURPLE LION, and WHITE SWAN.

Buddleia SUMMER TEENS MATS MAGIC RED 'Artbud 1580' - compact, well-branched, moderate vigor. Flower panicles numerous, narrow, sharply tipped, bright violet-red corolla. Or: Norbert Artmeyer, Horstel-Reisenbeck, Germany. Aw: Plantarium Silver 2018. Web:

Buddleia SUMMER TEENS (R) DAVID DARKVIOLET - corolla very dark blue.

Buddleia SUMMER TEENS PIA PINK - corolla medium pink, very wide, dense inflor.

Buddleia SUMMER TEENS WILMA WHITE - corolla white, no distinct eye, inflor. very dense, full like PUGSTER WHITE

Buddleia SUMMER TEENS VIVIEN VIOLET - corolla medium lavender-violet, small orange eye.

Buddleia SUMMER TEENS BRUNO BLUE

Buddleia SUMMER TEENS VIGGO VIOLET

Buddleia SUMMER TEENS LILITH LILAC

Buddleia SUMMER TEENS PABLO PURPLE

Buddleia SUMMER KIDS® 'Benni' - flowers white.

Buddleia SUMMER KIDS 'Leni' - flowers rich violet-purple

Weigela PICOBELLA ROSA 'TVP2' - 40cm tall x 60 cm wide, very compact without much pruning, fine textured leaf. Flower corolla a clear medium pink, abundant, blooming often from May to October. Or: Bert Verhoef, The Netherlands. Aw: Plantarium Silver 2019, RHS Chelsea Sgow 2019 Plant of the Year Shortlisted. Ch: to -25 deg. C. Pat: EU 20172546. Web: <https://www.plantarium.nl/novelties-search/>, accessed 12.20.2019

Juniperus scopulorum BLUE IVORY 'Klaverjun' - narrowly pyramidal to columnar, frosty blue with abundant white to cream mottling throughout, appears to be a wider plant than 'Sparkling Skyrocket'. Web: <https://www.kvbc.nl/juniperus-scopulorum-klaverjun/?lang=en>, accessed 12.18.2019

Gardenia jasminoides 'Wald' - flowers very wide, single, pinwheel-shaped, numerous. Pat, or: Japan #13621 in 2003 to Mstsui Kunio, title held by Toyota Motor Corporation (yes, really). Photo: http://www.hinshu2.maff.go.jp/vips/cmm/file_library/20000/15138/15138_3_1.jpg, accessed 6.17.2019

Fagus sylvatica 'Anny's Rohan Sentry' - very narrowly columnar, leaves dark purple, margins dissected. Listed apart from 'Anny's Red Pillar', thus not the same, the later not having as dissected or lobed margins.

Fraxinus excelsior 'Zygmunt Krasinski' - leaflets much elongated, single, double, and triple compound. Or: Opinogora, Poland from a notable tree found there.

Hydrangea paniculata 'Dentelle de Gorrion' - large inflorescence, numerous tiny flowers, lacy appearance.



Syringa is one of the exempt genera as it has been so skillfully written, almost obsessively updated, and carefully distributed (at no charge too) by the Freek Vrugtman, former Curator of Collections at the Royal Botanic Garden, Hamilton, Ontario and nomenclatural expert. He has retired from this passion of many decades (I've known him for 40+ years as an informed correspondent and mentor) and now the capable Dr. Mark De Bard has taken over. De Bard is an accomplished lilac scholar, collector and retired three years ago as a Trauma Physician at the The Ohio State University Medical Center. The newest version of Syringa Register, including trademark clarifications is found in the link below. The new photo CD with over 1300 cultivars (soon to be higher in a forthcoming edition) and their color values (wow and super wow) is highly recommended and available from the ILS. Between the two references our knowledge of this fascinating and difficult genus is much enhanced and our love of those scented flowers all the deeper. This is a genus in good hands and an ideal example of the ISHS/ICRA process as it's very best. We at OROC fully support ICRA when it works, is free, responsive, and handled with scientific precision.

<https://www.internationallilacsociety.org/wp-content/uploads/2019/10/International-Register-updated-October-3-2019.pdf>

Fagus sylvatica 'Cheeky Slab' - provisional registration. Widely listed in Russia and Poland. Description needed.

Fagus sylvatica 'Purple Drongo Weeper' -

https://floraplanet.com/catalog/rasteniya_i_cveti/fagus_sylvatica_purple_drongo_weeper-23162, accessed 12.18.2019

Fagus sylvatica 'Rohan Red Globe' - dense globose, leaves dark purplish-red, incised and lobed as the Rohan series but even more rugose and textured than usual. <https://www.pepinieres-rouxel.fr/plante/index/famille-fagaceae/genre-fagus/espece-sylvatica/cultivar-rohan-red-globe/fagus-sylvatica-rohan-red-globe>, accessed 12.18.2018

Hatch's Cultivars of Woody Plants 2018-2020



Laurence C. Hatch
Horticultural Taxonomist

Our nomenclatural standard for *Juniperus* with more than 1200 cultivars described is *Cultivars of Woody Plants*. The five volumes on this genus in CWP replace the older *Garden Junipers* book offered a decade ago.

Juniperus chinensis 'Mitshi Gold' - habit narrowly pyramidal to columnar, dense, foliage bluish-green, mottled in light yellow to gold. Pat: Japan # 14641 in 2004 to Nakajima Yoshikazu and others.

Juniperus horizontalis 'Brockway Beauty' - "windswept" low form, foliage "vibrant green" all year, tips slightly more bluish to silvery per their image. Or: found at 720 ft. near Lake Superior on Brockway Mountain near Copper Harbor, Michigan. In: <https://hartmannsplantcompany.com/wholesale/product/brockway-beauty/>, accessed 9.17.2019. Not to be confused with 'Copper Harbor', a gold and copper-toned sport of 'Bar Harbor'.

Juniperus horizontalis 'Maxton Hugger' - very low procumbent, hugging the ground, foliage a rich green all year. Or: found in the wild at the Maxton Flats on Drummond Island, Michigan. In: <https://hartmannsplantcompany.com/wholesale/product/maxton-hugger/>, accessed 9.17.2019

Abelia x grandiflora CAMEL CHARM® 'Minacara1' - 1.5m tall x wide. compact, new leaves a rich brownish-orange to caramel shade, becoming a brighter orange then finally more golden. Or: Hortival Diffusion. Web: <https://www.pepinieres-minier.fr/produit/abelia-x-grandiflora-caramel-charm-r-minacara1-cov>, accessed 12.23.2019

Potentilla fruticosa DOUBLE PUNCH PASTEL 'Minbrero04' - 50cm tall. Flowers large, semi-double, slightly undulate and irregular, almost the look of a small rose with gold stamens, creamy-pink from creamy-peach buds with pink margins, fading paler, blooming most of the summer, Leaves green, mossy color. Or: Hortival Diffusion SAS, France. In: Minier Solutions, 2019.

Philadelphus coronarius 'Kostelec WB' provisional name - very dense, dwarf, sported from a broom, subglobose. Leaves golden-yellow.

Prunus cerasifera 'Zloty Oblok' - leaves golden-yellow at first, later more green.

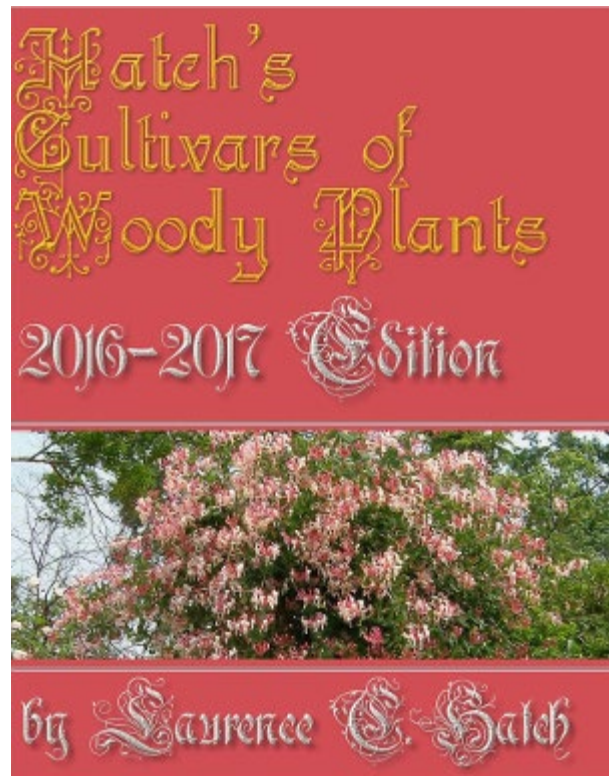
Ilex crenata CHAT'O® 'Farrow6' - 1.5m tall x 0.5m wide, columnar to narrowly ovoid, however a few catalog illustrate a more subglobose form, dense, slight irregular and not all vertical. Leaves dark, glossy green at maturity. Web: <https://www.pepinieres-minier.fr/produit/ilex-crenata-chato-r-farrow6-cov>, accessed 12.23.2019

Juniperus virginiana PROVIDENCE™ 'JVBP3' - 20 ft. tall x 10 ft. wide, dense, pyramidal, appears from image to be much like 'Brodie' but perhaps less formal. "Root system and transplantability are superior to most cultivars". Or: found in Athens, Georgia as notable, superior plant, suggested as Leyland Cypress replacement. Li: Dirr, M.A. and Warren, K.S. 2019. *The Tree Book*. Timber Press. Web: <http://www.selecttrees.com/trees/providence-eastern-red-cedar/>, accessed 5.9.2019

Juniperus virginiana TAPESTRY™ 'JVADR' - 25 ft. tall x 15 ft. wide, very densely pyramidal-ellipsoidal to ovoid, very

much like the Ovoid Group documented in CWP, from images it appears to have a more divergent, semi-juvenile foliage type which does increase the density of individual branches. "Root system and transplantability are superior to most cultivars". Or: from a notable tree found in Adriuan, Georgia. Li: Dirr, M.A. and Warren, K.S. 2019. The Tree Book. Timber Press. Web: <http://www.selecttrees.com/trees/tapestry-eastern-red-cedar/>, accessed 5.9.2019

Chimonanthus praecox 'Long Fruit' - larger, longer fruit and seed pods. Web: www.camforest.com, accessed 12.23.2019'



Our nomenclatural standards for Lonicera are Cultivars of Woody Plants with 430+ different named clones and also Lonicera.nl by honeysuckle expert and collector A.J. Laros.

Lonicera japonica PINK APERITIF® 'Crowthlon' - 4m tall x 3m wide, vining however. Leaves when young a glowing light pink, becoming whitish and blush, expanding to white with green veins, later more of a typical green, a virescent mutation, said to resemble Actinidia kolomitka at times. Or: Tim Crowther, UK, from 'Repens', intro. about 2018. Web: <https://www.pepinieres-minier.fr/produit/lonicera-japonica-pink-aperitif-r-crowthlon-cov>, accessed 12.23.2019

Our official nomenclatural standard for Lagerstroemia is the U.S. National Arboretum site: <https://www.usna.usda.gov/science/icra/lagerstroemia/>, last updated November 2016.

Lagerstroemia COLORAMA™ SCARLET 'JM1' - 15-20 ft. tall x 8-12 ft. wide, vigorous, self-branching. Leaves dark green into fall. Flowers a dark scarlet red in high quantities. USDA 6. Web: <https://www.gardendebut.com/plant/Colorscape-Scarlet-Crapemyrtle>, accessed 12.21.2019

Lagerstroemia THUNDERSTRUCK™ - generally 12-15 ft. tall x 8-12 ft. wide, compact, floriferous,

- THUNDERSTRUCK™ RUMBLIN RED™ 'JM2' - leaves very dark, blackish-purple. Flowers undulate, very dark ruby red, sometimes blackish
- THUNDERSTRUCK™ LAVENDER BLAST™ 'JM3' - leaves very dark, blackish-purple, glossy. Flowers medium, clear lavender most of the summer.
- THUNDERSTRUCK™ WHITE LIGHTNING™ 'JM4' - leaves dark green, fading to near black, not as purple at first as others. Flowers white, however images show lavender tints.
- THUNDERSTRUCK™ CORAL BOOM™ 'JM5' - leaves glossy, blackish-purple. Flowers summer to fall, rich coral pink.
- THUNDERSTRUCK™ WHITE FLASH™ 'JM6' - leaves glossy, blackish-purple. Flowers blush pink to white tinged pink, summer to fall.

Thuja plicata EMERALD TEARDROP™ 'RLH-CS' - 15 ft. tall x 8 ft. wide, compact, "very clean", dense. Foliage medium green all year, holding color well into winter. USDA 5. Web: <https://www.gardendebut.com/plant/Emerald-Teardrop-Arborvitae>, accessed 12.19.2019

Thuja SLENDER GIANT™ 'RLH-GG' - 20 ft. tall x 6 ft. wide, vigorous. Foliage dark green, holding color into the winter. Interspecific hybrid, parentage not yet reported. USDA 4. Web: <https://www.gardendebut.com/plant/Slender-Giant-Arborvitae>, accessed 12.19.2019

Abelia x grandiflora TWIST OF MANGO™ 'RNTOM' - 2 ft. tall x 4-5 ft. wide. Leaves bright yellow at first, becoming a true gold in summer, fall showing bronze with gold highlights. Flowers small, white. USDA 6. Web: <https://www.gardendebut.com/plant/Twist-of-Mango-Abelia>, accessed 12.19.2019

Our nomenclatural standards for the genus *Buxus* with about 400+ cultivars are the two major books written by Lynn Batorf as well as his recent Addenda in the IBS Bulletin: https://boxwoodsociety.org/uploads/58_3_2019_Spring.pdf. This update is wonderful perhaps except for a quote from the RHS incorrectly stating that OROC charges for registrations (*Buxus* or otherwise) as part of our "scheme". By the way, the important cultivar 'Justin Brouwers' is now with scientific evidence in hand a true *B. sempervirens* and not longer a *B. sinica* var. *insularis* variant. The society is further generous in providing their recent and past Bulletins (a genuine treasure trove) free online: https://boxwoodsociety.org/abs_publications.html#bulletin.

Gardenia jasminoides PRINCE CHARLES™ - 4 ft. tall x 5 ft. wide, subglobose to mounded, compact, vigorous, slightly larger than 'Crown Jewel'. Flowers all white, semi-double to double with a full center, very fragrant, recurrent blooming, flowers not aborting from heat stress. Leaves dark green. Ir: moderate resistant to white fly. Or: Oakmont Nursery, Siler City, North Carolina. Just for the record, Siler City was the long-time home of Francis Bavier, better known as Aunt Bee on the Andy Griffith/Mayberry TV show. Ns: normally cultivars named for a well known celebrity or member of a royal family require by the ICNCP permission of the name holder or their estate. This is less clear in the trademark world but ought to be considered. Web: <https://bestnewgardenias.com/prince-charles/>, accessed 12.23.2019

Pyracantha coccinea 'Anatolia' - 1-2m tall x 1.0-1.5m wide, vigorous, spreading form, others says "dense, rounded" but lower limbs do generally cascade. Leaves dark green all year. Dr: scab resistant. Fruit red to orange (reports vary), showy. More cold hardy. In: Bullbacks Nursery, intro. 2016

Our standard for *Quercus* nomenclature is <http://oaknames.org/search/index.asp>. A superb example of a database/monograph in one form. This is a fitting and excellent tribute to the great, late Piers Terhane and just one of his many, quality productions.

Quercus palustris 'Betty Jean' - leaves more deeply lobed or incised.

Quercus robur 'Blue Gnome' - dense, dwarf, leaves a more greyish, faintly blue sheen. Li: Coombes and Jablonski, J. Int. Oak Soc 17: 39 (2006). Not new but so rarely reported I include it here.

Quercus robur 'Jan Kiepura' - very dense, narrowly columnar, uniform. Li: Jablonski, J. Int. Oak Soc. 27: 142 (2016).

Ternstroemia gymnanthera 'Broody' - habit compact, leaves margined cream to yellow, new growth tinged pink, Pat, or: US#30,450 on 30 April 2019 to Clayton O'Quinn, Fort White, Florida as chance sport in 2006.

Crataegus monogyna 'Bulsom Gold' - leaves yellow or sectored yellow as a chimera. Or, in: Kris Michielsen 2015 ex https://www.arboretumwespelaar.be/userfiles/file/pdf/171008_Cultivars%20of%20European%20Crataegus%20%E2%80%93%20Past%20and%20Present_Eike%20Jablonski.pdf

Carpinus caroliniana 'Sentinel Dries' - 25 ft. tall, columnar, durable, leaves slightly darker than species, rich red tints in fall, perhaps rivaling maples at times, also having orange and yellow tints, richer and darker than species typical. Or: Belgium. Web: http://www.atreeday.com/atreeday/Carpinus_caroliniana_Sentinel_Dries.html, accessed 12.19.2019

Hatch's Cultivars of Woody Plants 2018-2020



Laurence C. Hatch
Horticultural Taxonomist

For more than 220 cultivars of *Viburnum* our nomenclature standard is *Cultivars of Woody Plants* along with Mike Dirr's brilliant monograph on the genus.

Viburnum odoratissimum COPPERTOP™ 'Brand01' - 8-10 ft. tall x 5-6 ft. wide, more compact, new growth red to bronze or copper orange, USDA 8. Pat, or: US# 30449 on 30 April 2019 to Paul Klinger Jr., Bushnell, Florida as chance seedling of species in 2005. Web: <http://southernlivingplants.com/shrubs/plant/coppertop-sweet-viburnum>, accessed 6.17.2019

Viburnum carlesii 'Fit 2B Tied' - 1.88 m tall x 1.52 m wide (20 years), stems flexible, not easily broken, thus more suitable for nursery or garden center transport, mounded, flowers whitish pink from redder buds, fall foliage red, similar in flowers and fall color to 'Compactum' but slower, floral heads smaller, stems more flexible, and less dense. Pat, or: US# 30,329 on 2 April 2019 to Jeff and Nancy Tures of Illinois as chance seedling in Huntley, Illinois 1987.

Viburnum plicatum 'Kuratomi3' - flower heads lacecap type, sterile flowers light pink. Pat: Japan # 23708 to Kuratomi Hirofumi 2010

Viburnum plicatum 'Kuratomi33' - flower heads lacecap type, sterile flowers very large, blush pink opening white. Pat: Japan # 23709 to Kuratomi Hirofumi 2012

Viburnum plicatum 'Beni Sango' - flower heads lacecap type, sterile flowers white, fruit red, very numerous, showy Pat: Japan # 24613 in 2013 to Odaira Tamito

Viburnum plicatum 'Ruby Sango' - flower heads lacecap type, sterile flowers white, fruit dark red, showy. Pat: Japan # 24614 in 2013 to Odaira Tamito

Ilex pedunculosa 'Harukaze' - new growth rich dark purplish-red. Pat: Japan #18048 in 2007 to Ishikawa Tsuyoshi, Limited Company Suikouen

Ulmus 'Wingham' - 25 ft. tall (5 years), large, open. Leaves dark green. Dr: DED resistant. Or: David Herling, UK, cross involving *U. minor*, *U. pumila*, *U. wallichiana*, and *U. x hollandica* 'Vegeta', named for a village in Kent where it was trialed. Host to the white-letter hairstreak butterfly (a good insect interaction) which prefers elms for support.

web: <http://www.resistantelms.co.uk/>, accessed 12.24.2019

Ulmus minor 'Dehesa de Amanuel' - <http://www.resistantelms.co.uk/ulmus-minor-dehesa-de-amaniel/>, accessed 12.24.2019

Sorbus bissetii PEARLS - https://www.rhsplants.co.uk/plants/_/sorbus-bissetii-pearls/classid.2000022368/, accessed 12.24.2019

Juniperus communis 'Bagnet' - 2.5m tall sx 20cm wide, very narrowly columnar to fastigiate, remaining thick, dense, 5-10 cm growth a year. Leaves bright green and silver. Or: Michal Kaluzinski, Poland c. 1996. Web, or:

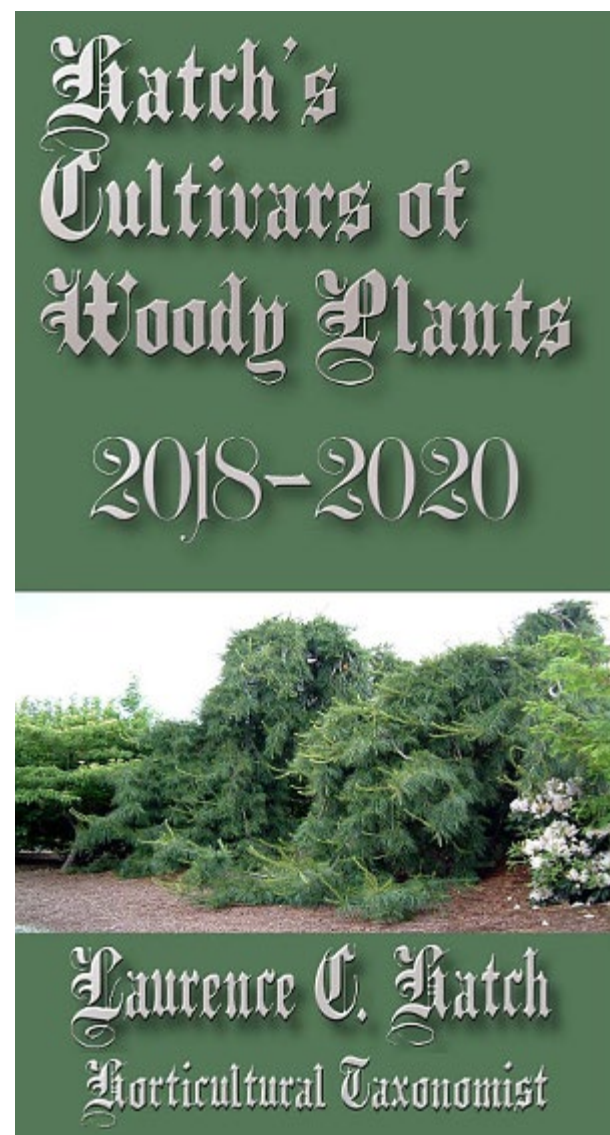
<https://www.kaluzinsky.pl/en/offer/conifers>, accessed 12.24.2019

Juniperus x media 'Yellow Sapphire' - 20-30cm tall x 50-60cm wide, slowly arching-spreading as *Pfitzeriana*, golden yellow new growth, denser, smaller than most other golds, holding color all year, leaves moderately to medium divergent. Web: <https://www.kaluzinsky.pl/en/offer/conifers>, accessed 12.24.2019

Juniperus horizontalis 'Salamander' - 20cm tall, procumbent, silvery-blue, heavily mottled in medium to yellow, leaves moderately to highly divergent, slow. Web: <https://www.kaluzinsky.pl/en/odmiana/2210.juniperus-horizontalis-salamander-pa>, accessed 12.24.2019

Juniperus squamata 'Denfa Malachit' - 70cm tall x 2m wide, 15cm growth a year, wide-spreading variant on 'Blue Carpet' (which in the US is often untrue). Or: Michal Kaluzinski, 2003.

Picea glauca 'Dendrofarma Gold' - 0.5m wide (15 years) very dwarf, subglobose to mounded, very dense, much like a golden version of 'Alberta Globe'. Or: Michal Kaluzinski 2000.



Pinus sylvestris 'Pelczar' - subglobose, semi-dense, 5cm growth a year. grayish-green. Or: Michal Kaluzinski 2009 as wb.

Lagerstroemia PURPLE POP™ 'Grebepur' - 10 ft. tall x 6 ft. wide, flowers light purple to lavender-violet in large heads. web: <http://www.gardendebut.com/plant/Purple-Pop-Crapemyrtle>, accessed 6.17.2019

Cornus kousa 'White Minuma' - bracts white, very narrow, elliptic, pinwheel effect. Pat: Japan #6021 in 1994 to Hagiwara Toshihiro

Salix aurita 'Buchelberg' - leaves irregularly marked in white to cream.

Cornus kousa 'Summer Sky Tree' - robust, columnar to narrowly pyramidal, one of the most erect kousas known, new leaves tinged orange to red, flowers white, numerous. Pat: Japan # 22395 to Hagiwara Toshihiro in 2013

Cornus kousa 'Summer Glassy' - leaves medium olive, very glossy as the name implies, flowers white, showy, leaves red to orange in fall, showy. Pat: Japan # 22394 in 2013 to Hagiwara Toshihiro

Cornus kousa 'Snow Around Paige' - leaves broadly margined white, chimera to 20-30% surface, flower bract white, narrowly ovate. Pat: Japan #26044 to Hagiwara Toshihiro in 2017

Thuja POWDERED GOLD™ - 25-30 ft. tall x 8 ft. wide, narrowly pyramidal to conical, strong central leader, dense, 18-25 in. growth a year when young, about half as tall as its sport parent 'Green Giant'. Foliage golden-yellow in tips, becoming a sparkling tint or suffusion of gold, powdered actually with lots of green too by summer, holding these colors all summer, very much more green in winter. Or: Oatmont Nursery, Siler City, North Carolina. Web: <https://bestnewgardenias.com/arbortitae/>, accessed 12.23.2019

Quercus lyrata STALAGMITE® 'QLSTK' - 30-60 ft. tall x 20-30 ft. wide, habit more narrow, branches upsweeping, leaves dark green, leafing out several weeks later than the earliest of strains. web: <http://www.selecttrees.com/trees/stalagmite-overcup-oak/>, accessed 5.9.2019

Ilex latifolia COOL FENCES™ 'ILDG' - 20 ft. tall x 15 ft. wide, pyramidal, dense, leaves dark green, thick, coriaceous, fruit red and abundant, showy. Li: Dirr, M.A. and Warren, K.S. 2019. The Tree Book. Timber Press. We are eager to recommend this new, sophisticated and frankly stunningly beautiful new book which is available as low as \$17 for a ebook copy at Google or Amazon. Web: <http://www.selecttrees.com/trees/cool-fences-lusterleaf-holly/>, accessed 5.9.2019

Ilex latifolia 'Dodds Green Flame' - listed for Coosa Valley Growers, Powder Springs, Georgia, USA

Ilex crenata 'Country Court' - listed for Coastal Nursery, Freehold, New Jersey, USA

Ilex vomitoria 'Dummyline Road' - listed for Louisiana Growers, Anite, Louisiana, USA

Juniperus virginiana 'Green Point' - a listed name from Walker Nursery, McMinnville, Tennessee, USA

Juniperus virginiana 'Greenbelt' - typical habit, wider than 'Bordie', female by their images. Developed for ease of transplanting. I recently saw a major nursery in NC transplant nursery grown redcedars on a highway project and half were lost. Even though this is a tough, tolerant species once established, transplanting can be a big issue. Good to see this work. In: Bold Spring Nursery, Hawkinsville, Georgia, USA, <http://www.boldspring.com/trees/jvg-ftg>, accessed 12/23.2019

Juniperus virginiana var. *silicicola* 'Robin Blue Improved' - ovoid, bluish-green, tips notably a frosty blue, not as verdant green as variety. In: BK Cedars, Alachua, Florida, USA, <https://www.bkcedars.com/>, accessed 12.23.2019. BK Cedars is a provider of large container, live Christmas trees of this species and also *Cupressus glabra*.

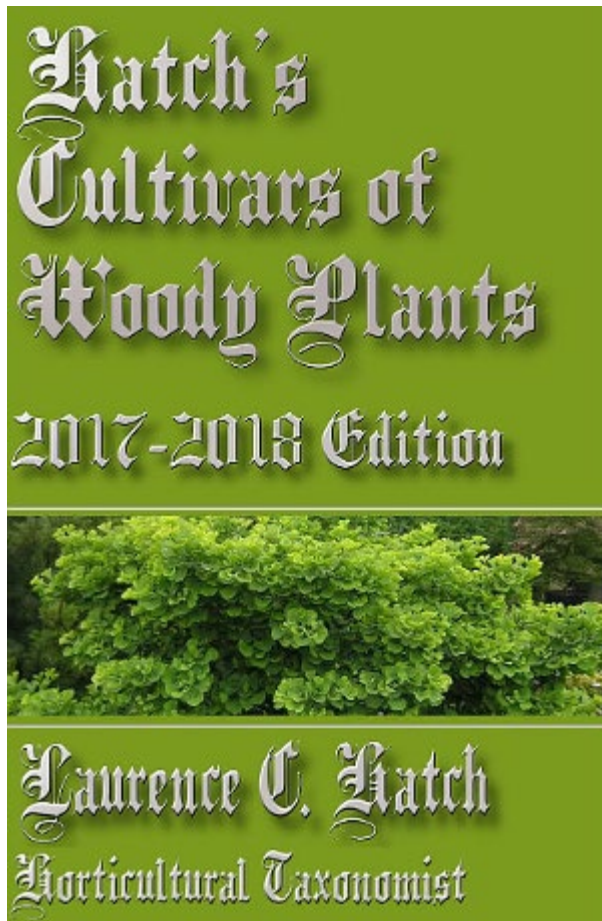
Malus toringo 'Aro' - 3m tall, columnar. Leaves very dark blackish-red. Flowers dark violet-pink with paler, whitish center. Fruit dark red, 1-2cm wide. Or: Karsten Jensen, Denmark, intro. 2013, not widely seen in Europe until 2019, still not in the US(?).

Ribes nigrum BLACK'N'RED(R) PREMIERE - an edible black currant doing a foliage impression of a purple-leaved *Physocarpus*. <http://www.lubera.co.uk/plants/soft-fruit/currants/black-currants-cassisima/blackcurrant-with-red-leafs-black-n-red-premiere>, accessed 12.23.2019

Larix kaempferi 'Kenwith Weeping' - very pendulous, limbs hanging close to the trunk, foliage bluish-green. <https://www.kenwithconifernursery.co.uk/slow-growing-conifers-sg/larix-kaempferi-i-kenwith-weeping-i-b-sg-b>, accessed 12.23.2019

Pinus wallichiana 'Kenwith Cascade' - pendulous cascading form. Needles dark green. <https://www.kenwithconifernursery.co.uk/slow-growing-conifers-sg/pinus-wallichiana-i-kenwith-cascade-i-b-sg-b>, accessed 12.23.2019

The Magnolia Society has updated their massive Cultivars Checklist in March 2017 and once again these 1000 name entries proves a useful nomenclatural standard for the genus: <https://www.magnoliasociety.org/CultivarChecklist>



Ginkgo biloba 'Orloci Triploid' - <https://www.nature.com/articles/s41438-018-0055-9>. If you have even the least bit interest in the diversity of Ginkgo cultivars, this informative academic paper will be of strong interest.

Ginkgo biloba 'Ozana's Triploid' - <https://www.nature.com/articles/s41438-018-0055-9>

Ginkgo biloba 'Finger Variegated' - <https://www.nature.com/articles/s41438-018-0055-9>

Ginkgo biloba 'Knapek's Triploid' - <https://www.nature.com/articles/s41438-018-0055-9>

Gardenia jasminoides SNOW GLOBE 'WAH-SG' - Web: <https://www.greenleafnursery.com/plant/Gardenia-Gardenia-jasminoides-WAH-SG>, accessed 12.20.2019

Lagerstroemia BARISTA® 'Brew Ha Ha' - 2.0-2.5 ft. tall x wide, probably taller in warmer climates, dwarf, compact. Leaves very dark bluish-green. Flower corolla a rich bubblegum pink, contrasting well with the foliage, blooming on new wood.. USDA 6 hardy so extending it's range up North, including the originator's West Michigan climate. Pat: US# 31206. Web, or, in: <https://www.waltersgardens.com/variety.php?ID=LAGBH>, accessed 12.20.2019. Other named clones in the BARISTA series include 'Bubble Tea', 'Dark Roast', 'Chai Berry', 'Cool Beans', 'Frappe Pink', 'Cherry Mocha', 'Lava Java', 'Like a Latte', 'Peppermint Mocha', 'Perky Pink', 'Sweet Maciatto', and 'Spiced Plum'. There will be a major revision of crapemyrtles in CWP for 2020 and we'll all catch up with the now hundreds of cultivars, past and present.

Berberis thunbergii 'Amera' - Pat: US# 31205

Ilex 'SMNIFA' - Pat: US# 31118

Gardenia jasminoides SNOW GIRL™ 'WAH-LM' - web: <https://www.starrosesandplants.com/plants/shrubs/snow-girl-gardenia>, accessed 12.23.2019

Cotinus coggygria THE VELVET FOG™ - www.springmeadownursery.com, accessed 12.21.2019

Berberis thunbergii SUNJOY NEO™ - www.springmeadownursery.com, accessed 12.21.2019

Buddleia RUBY CHIP™ - www.springmeadownursery.com, accessed 12.21.2019

Hibiscus syriacus PARAPLU PINK INK™ - www.springmeadownursery.com, accessed 12.21.2019

Hibiscus syriacus PARAPLU VIOLET

Carpinus betulus 'Cornerstone' - web: <http://www.boldspring.com/trees/cbw-mst>, accessed 12.23.2019

Ilex opaca GLORIOUS FENCES™ 'IOLAW' - upright, dense, sometimes in tufts or layers. Or: Steve Sanchez from a notable tree in Lawrenceville, Georgia. Web: <http://www.selecttrees.com/trees/glorious-fences-american-holly/>, accessed 5.9.2019.

Lagerstroemia fauriei 'Woodlander's Chocolate' - bark very dark brown, darkest in this species, exfoliating well. flowers typical. Li: Dirr, M.A. and Warren, K.S. 2019. The Tree Book. Timber Press. As *L. subcostata* var. *fauriei* cultivar.

Metasequoia glyptostroboides PALATIAL™ 'MG1042' - 70 ft. tall x 25 ft. wide, pyramidal, erect, slightly denser, leaves darker green, rich orangish-brown in fall. Propagated on own roots. Or: Tree Introductions Inc. Li: Dirr, M.A. and Warren, K.S. 2019. The Tree Book. Timber Press.

Parrotia persica CONTEMPLATION® 'PPCM2' - 20 ft. tall x 15 ft. wide, erect, ovoid, dense, narrower than species typical, leaves purple, yellow, orange, and red in fall, showy. Or: Morris Arboretum from a notable, showy tree there. Li: Dirr, M.A. and Warren, K.S. 2019. The Tree Book. Timber Press. Web: <http://www.selecttrees.com/trees/contemplation-parrotia/>, accessed 5.9.2019

Salix 'Plakuczyj Gnom' - dense, dwarf, also weeping.

Camellia is one of the genera exempt from OROC data collection because of the work of a very capable society. Their cultivar registrations are found here: <https://www.americancamellias.com/care-culture-resources/camellia-cultivars-registered-by-the-acs> while a very outstanding, large encyclopedia is found here: <https://www.americancamellias.com/care-culture-resources/camellia-encyclopedia>

Populus tremuloides SUMMER SHIMMER 'Select Klaus' - 40 ft. tall x 20 ft. wide, vigorous, leaves "large, clean". Or: Minnesota. Li: Dirr, M.A. and Warren, K.S. 2019. The Tree Book. Timber Press.

Sorbaria sorbifolia MATCHA BALL® 'Levgreen' - 2-3 ft. tall x 3-4 ft. wide. Leaves much as species but a light yellowish-green color (not chartreuse), a light lime-olive perhaps, the shade of Matcha tea in fact, some red to orange tints also in new tips, fall color yellow. Flowers rare. Pat: US# 31202. Web: <http://www.firsteditionsplants.com/the-plants/new-varieties/matcha-ballr-ash-leaf-spirea>, accessed 12.22.2019

Nyssa sylvatica 'The James' - broadly ovate, branches upswept, vigorous (more so than 'Wildfire'), freely-branching, numerous later branching for denser effect (denser than 'Tupelo Power' and 'Forum'), leaves large (10.4cm long x 4.4 cm wide), glossy (glossier than 'Forum'), dark green (darker than 'Wildfire'), apex often red, petioles red (green in 'Forum'), orangish-red and showy in fall. Pat, or: USPP# 29473 on 10 July, 2018 to James A. Hines III, McMinnville, Tennessee found in a nursery in the same city in 2013.

Edgeworthia papyrifera 'Winter Liebe' - 1m tall, shorter than some seedlings, "good branching", flowers abundant, mostly yellow, heads denser than typical. This appears to be a popular clone in Europe and as usual not the same choices as American clones. So: www.esveld.nl, accessed 5.2.2019

Sambucus nigra 'Bad Muskau' - leaves sectored with yellow variegation.

Prunus x gondouinii 'Schnee' - 5-6m tall, dense, compact, narrowly vase-shaped at first, maturing to "flattened spherical", Flowers single, large, numerous pure white. Fruit not produced or very little. Leaves a showy yellow, orange, or red in fall. This is not a new cultivar by any means but it's widely omitted from reference books and so is included here.

Sorbus aucuparia 'Fingerprint' - narrowly columnar, vigorous, disease resistant. Fruit red, showy. Web: <https://www.vdberk.com/trees/sorbus-aucuparia-fingerprint/>, accessed 12.21.2019

Enkianthus campanulatus 'White Elegans' post-1959, invalid Latin name, 'White Elegant' is proposed as new, corrected name - leaves broadly margined cream, flowers mostly white, faintly veined pink. So: www.esveld.nl, accessed 5.2.2019

Acer palmatum 'Bumps Red Seed' - leaves fairly typical but slightly large, fruit numerous, bright red, quite showy.

Acer palmatum [Dissectum Group] 'Jeddeloh Orange' - Dissectum habit but slightly more erect than average, leaves tinged orange in spring and summer, more green with maturity, orange to red again in fall, intermediate between Dissectum and *Matsumurae* shapes

Acer palmatum 'Cosmos' ('Radiant' in part) - twigs shades of red to orange and pink, very showy, leaves 7-lobed, coarsely serrate, deeply lobed but shallowly serrate, medium green brightly splashed, sectored, and speckled in pink and white, holding good color combinations into fall. A vigorous plant and not a weak mutant like so many older variegated. So: <https://www.brokenarrownursery.com/pdf/Trees.pdf>, accessed 5.2.2019

The Conifer Treasury is a superb, very massive work by Mr. Mesterhazy and we highly recommend you consult their files for new conifers, especially new witches broom named all over the world: <http://www.conifertreasury.org/>

Salix candida ICEBERG ALLEY™ 'Jefberg' - 5 ft. tall x wide, subglobose, moderate vigor. Leaves powdery silvery to whitish-silver. Flowers a silver ament (catkin) with red stamens, showy. Or: Memorial University, Newfoundland, Canada and Labrador Botanical Garden. USDA 2-6. Web: <http://www.firsteditionsplants.com/the-plants/new-varieties/iceberg-alleytm-sageleaf-willow>, accessed 12.22.2019

Fagus sylvatica 'Fragrant Farms' - a listed name, leaf shape appears from image to be oak-like. So: http://www.davidsansjapanesemaples.com/shop/product/z_fagus_sylvatica_fragrant_farms/, accessed 5.2.2019

Osmanthus heterophyllus 'Grace Seabrook' - leaves glossy, rounded, not spinose. In: Dr. Nick Nickou. So: <https://www.brokenarrownursery.com/pdf/Broadleaf-Evergreen-Shrubs.pdf>, accessed 5.2.2019. Unclear yet how this differs from the existing, classic 'Rotundifolius'.

Kalmia latifolia 'Forever Red' - flowers intense red in bud, developing about a week later than species typical, never fully opening and thus "forever", the floral effect persisting long as no energy is wasted in pollination and seedset, leaves dark green, glossy. So: <https://www.brokenarrownursery.com/pdf/Broadleaf-Evergreen-Shrubs.pdf>, accessed 5.2.2019

Ginkgo biloba 'Granny Stripes' - leaves green striped white, each leaf differing from the other in amount of chimera. So: <https://kiginursery.com/conifers/ginkgo-biloba-granny-stripes-variegated-maidenhair-tree/>, accessed 5.2.2019

Ginkgo biloba 'Pine Glen Dwarf' - 4 ft. tall x 3 ft. wide (10 years), semi-dwarf, leaves much reduced in size. So: http://www.davidsansjapanesemaples.com/shop/product/z_ginkgo_biloba_pine_glen_dwarf/, accessed 5.2.2019

Ginkgo biloba 'Jadwiga' - leaf blade much reduced, only 4-5 visible veins, these veins 1mm apart, deeply bifid at 95-98% depth, the two main lobes normally lobed or incised to 20% deep, overall surface area about 20% of a normal species leaf and 10% of some larger-leaved cultivars. Or: Poland. Li: Klimko, M. et al. 2015. Comparative morphology and anatomy of *Ginkgo biloba* L. cultivars. *Acta Sci. Pol. Hortorum Cultus* 14(4): 169-189.

Elaeagnus umbellata var. *borealis* 'Polar Lights' - 3m tall (10 years). Flowers cream to yellow, sweet-scented. Very cold hardy variety so durable, substitute for *E. angustifolia*, lacking runners and invasive traits.

Cotinus 'Ruby Glow' - flowering and seedheads rich, glowing, pinkish, darker and less pale than earlier selections. Web: <https://www.hillier.co.uk/nurseries/products/listings/cotinus-ruby-glow/>, accessed 3.26.2019

Juniperus (Hetzii Group) 'Filip's Snowdance' - as 'Grey Owl' (a hybrid, thus not *J. virginiana* as commonly cited) but mottled white.

Acer campestre 'Eko Effen' - 6-8m tall, ovoid, dense, slightly narrower than 'Elsrijk', straight leader. Leaves dark green, undulate. Mite, and mildew resistant. Web: <https://www.vdberk.com/trees/acer-campestre-eko-effen/>, accessed 12.19.2019

Magnolia grandiflora 'Miss Chloe' - pyramidal dense, strong growth rate, flowers 10-12 in., clear pink stamens (not burgundy), Cherrylake Nur. from superior plant, selected 1993

Deutzia scabra 'Full Pull' - a listed name with www.esveld.nl, not described. Data requested.

Pittosporum 'Sappy' - 15 ft. tall x 6-8 ft. Leaves bluish-green. Flowers light creamy-yellow, very fragrant. Or: Cistus Gardens, cistus.com, thus not to be confused with *P. illicioides* 'Strappy' of Monrovia and Dan Hinkley, a very different clone.

Arctostaphylos aff. *densiflorus* 'Orleans' - Web: cistus.com, introduced before 2019

Arctostaphylos 'Ishi Pishi' - Web: <http://www.cistus.com/pdf/CistusMailOrderCatalogFall2019.pdf>

Tilia americana SWEET STREET™ 'Kromm' - 30 ft. tall x 15 ft. wide, densely pyramidal, neat, narrowly ovoid according to images seen, leaves glossy dark green, persisting long in the year, resistant to Japanese beetle damage. Or: Russell Kromm, Reeseville Ridge Nursery, Wisconsin.

Euonymus fortunei 'Bushel of Gold' - 12 in. tall x wide, stems yellow, leaved bright yellow, eventually becoming lime with gold tints and veins, finally all lime. Or: Flemings Flower Fields, www.flemingsflowers.com, their own selection,

accessed 3.25.2019

Gardenia jasminoides SWAN PRINCESS™ '4KIMYMJ01' - 58 cm tall (4 years) or 78 cm tall (8 years) x 62 cm wide (4 years) or 87 cm wide (8 years), shorter and denser than 'Double Mint', 11.0-18.0 cm growth rate per year when young, internode 1.68 cm (compared to 2.3cm in 'Double Mint'), denser than parent 'Frostproof', compact, uniformly mounding, rounder than parent 'Frostproof', leaves dark green (darker than parent 'Frostproof'), 3.48 cm long x 1.14 cm wide, oblanceolate, resistant to root diseases, flowers double (2 rows of petals, 1 row of petaloids), early (2 weeks before 'August Beauty'), more numerous than older clones, proven cold hardy in Georgia. Or: USPP# 29857 on 20 November, 2018 to Brian Jernigan, Dearing, Georgia from open pollination in 2009 crossing 'Frostproof' with unnamed male parent.

Cotinus coggygria FLAMISSIO 'Mincofla20' - 1.5-2.0m tall, "spread well, forming numerous, straight shoots". Leaves magenta in spring, becoming green by summer, becoming intensely red and orange, rich glowing flame-like shades in fact. Flowers somewhat small, inconspicuous, fruit however more showy, fluffy like a "pink wig". Or: Hortival Diffusion S.A.S., France, introduced by Minier 2019. Web: <https://www.pepinieres-minier.fr/produit/cotinus-coggygria-flamissimo-r-mincofla20-cov>, accessed 12.19.2019.

Juniperus rigida var. *conferta* 'Sunflower' - leaves yellow to gold at first green, by images it seems to transition to green faster than GOLDEN PACIFIC and be a bit denser, slower than it. Comparisons of the two and a couple other gold sports being reported are most welcome. Web: <https://newplants.nl/en/planten/J/juniperus-conferta-sunflower/>, accessed 5.1.2019.

Euonymus alatus 'Blade Runner' - habit "robust and well branched", distinctly corked or alate twig wings extending down the entire stem, leaves crimson-pink in fall. There are now 5 "big blade" named clones of this species. Web: <https://www.hillier.co.uk/nurseries/products/listings/euonymus-alatus-blade-runner/>, accessed 3.26.2019

Enkianthus campanulatus PRETTYCOAT™ 'JWW10' - compact, well-branched, leaves dark green with showy dark red stems, flowers white with no visible markings, barely a hint of pink at first, abundant. Web: <https://newplants.nl/en/planten/E/enkianthus-campjww10-pbr-prettycoat/>, access 5.1.2019

Buddleia davidii 'Griffin Blue' - 6 ft. tall, semi-compact, inflorescences larger and upright, flowers dark blue, orange center, very fragrant. Or: University of Georgia, Experiment Station, Griffin, Georgia. Not new but widely omitted from reference books and websites on this genus.

Hibiscus syriacus 'Lady Bug' - 6-8 ft. tall, flowers light pink to blush, double, 6-8 weeks bloom period, 3.5-4.0 in. wide, few or no seeds, flowers open reliably in morning. Web: <http://www.drcarlwhitcomb.com/>, accessed 12.21.2019

Ligustrum sinensis 'Green Global' - 15-20cm tall, dwarf, internodes 0.3-0.5cm, 50-70 leaves per branch, reduced leaf size, 0.5-1.5cm long by 0.3-0.5cm wide, elliptic to ovate, acute, cuneate. Or: USPPAF on December 13, 2018 to Ukai Takanori, Japan, as whole plant mutation in Suzuka, Japan in 2006. It is interesting to note that we recently found reference in the 1936 catalog of the Japanese Nursery, Genoa, Texas of a *Ligustrum sinensis nana compacta* aka Babydoll Privet that was dwarf and not over 2-3 ft. tall. It sounds larger than this introduction but is just one of many old cultivars unrecorded in popular woody plant literature but now in the CWP system. For the record, there are now two dwarf Chinese privets.

Itea virginica LOVE CHILD™ 'Bailteaone' - 3-4 ft. tall x wide, mounded, compact, subglobose with time, leaves bright green, flowers slightly scented, very floriferous, fall foliage mostly burgundy. Or, in: www.baileynurseries.com, accessed 4.3.2019

Acer palmatum 'Bronze Wing' - leaves narrowly incised, bright orangish-red in spring, becoming bronze by summer, lasting color into summer in Australia, yellow to orange in fall. Or: Australia.

Sambucus nigra f. *porphyrophylla* 'Blue Sheen' - leaves dark purplish-black, distinct silvery-blue to violet sheen, flower head medium pink, showy. Web: <https://www.shootgardening.co.uk/plant/sambucus-nigra-f-porphyrophylla-blue-sheen>, accessed 12.19.2019

Acer palmatum 'Carlls Corner' ('Carlls Corner' in error, 'Louise', 'Mary Katherine'?) - smaller tree, subglobose with age, dense, leaves with shorter central lobe, bright pinkish-red becoming dark burgundy, holding the dark red shades into summer, dark red in fall. Or: found as a witches broom of ordinary 'Atropurpureum' at Carlls Corner, New Jersey.

Spiraea japonica RAINBOW FIZZ™ 'Matgold' - 3-4 ft. tall x wide, compact, subglobose, leaves copper at first, later yellow with red tips, mostly medium yellow to greenish-yellow when mature, copper-red in fall, flowers red in bud opening a medium pink, violet-pink by images, USDA 3. In: www.bloomineasyplants.com, accessed 4.1.2019,

introduced 2017

Spiraea japonica POPROCKS™ PETITE 'Odessa' - 3 ft. tall x wide, compact, subglobose, leaves rich, bright green, flowers bright candy pink, very abundant in small but numerous mounded corymbs. USDA 3. In: www.bloomineasyplants.com, accessed 4.1.2019, introduced 2019

Acer palmatum 'Phantom Flame' - 5 ft. tall x 4 ft. wide (10 years), slower, leaves similar to Ghose Series, cream at first, developing dark green veins and reddish apical tints, lobes very irregular, slightly twisted, narrow, and long, sharply and finely serrate, midrib the widest green vein of all. Or: Crispin's Creations Nursery, Oregon.

Lagerstroemia 'Perky Pink' - 2-3 ft. tall x wide, flowers rich violet-pink in well-defined panicles, blooming on new wood, leaves dark olive green, contrasting well. Or, in: www.waltersgardens.com, accessed 3.28.2019

Acer palmatum 'Dixie Delight' - bark of variable colors including orange to yellow and reddish shades, showy red twigs, leaves light green, edged red, sometimes mostly tinged red, very tolerant of southern US heat and humidity. Or: Maple Ridge Nursery.

Acer palmatum 'Green Tea' - vigorous, full-sized cultivar, leaves 5-lobed, these fairly broad with terminal lobe up to 3.5cm wide, shallow and rounded serrate, new tips reddish, later a green tea coloration in medium-light green, maturing to dark green, orange to red in fall. Or: Buchholz Nursery, Oregon as green sport of 'Amber Ghost'.

Acer palmatum 'Jet Black' - leaves 7-lobed, each lobed very wide, secondary lobes often overlapping with central lobe, one of the darkest in this species for leaf color, dark burgundy maturing to blackish-purple or very dark red, not a true black, appearing black from a distance compared to ordinary red cultivars. Or: Oregon

Ginkgo biloba 'Snake' - a listed name at <https://www.npcginkgo.com/npcginkgo>, accessed 5.1.2019

Ginkgo biloba 'Pansy' - a listed name at <https://www.npcginkgo.com/npcginkgo>, accessed 5.1.2019

Ginkgo biloba 'Patio Umbrella' - a listed name at <https://www.npcginkgo.com/npcginkgo>, accessed 5.1.2019

Ginkgo biloba 'Laying Low' - a listed name at <https://www.npcginkgo.com/npcginkgo>, accessed 5.1.2019

Ginkgo biloba 'Leather Green' - a listed name at <https://www.npcginkgo.com/npcginkgo>, accessed 5.1.2019

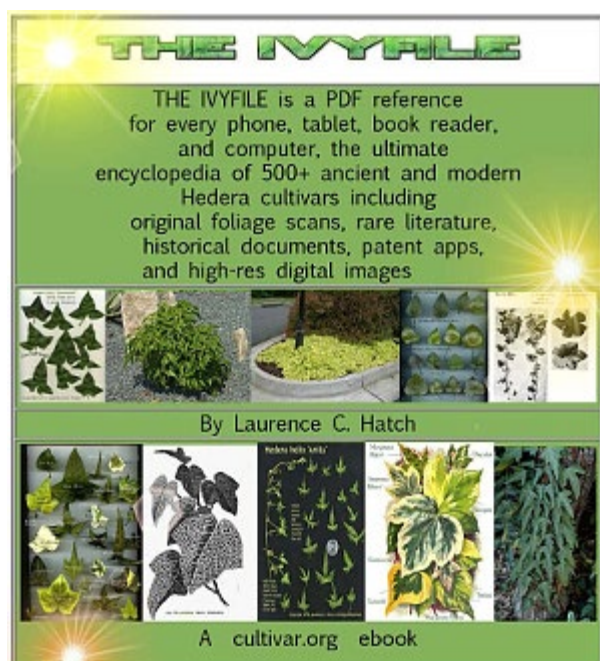
Ginkgo biloba 'Scruffy Butterflies' - a listed name at <https://www.npcginkgo.com/npcginkgo>, accessed 5.1.2019

Ginkgo biloba 'Filips Perfect Spire' - a listed name at <https://www.npcginkgo.com/npcginkgo>, accessed 5.1.2019

Ginkgo biloba 'Filips Weeping' - a listed name at <https://www.npcginkgo.com/npcginkgo>, accessed 5.1.2019

Ginkgo biloba 'Late Case Gold' - a listed name at <https://www.npcginkgo.com/npcginkgo>, accessed 5.1.2019

Ginkgo biloba 'Torpes Envelopes' - a listed name at <https://www.npcginkgo.com/npcginkgo>, accessed 5.1.2019



Hedera helix 'Jake' - leaves small, narrowly to broadly cordiform, often asymmetrical, occasionally near sagittate, mature leaves more narrowly acute, younger leaves broadly obtuse, mix of yellow, gold and green shades, wide silver veins conspicuous.

Hedera helix [Birdsfoot Group] 'Courage' - large leaf of the Group's shape, deeply lobed, medium (typical green) with yellow edge becoming a lime to pale green margin at 10-15% surface. Sport of 'Maple Leaf', US c. 2001

Hedera helix 'Sally' - classically shaped 5-lobed blade, rich gold to bright lemon yellow, liberally and finely spotted and suffused olive green to medium green, this green shade about 30-45% surface or more with maturity. Or: UK 1992, not widely seen until this decade.

Hedera helix 'Seabreeze' - leaves shallowly 3-5 lobed, almost a Fan type but lobes more distinct, lightly twisted with a folded sinus, margined and sectored cream at 15% surface, tinged lime green

Hedera helix 'Ballet' - leaves narrowly to moderately cordiform but usually asymmetrical (lop-sided) and irregular in shape, some unlobed and elliptical, others shallowly 3-lobed, some broadly elliptic with 1 very rounded basal lobe, margined cream becoming white, surface overlaid in light gray to silver chimera over green.

Heptacodium miconodes TIAHSHAN® 'Minhep' - 8-12 ft. tall x 5-7 ft. wide, more compact and shorter than species at 20-25 ft. Flowers abundant and typical of species. Or: Minier, France. Web:

<http://www.firsteditionsplants.com/tianshanr-seven-son-flower>, accessed 12.22.2019

Ilex x meserveae LITTLE PIRATE® 'Monnieves' - 1.2m tall x 0.9m wide, "a very robust dwarf", compact, subglobose to erect-mounded, most shoots distinctly erect. Leaves dark green, glossy. Fruit absent. USDA 5b. Or: Nieves Garcia, McMinnville, Oregon, USA. Pat: EU 43627.

Loropetalum chinense 'Rouge de la Majorie' - Web: <https://newplants.nl/en/planten/L/loropetalum-chinensis-rouge-de-la-majorie/>, accessed 12.20.2019

Our nomenclatural standard for the *Cercis* is Cultivars of Woody Plants as well as the new United States National Arboretum registration page: <https://www.usna.usda.gov/science/icra/cercis-icra>. They are the official ICRA. Thanks to them for citing The Redbuds ebook (which is the CWP volume on *Cercis*) and the 2017 OROC Book V.



Cercis canadensis FLAMETHROWER™ 'NC2016-2' - habit semi-pendulous to apically drooping, not a full nor classic weeper, cascading to arching perhaps, leaves at first purple becoming tinged paler bronzish-purple to pinkish-purple, rich yellow to near gold tinged purple and red, sometimes medium yellow delicately veined or suffused around the major veins in pink to red, finally yellowish-green, giving a flame-like appearance overall when in active growth, showing a mix of two major colors and dozens of minor ones in spring or as long as new growth continues. The color contrast is reduced after mid-July. Or: Dr. Dennis Werner, North Carolina State University, cross of NC2006-14 (a weeping, purple leaf) x RISING SUN™ in 2010. Image copyright owned by and courtesy of the originator. In: licensed to Star Roses. A very unique leaf coloration among deciduous ornamental trees and what I am going to be calling purpureo-aurantescent or "purple becoming gold".

Alnus glutinosa 'Drucourt' - leaves sectored broadly in cream to white. France, before 2015 ex arboretumwespelaar.be/userfiles/file/pdf/180916_Alnus_cultivars_Jablonski.pdf, accessed 12.23.2019

Alnus glutinosa 'Luszyn' B. Szmit, Poland ex arboretumwespelaar.be/userfiles/file/pdf/180916_Alnus_cultivars_Jablonski.pdf, accessed 12.23.2019

Alnus glutinosa 'Thillie Trompenburg' Gert Fortgens 2018 ex arboretumwespelaar.be/userfiles/file/pdf/180916_Alnus_cultivars_Jablonski.pdf, accessed 12.23.2019

Alnus incana 'Gold Cascade' Arboretum Borova Hora 1998 ex arboretumwespelaar.be/userfiles/file/pdf/180916_Alnus_cultivars_Jablonski.pdf, accessed 12.23.2019

Alnus incana 'Gold Fountain' Arboretum Borova Hora 1998 ex

arboretumwespelaar.be/userfiles/file/pdf/180916_Alnus_cultivars_Jablonski.pdf, accessed 12.23.2019

Alnus incana 'Green Fountain' Arboretum Borova Hora 1998 ex
arboretumwespelaar.be/userfiles/file/pdf/180916_Alnus_cultivars_Jablonski.pdf, accessed 12.23.2019

Alnus incana 'Wonderful Fountain' Arboretum Borova Hora 1998 ex
arboretumwespelaar.be/userfiles/file/pdf/180916_Alnus_cultivars_Jablonski.pdf, accessed 12.23.2019

Alnus incana 'Varho' Finland ex arboretumwespelaar.be/userfiles/file/pdf/180916_Alnus_cultivars_Jablonski.pdf,
accessed 12.23.2019

Taxus x media 'Masa' - 2-3m tall, dense columnar to narrowly ovoid, moderate growth rate, main shoot all erect, vertically arranged. Leaves thick, wide, pointed, light green, becoming rich, dark green. Sex: female, setting some cones with red arils. Or: Joanna Szaniawska, introduced by Acrocona SKiKO in 2019. <https://zszp.pl/en/plants/plant-novelties-competition/plants-novelties-competition-2019/#taxus-xmedia-masa-2>, accessed 12.18.2019

Acer palmatum [Dissectum Group] 'Kings Blood' - leaves scarlet, intermediate between two parent cultivars, strongly serrate. Or: USPPAF March 18, 2018 to Chris Winslow Davis, Virginia Beach, Virginia, bred from 'Crimson Queen' and 'Bloodgood' apparently this patent never approved.

Euonymus japonicus GREEN EMPIRE® - Web: <https://www.koju.de/en/assortmentsshop/deciduous-trees-and-shrubs/1466/euonymus-japonicus-green-empire>, accessed 12.24.2019

Juniperus x media 'Swampscott Gold' - arching, spreading, intermediate to highly divergent foliage, leaves small, bright golden-yellow tips, becoming lime-olive the second year, soft texture to touch. Or: Brent Marcus, 2003, found as sport. Web: <https://www.raretreenuresery.com/types/juniperus-juniper/>, accessed 12.23.2019, as a *J. chinensis* but by habit, clearly this hybrid species.

Juniperus communis TORTUGA™ 'SMNJCB' - www.springmeadownursery.com, accessed 12.21.2019

Lagerstroemia CENTER STAGE RED™ - www.springmeadownursery.com, accessed 12.21.2019

Nerium oleander AUSTIN PRETTY LIMITS™ - www.springmeadownursery.com, accessed 12.21.2019

Philadelphus coronarius ILLUMINATI ARCH™ - www.springmeadownursery.com, accessed 12.21.2019

Rhamnus fragula FINE LINE IMPROVED™ - www.springmeadownursery.com, accessed 12.21.2019. Ns: "Improved" is banned from cultivar names but this being a trademark has no such limitations.

Taxus STONEHENGE DARK DRUID™ 'SMNTHDB' - 3-4 ft. tall x 3 ft. wide, "neat and tidy", subglobose to flattened globose, dense, *Buxus* substitute for texture, color, and form. Leaves green all year. Said to be very cold hardy to no USDA zone was given at the time of this publication. Or: Tim Wood, Spring Meadow Nursery, intro. 2020 - www.springmeadownursery.com, accessed 12.21.2019. This is not the original STONEHENGE™ without a suffix name.

Taxus STONEHENGE™ SKINNY - www.springmeadownursery.com, accessed 12.21.2019. This is not the original STONEHENGE™ without a suffix name, both are narrow.

Viburnum SWEET TALKER™ - www.springmeadownursery.com, accessed 12.21.2019.

Viburnum YIN™ 'NCVX2' - 2-4 ft. tall x 4 ft. wide, subglobose to mounded, dense. Leaves broadly elliptic, 3-veined as parent *V. davidii*, glossy, bluish-green. Flower white in globose clusters. Fruit bright blue, best pollinated by YANG™. Or: Dr. Tom Ranney, NC State, cross of *V. davidii* x *V. propinquum*, giving more heat tolerant to the *V. davidii* leaf look. USDA 7b. Web: www.springmeadownursery.com, accessed 12.21.2019.

Viburnum YANG™ 'NCVX3' - 2 ft. tall x 4 ft. wide, compact, subglobose to mounded, dense. Leaves thick, glossy, bluish-green. Flowers in showy open clusters, white. Fruit elliptical, blue, needs YIN™ for pollination. Or: Dr. Tom Ranney, NC State, as *V. davidii* x *V. propinquum*, heat tolerant unlike *V. davidii* but having the appealing look of that species. In: Spring Meadow Nursery 2020. Web: www.springmeadownursery.com, accessed 12.21.2019.

Acer palmatum 'Patsy' - dense, erect, soft texture, eaves 7-lobed, massive dentate teeth, apex prolonged very long and sometimes subfiliform, bright, light lime green to chartreuse-green, distinct margins red to pink shades, fall colors in orange, red, and yellow.

Acer palmatum 'Livy' - 5-6 ft. tall (10 years), semi-dwarf, dense, leaves red to bronzish-red and shaped as 'Mikawa', rich red in fall.

Acer palmatum 'Nebula' - leaves 7-9 lobed, these fairly broad but also folded down (cucullate), very pale pinkish-yellow shades (Ghost style) with red tints and margins, veins darker, bright to dark maroon red in fall. Or: Buchholz Nursery

Prunus laurocerasus ELLY® 'VERSTRA' - Web: <https://www.koju.de/en/assortmentshop/deciduous-trees-and-shrubs/1480/prunus-laurocerasus-elly-verstra?c=146>, accessed 12.24.2019

Larix laricina 'Michigan Tower' - vigorous, "fairly narrow", foliage bluish-green. Or: Josh Horky and Josef Braeu of Edelweiss Nursery. Web: <https://www.raretreenursery.com/types/larix-larch/>, accessed 12.23.2019

Morus rotundiloba BONBONBERRY® MOJO BERRY 'Matsunaga' - 1.5m tall, dwarf, compact enough for small yards and large containers. Fruit black, bearing on both old and new wood, self-pollinating, fruiting well in small spaces over a longer period, often the first year from purchase. Considered an ornamental-edible, it removes the need for 6-8 trees, one for bearing and one for pollinating, replacing it by one small shrub. Ch: -10 deg. C. Pat: EU 51394 to Hajima Matsunaga., Japan. Web: <https://www.plantipp.eu/en/varieties/?type=&introduction=1&rpp=20&q=>, accessed 12.19.2019.

REGISTRATION FORM

If you have a new tree, shrub, conifer, or woody vine to register there are three options. All are free.

1. Email us with a full description and links for sales and more data.
2. Email us with a link to your catalog or an article containing all the data.
3. Cut and paste the Long Form II below, fill it out, and email to ornamentals@lycos.com. The more you distinguish your cultivar from existing ones the better your chances for buyers and growers to contact you.

If you need any assistance just email office with OROC in the subject line. We have several trained Registrars and two graduate-trained taxonomists who can provide help with precise Latin terms, assuming they are helpful to set your new cultivar apart from others. Name choices are easily reviewed too so please don't hesitate to ask.

OROC Woody Plant Long Form II February 2019 Version

---copy and cut below

Species and genus name:

Any infraspecific affiliation (ie. subspecies *chinensis*, botanical f. *alba*, var. *hatchii*, var. *jonesii* x var. *smithii*):

Cultivar name:

Significant of cultivar name (name for friend or relative, place where sport found, my garden name):

Do you have permission to use the name if after a celebrity, famous person, place, or product?:

It is hard to sell a plant that repeats a trademark or protected asset (Coke, Elvis, Big Mac, Mercedes) in some countries. Is this a concern?:

Patents or Breeder's Rights?

If so: USPP# and date:

Canadian Patent# and date:

Euro PBR# and date:

Other Patent# and date:

Since Latinized words are permitted in unregistered trademark names, would you consider adding this "old school" nomenclature?"

Trademarked (specify registered, unregistered)?

In what countries is the trademark registered?:

Was the trademark unregistered at first and later registered or it being sought now?:

Trademark Name for this one clone or taxon (ie. GREEN MAGIC® 'JMmagic')

Trademark Name for a group of cultivars (ie. NIRVANA® 'Heavenly Blue')

Does this trademark group name apply to more than one genus?

Significance of trademark name (ie. NIRVANA® is the name of the family garden)

Originator's name:

Originator's affiliation (ie Metropolis University, Frigid Experiment Station, Damncold, North Dakota):

Registrant's name (who is submitting this):

Registrant's affiliation (if different from originator):

Nominant's name (who named it, if different):

First commercial introducer (who first sold it or distributed it):

Patent assigned to in the body of the application:

First place of valid publication in print book (ie. Doe, J. 2021. Golden Trees. Metropolis Press, p, 43-44):

First place published on internet:

Associated with any particular fund-raising, charity, or special cause?

Do royalties go to one of these causes (share any details you like):

Is another nursery introducing it for you?:

When was it discovered (year):

First year or date of commercial sales and by whom? (ie. Doe Nursery, Metropolis, Ohio, 2011):

Has it been published in a printed catalog (ie. Doe Nursery Fall-Winter 2023 Catalog):

How did it occur (seedling, sport, controlled cross, wild):

If sport, name parent cultivar if known:

Did this cultivar come from a witches broom?:

If seedling, give history of source (ie. John Doe #JD3021 collected at 8000 ft. at Mt. Dido, Szechuan, China in 1988, notably fruitful tree with arker leaves):

Is from a notable tree at a particular garden, nursery, park, collection, etc? (ie. #76-203 from Metropolis Arboretum)

Parent taxa if hybrid (female x male, female parent if pollinator is unknown):

Height and width (specify 5 or 10 years or original plant with it's age)(10-12 ft tall x 4-5 ft. wide, 10y):

Habit form (ie. globose, fastigiate, pendulous, decumbent):

Secondary branchlet form (ie. apex fasciated, columnar overall but secondaries semi-pendulous and filiform):

Special branching patterns (ie. self-branching, distinctly plumose, filiform/thready, densely tufted, virgate/snake-type):

If you have cladometric data (useful for Juniperus, Thuja, Chamaecyparis)(ie. 5-9 secondary shoots, longest 7-12 cm long, 2-4 tertiary shoots, longest 3-5 cm long, 0-2 quaternary shoots, longest 0.0-1.8 cm long) enter it here:

Growth rate per year (range as young stock):

Internode spacing (ie. 2-3cm or 0.5-0.75 in.):

Special landscape uses (ie. ecological reclamation, wildlife food, hedge, rock garden, fast windbreak, collector's item):

Unique habit features (ie. stronger crotch angle, no staking required, no fruit so keep dense form):

Bark showy? (yes, no):

If bark showy, describe colors and pattern (ie. corky to 5cm thick, white exfoliating brown by 3rd year, orange similar to orange winter twigs):

Stem or twig traits, if unique or showy (ie. alate/winter to 3cm deep, showy orange winter stems, thornless twigs, twigs red striped white 1st year):

if flowers dimorphic (ie. fertile and sterile, describe each separately below):

If flower bicolored or tricolored describe pattern (ie. picotee, eyezone, flecking, suffusions or tints):

If flower bicolored or tricolored describe distribution (ie. red picotee 10% surface, pink throat 10%, base color white 80%)

Flower scent, only if atypical or variable in species (ie. light fruity scent, unscented, unique strong bubblegum aroma):

Flower bud color (specify corolla, calyx, bracts, etc.)(ie. red buds open blush, white at maturity):

Flower color (corolla, main mature color, use RHS or Pantone values when known):

Flower color (corolla, fading color):

Flower color (calyx or bracts):

Flower color (pedicel/stalk):

Flower corolla lobe shape (ie. suborbicular, broadly ovate, irregularly notched and undulate, convex and elliptic-ovate):

Flower corolla shape (only if atypical, ie. campanulate, funnelform, rhomboid):

Flower corolla length and width (diameter) (specify in, cm, mm):

Bloom period (give location, ie. July 15 to September 5, Raleigh, North Carolina):

Is it unusual for blooming earlier or sooner or young plants?:

Rebloom (under what conditions, ie. partial 5-10% fall rebloom if cut back in September after peak):

Other floral traits (ie. self-deadheading, lacks petals, incised petals, heads born well above foliage):

Petal or tepal count (only if atypical):

Inflorescence shape (ie. domed panicle, flat cyme):

Inflorescence dimensions (specify cm or in)

Can this plant be described as an dual purpose "edible-ornamental"?

If a conifer, use the "fruit" traits below to describe any ornamental female strobili (cones)

Fruit showy?:

Fruit edible?, if so describe:

Fruit shape, describe if atypical (ie. elongated ellipsoidal to narrowly ovoid while species is broadly ovoid):

Fruit color, if showy (ie. gold tinged red, green becoming blue and later black):

Fruit dimensions if showy (in, cm, length x width):

Special fruit traits (ie. fruitless, early fruit by September 15 (GA), pods showy and red):

Leaf polymorphic (2 or more distinct shapes or forms)?:

Leaf shape and type (ie. palmately 5-lobed, cordiform and unlobed, omit if typical of species):

Leaf dimensions (long x wide, average, cm):

if you have more phyllometric data enter it here (useful for Hedera, Acer)(ie. 3-5 secondary lobes, 2.3-4.1 cm long, 1.1-1.5cm wide; 1-2 tertiary lobes, 1.1-1.3 cm long, 0.5-0.7 cm wide, tertiary lobes rarely absent in 2-4% of blades measured):

Leaf lobe count:

Leaf color (new tips, immature)(ie. showy red to orange tips becoming light olive green, finally a dark olive green):

Leaf color (above when mature)

Leaf color (below when mature, if conifer describe stomatal banding):

Leaf color (fall):

Leaf color (winter or cold weather):

Leaf vein color (describe if contrasting, reticulate)(ie. veins distinctly silver, veins a slightly green but not showy):

Leaf petiole (special, atypical traits only)(ie. 1.0-1.6 cm long, shorter, distinctly pink to red, very showy with the gold lamina):

Is the leaf multicolored but not truly variegated (a section lacking chlorophyll)(ie. green suffused red, tinged orange with greener veins):

If variegated leaf, is it bicolored, tricolored in general, or more?:

If variegated leaf, pattern (ie. marginate, central zone/medio-picta, speckled/maculata, margino-maculata):

If speckled or maculata variegated are there tiny flecks, large spots, and big sectors?:

If marginate variegation is there a central "tree" or "leaf" shape (describe it):

If variegated leaf, chimera % of entire surface (ie. marginate 25-45% surface):

If variegated leaf, color of chimera (ie. pink becoming cream with maturity):

Leaf vestiture (hairs or trichomes, describe only if atypical)(ie. more tomentose than species, glabrous below unlike 'Pendula'):

Leaf base type (ie. broadly cuneate, shallowly cordate to truncate):

Leaf apex type (ie. acuminate, obtuse, acute, cuspidate):

Leaf margin type (ie. crenate, incised, serrate, dentate):

Leaf margin undulates (if atypical, describe # of waves and depth per side of leaf):

If spinose marginal teeth (ie. Ilex, Osmanthus, Mahonia) describe # of teeth per side:

If spinose marginal teeth (ie. Ilex, Osmanthus, Mahonia) describe length and wide of teeth (in, mm):

If spinose marginal teeth (ie. Ilex, Osmanthus, Mahonia) describe spacing between teeth (in, cm):

If incised or cut, estimate depth of cut or lobing in %:

Any special leaf traits (more glaucous than cultivar X, thicker blade, showy red petiole):

if leaves edible, note any special chemistry (ie. 12% thymol, more potent for culinary use than 'Big Red'):

Cold hardiness (USDA number and/or degrees, if atypical and compare)(ie. USDA 4a compared 5a for 'Grandiflora Alba'):

Any special pest or disease resistance (give specific names):

Any special cultural resistance (ie. urban resistant due to higher drought tolerance and thicker leaves):

Any laboratory proven physiological improvements (ie. 26% higher photosynthetic efficiency compared to 'Viridis Nana'):

Propagation notes: (ie. roots up to 97% from softwood cuttings, best crafted on resistant 'Rootuff' understock):

Non-invasive clone (ie. triploid, fruitless, sterile seed)?:

Genetics/cytology (ie. ploidy, unique traits):

Has the cultivar been DNA profiled by a qualified or certified lab (if so, where on file):

International awards (ie. RHS AGM 2012, Plantarium Gold Medal 2021, Plantus Society Plant of the Year 2020):

This cultivar was bred mainly to remove certain flaws of the species other cultivars?:

Cultivar is designed to replace existing cultivar (name it)(ie. sterile 'Green Goblin' type, mildew resistant 'Red King'):

Compare and contrast to existing Cultivar A (name it):

Compare and contrast to existing Cultivar B (name it):

Compare and contrast to "species typical" of gardens:

Are any traits completely new to this species or genus (ie. first lavender-flowered clone, first genetic dwarf)?:

Is this a unique combination of two or more existing traits (ie. weeping/gold, dwarf/white-flowered, first gold-leaved dwarf with true red flowers)?:

Why is it unique and special in general?

Any quotes from evaluators (name or not) describing it ("best white-flowered clone we have tested" John Doe, Metropolis Nursery):

Internet video link for it's promotion (please do not attach video files to email):

Sales email to purchase it (specify if wholesale only):

Informational email to discuss (if contact is invited by any reader):

Sales internet link to purchase it (specify if wholesale only):

Informative internet link with more details (including cultivar release, academic article):

Public garden or nursery where it can be seen by public (attach Google map or other link if desired):

Image link on internet:

Image for registration form (please attach up to 10MB and your copyright statement, this is OPTIONAL):

Any other information our readers might like:

---end here, paste into email, fill out, and send

OROC PRINCIPLES

OROC Declaration

While the International Society for Horticultural Science (ISHS) Commission for Nomenclature and Cultivar Registration via the role of the International Cultivar Registration Authority (ICRA) over the last fifty years has succeeded in some valuable measure to stabilize the vast nomenclature of garden plants, and in some genera serve the scientific and gardening communities with brilliance and deep scholarship, in many ways they have failed to lead, proactively seek knowledge, communicate, and innovate for the majority of economically important and culturally precious landscape taxa. Fewer than 1% of new woody plants, 2% of hardy herbaceous perennials, and 0% of annual bedding plants (given that no registrars exist) are catalogued each year. Nor do the vast majority of nurserymen, including worldclass breeders in a genus for decades, know with whom in ICRA to communicate nor do most see any merit or value in their process.

When most of these incomplete registrations in hundreds of under-served genera appear, sometimes after years of delay since submission, one must purchase thousands of dollars worth of society, academic, and other periodicals to be fully informed, thus the scheme becoming an elitist communication paradigm that excludes all but the most wealthy institutions and financially able collectors; or those who just happen to live near libraries with few budget restrictions. A simple question to an ICRA may cost one upwards of \$200 to acquire their data, leaving amateurs and students bewildered and unaided. We know. We were those students asked to pay up.

Furthermore the existing system is designed not to serve the public or even a devoted set of collectors but the perpetuation of chosen societies, institutions, favored nurseries, author-ICRA, nurserymen-ICRA, and gardens through sequestration of knowledge for sheer profit and control that goes far beyond the rules of the nomenclatural codes. In this internet era where publication costs literally nothing, the *status quo* with cultivar registration remains even more puzzling and intolerable. Garden plants and the people who cherish them are supremely worthy of a far more accessible and modern system, requiring both reform of the ICRA and revolutionary new alternate channels.

We as the OROC, a consortium of horticultural scholars, taxonomists, breeders, plantsmen and plantswomen, geneticists, professors, landscape designers, curators, garden administrators, librarians, landscape architects, floriculturists, nurserymen, students, the odd botanist (aren't they all?), plant explorer, web guru, Master Gardeners, and accomplished amateurs strongly disagree with the money-first, elitist control of cultivar knowledge in what can be, and we believe should be a free, fair, and very open system. In this mind we will give more, do more, and share more towards the improvement of students, scholars, plantsmen, the general public, and all our gardens everywhere. If you have an internet connection, you will pay nothing to be informed.

You have our promise that free, effective, highly informed, proactive, and scientifically rich communication will be given, constantly improved, refined, and augmented at all times.

OROC Principles and Remedies

Principle 1. 100% New registration access. All new registration data is shared online 100% free with no preferences for any persons, parties, corporations, or organizations in terms of access, timing, or data delivery. No society dues, purchases of any product or service, journal subscription fees, or other paid fees or compensation will be required for access to this new cultivar data.

Principle 1.A. We affirm that the purpose of cultivar registration should never be financial support of a plant society, botanical garden, arboretum, organization, publisher, their staff, or other entity, nor is it acceptable to monetize and control data access for

personal, professional, and organizational reasons. Cultivar registration must favor open, status-neutral, communication of plant information regardless of ability or willingness to pay, join an organization, or subscribe to specific media.

Principle 1.B. Non-interference with traditional monographs and databases. The primary goal of the OROC program is cataloging and communication new cultivar introductions, allowing authors, database developers, curators, germplasm managers, and other compiling parties to write more complete checklists and encyclopedia as their own work product, integrating OROC data as they choose. When it becomes logical, economically viable, and a strong scientific need, OROC will endeavor to create and share complete checklists as 100% free publications, mindful to avoid direct competition with authors, whenever possible or feasible, on whom we depend for free and willing exchange of data.

Principle 2. No fee policy. No fees or other compensation are charged for the registrations, processing or communication of data, or any changes to same. Lack of membership, legal standing, inclusion, nor any other fees or conditions will exclude a person from registering a cultivar.

Principle 3. Expert Assistance. Scientific support including experts in taxonomy, genetics, and the specific genus, all when possible, are provided readily, at no cost, and without delay. An unpaid, uncompensated, all volunteer panel of experts will be assembled when possible to assist in all these matters.

Principle 4. Immediate Data Delivery. Registration data will be provided online in a timely manner.

Principle 5. ICNCP. The International Code of Nomenclature for Cultivated Plants (ICNCP) is our guide for cultivar name acceptance and evaluation when possible, our Board of Directors allowing exceptions to be clearly stated and explained.

Principle 6. Commercial Links. Commercial links for promotion, mailorder sales, sales contacts, and other communications will be encouraged and communicated as an incentive for registration and general cooperation. This has been widely discussed as a failure to motivate registration with the current ICRA system. Nurserymen and plant breeders need exposure, deserve it in fact, and providing them a printed address reference in some barely read journal is not what they need, want, or desire. Also important is the easy, mailorder or local availability of new cultivars to the buying public. There is nothing more frustrating than seeing an exciting, breakthrough cultivar registration and finding no listing anywhere to acquire it.

Principle 7. No Delay Policy. Registrations are not delayed for any commercial reason such as publication of book or product by a participant except by legal demand by an attorney on record requiring such an order. The delay of publication of data for the purpose of book publication by an Author-ICRA, patron of some institution, or a noted horticultural society is considered abuse of the system and will not be tolerated.

Principle 8. Patent and PBR Monitoring. Application for a Plant Patent or Breeders Rights is considered a content capture event worthy of automatic registration and recognition. Staff in this project are to monitor all Patent and PBR sites on a regular basis.

Principle 9. Proactive Data Seeking. We will seek out new cultivars by any ethical and legal means possible and consider all publications of cultivars in catalogs, books, monographs, checklists, websites, or other media to be worthy of our automatic registration without or without the consent of the originator, nominant, introducer, patent holder, patent assignee, or other party. Our registrations will be both proactive and reactive, the first from our own study and the second from submissions sent to us.

Principle 10. Communication paradigm. Data will be distributed by the most innovative, technologically efficient, and effective means of communication possible. OROC will invest time, money, and resources to study, test, and acquire new technologies, tools, hardware and software, and all other means or methods for efficient transfer of our free data to the most users possible.

Principle 11. Volunteer and Student Mandate. Volunteers will be the basis of our data development and communication program. When possible we will have at least 20% of our staff as student interns to keep use fresh, modern, and technologically informed.

Principle 11.A. CCR Program. Commissioned Cultivar Registrars (CCR) will be trained and appointed from the ranks of known experts and eager students to provide modern, high level service at no cost and yet service of great value to our Registrants.

Principle 12. In the early stages, [Http://www.cultivar.org](http://www.cultivar.org) is the default free website for registration data but is given no preference over other websites or media in any aspect or function. In future we will list all other sites with a full availability of OROC data and

regular updates of such. The process for use and extraction of registrations from the cultivar.org pages will be discussed below.

Principle 13. Elimination of Registration Obstacles. We will not impose severe and undesirable requirements upon registrants such as demand for surrounding copyrights to images, submission of nursery stock, herbarium vouchers, or plant tissues for documentation or evaluation, and need for extensive, multi-year cultivar trials. Such is the prerogative of patent and breeder's rights organizations and by no means under any code the right of a cultivar registrar.

Principle 13.A. OROC will promote and assist with maximum documentation of a new cultivar but are mindful that our duty is registration and at no time are we to comment on the merits of a new cultivar except in a clearly editorial context with a named author. It is the work of plant trials committees, Plant Plant, and Plant Breeders Rights authorities to evaluate the unique merits of a new plant.

Principle 14. A Board of Directors will supervise all activities and have power with a simple majority to rule on any issue.

Principle 15. Excluded genera policy. Our Board of Directors will determine a list of genera well served via ICRA with high scholarship, communication, data access, and other criteria which will be excluded from the OROC process. Exclusions will be posted on our registration forms and related portals. The OROC program will not accept registrations in certain genera due to their size, complexity, specialized interest, and existing success in the ICRA and other programs. Subject to amendment by the Board of Directors our current list of excluded genera are: all Bromeliaceae, Camellia, Dahlia, Dianthus, Fuchsia, Gladiolus, Hemerocallis, Hibiscus rosa-sinensis (and tender hybrids), Hosta, Iris, Liliaceae, all orchids, Paeonia, Rhododendron, Rosa, Saintpaulia and all other Gesneriaceae, Syringa, and Tulipa.

Principle 16. We will endeavor with care and to cooperate with ICRA, plant society, and other expert organizations in genera to exchange data whenever of mutual interest.

Principle 17. Proven effective registration tools such as those used at Coleusociety.com and ICRA will serve as models for other genera and plant groups in our scope.

Principle 18. Data will be made available in multiple formats and for multiple computer and media platforms so far as cost permits.

Principle 19. CCR Resources. Refusal of later homonyms and synonyms in registration will be based on all available literature from any reputable source. Staff have free access to Cultivars of Woody Plants, Hatch's Perennials, HITS, and other cultivar.org references at no cost to determine previous or confusing use of names that the ICNCP forbids. We further recommend use of the RHS Horticultural Database (not the new, Plant Finder), Internationalplantsnames.com, and plantscope.nl in this process.

Principle 20. Trademark Name Policy

Principle 20.A. Sensible cultivar name policy. We will seek the registration of sensible, easily read, and communicated cultivar names in natural, vernacular language at all times, discouraging the use of trademarked names as the sole, preferred, logical, or *de facto* name of any garden taxon. OROC Certified Registrars will be asked to coach registrants towards this end, giving them options and suggestions at every step of the process, and doing so within our 24 hours response time window.

- 20.A. 1. A **Trademarked Entity (TE)** is an alleged plant marketing group, taxon, clone, strain, or other unit of naming or designation formed by a species or genus name followed directly by a trademarked name, registered or unregistered, and associated for commercial purposes with it by the originator, nominant, or introducer. For example, *Plantus communis* MORNING SUN® and MAGIC GARDEN™ are both initially considered a Trademarked Entity or TE until it is evaluated by OROC under Principle 20.C.1 for potential establishment of a Taxonomic Equivalency or Association (TEA). Further, the TE once considered for TEA status is further assigned a type of TEA status such as being as defined under Principle C.1.5.1. For example, *Plantus communis* MORNING SUN® is only associated with a single named cultivar 'Golden Ray' and is assigned Cultivar Equivalent (CE) status. *Plantus communis* MAGIC GARDEN™ has more than one clone but also includes cultivars in several unrelated families, namely in the hypothetical species *Florus albus* MAGIC GARDEN™ 'Snowball', *Liana maxima* MAGIC GARDEN™ 'Delicate Charm', and *Arborea erecta* var. *americana* MAGIC GARDEN™ 'Emerald Pillar'. MAGIC GARDEN™ will not be registered by OROC and considered a **Multi-Generic Marketing Brand (MGMB)** under Principle 20.C.1.1.
- 20.A.1.A. A cultivar and other taxa of botanical nature are defined by the two major nomenclatural codes and the definitions contained there are adopted here.

Principle 20.B. Cultivar-less garden varieties: trademarked entities without a designated cultivar name. While cultivar-less garden taxa are discouraged, we believe as citizens of a free and open world in the right of commercial parties towards using unregistered trademark names as the sole name for a named commercial clone without use of any cultivar name if they so desire for personal or business reasons. However, this practice will be discouraged if communication is sought with the OROC program.

Principle 20.C. Rejection and modification of some trademark names for logical, practical, and fair reasons. While OROC

cannot determine the merits, validity, or legal status of any trademark, we have chosen to reject some trademark applications for purposes our registration documents.. Reasons for rejection include:

- **20.C.1. Failure to establish Taxonomic Equivalency or Association (TEA) within a single species or single genus** where the trademarked entity has no taxonomic or genetic analog, homologue, direct pairing, or association such as with a cultivar itself, Cultivar Group, botanical form, botanical variety, subspecies, another infraspecific taxon, Grex, Provenance, Gene Group, Hybrid Group, Diversity Group, Genomic Group, Gene Sequence, or Strain. A trademark entity accepted by OROC should have a one-to-one exact synonymy (even as a clone) with a named taxon such as a cultivar or belong as variable entity to one of the above types of taxonomic or genetic groups as member. It must be identical to a unit of classification or clearly a part of it as known variation. It may be clonally or genetical identical or just be a related member of the group as defined by taxonomists and geneticists, fitting within the defined classification or set of traits. Association can be defined broadly as membership or kinship, phenotypical or genotypic in nature.
 - **20.C. 1.1. A trademarked entity which spans more than one genus is not accepted and will be considered for our OROC purposes a Multi-Generic Marketing Brand (MGMB)** or MGMB name and not a Taxonomic Equivalent or Association (TEA), whether or not it is legally registered for a specific genus or not. Many of these names are registered with authorities for more than one genus even though initially applied to just one. OROC will judge their merits based on actual trade application to one or more genera. The trademark name can be rejected based on the registered trademark's application showing intent to apply it to more than one genus, rule 20.C.1.2 as one exception.
 - **20.C.1.2. Exceptions granted for split, closely allied genera or intergenetic crosses.** Where a genus has been split from another and historically closed related to it (perhaps former Subgenera or Sections), the trademark name may be allowed to span these closely related genera, whether than trademark was established before widespread acceptance of the split or not. In the case of hybrids among closely related genera, exceptions may be granted on an individual basis. For example, OROC would now accept a trademarked entity which spans various new taxa within the complex called Cupressus, Chamaecyparis, Xanthocyparis, x Cupressocyparis, x Cuprocyparis, Callitropsis, and allowing them to cover whatever species names are now preferred.
 - **20.C.1.3. Botanical taxa with selected wild-to-garden horticultural clones accepted as equivalencies.** The above statement 20.C.1 does not imply we recommend botanical taxa such as formae, varieties, or subspecies be distributed or cloned (without unique traits stated) and considered for trademark names in the future. We do understand that collectors, nurserymen, and academic experts alike select heavily from wild populations and select superior clones of these taxa. Let us consider the hypothetical species *Plantus roseus* which normally has pink corollas but with f. *albus* has white to cream ones. Nurseryman John Doe has studied extensively of that white-flowered form around the country, searching out noble wild clones, and selected two of them he calls KENTUCKY CREAM™ and EARLY SNOWFALL™ without any defined cultivar names at this point in time. They are not equivalents of any true cultivar group (there is no valid 'Albus' nor Albus Group) since the white-petaled variants are technical f. *albus*, a wild even if rare entity. OROC would accept these in the form of *Plantus roseus* f. *albus* KENTUCKY WHITE™ as they can be established from a known, perhaps single gene mutation that appears here and there over time in the wild. The originator of the trademark names bears all responsibility to document in specific detail with numbers how his trademarked clones differs from the typical form. See below for the BVA and BFA terminology.
 - **20.C.1.4. Geneticist's classifications accepted as Taxonomic Equivalencies or Associations (TEA) for trademark registration purposes.** These may be termed genome clusters, hybrid groups, or even Diversity Groups. For example, if *Plantus albus* and *Plantus chinensis* have often been crossed these elite hybrids crossed yet again to new species *Plantus springeri*, these might have already been known in breeding circles as the AC Group (*albus* x *chinensis*) and now the ACS ((*albus* x *chinensis*)x(*springeri*)) Group. The term Diversity Group is used for subsections of a genome. They are in fact very much like cultivar groups but sometimes have more of a genomic basis than classic taxonomic one. Geneticists often defined species and hybrids groups very differently than even the modern taxonomist. In our very complex times with genes moving everywhere, geneticists are often defining their taxa in very different terms and these are increasing important for landscape and ornamental horticulture around the globe.
 - **20.C.1.5. Trademarks and their Taxonomic Equivalents and Associations (TEA) may be further classified** for speed of registration and communication:
 - **20.C.1.5.1. Trademarked entity is always just one taxon, in an exact, one to one relationship.**
 - **Cultivar Equivalent (CE)** - this is a one-to-one direct connection between the trademarked name in all cases and one specific cultivar. This means the trademarked name has only one application and that to one specific cultivar or clone. There will be no other variations except when a different trademarked name is presented. The cultivar may be a seed strain and thus more variable than monoclonal material. For example, SUMMER GLORY® is always the same as cultivar 'Sumglo' and there are no other clones of it under different cultivar names. The one-to-one link is precise, exact, and defined.

Lack of a cultivar name. A trademarked entity may be considered a CE without an actual, known, or published cultivar name. For example, if the originator said he grafted this clone from one sport in his nursery, we consider this to be a monoclonal, cultivar-like or CE situation.

- **Clarification of propagation method.** When possible OROC Certified Registrars will determine if the trademarked entity is propagated by seedage, cuttage, graftage (Liberty Hyde Bailey's terms) or by tissue culture. Further, if the trademarked entity/cultivar is vegetatively propagated we will ask if it is **monoclonal** (one specific original plant) or **polyclonal** such as a group or similar seedlings or from stock plants which came are variable to hold generally true to the description.
 - **If an originator subsequently introduces additional clones or taxonomic entities in the CE** for what was once a direct, one-to-one association, the position of CGA (Cultivar Group Associate) will be assigned to the trademark name and the originator asked to create very distinct nomenclature to separate the various new taxa.
- **20.C.1.5.2. Trademark is part of a larger, variable group, and not one precise taxon, not one-to-one:**
- **Cultivar Group Associate (CGA)** - the trademarked name applies to more than one defined cultivar or clone such as RED, WHITE, and PINK clones within the trademarked name. There does not have to exist a Cultivar Group in existing literature or registers for the CGE to apply. For example, SUMMER GLORY® is presented by two clones called 'Sunglo1' and 'Sumglo2' also known as SUMMER GLORY® ORANGE and SUMMER GLORY® SCARLET, respectively. The trademark name groups the two cultivars and perhaps future ones in the same manner as a traditional Cultivar Group. SUMMER GLORY® may belong to an existing Cultivar Group called Rubrus Group for red to orange-flowered variants or it may not have such an existing association. It stands on its own if necessary.
 - **If an originator of a trademarked name cannot determine the species affinity of a stock** OROC will assume the new entity is a CE or CGA within the genus only based on the number of distinct entities or taxa claimed or planned for introduction. OROC will provide all means of taxonomic assistance including study of living, pressed, or image material using all resources available to assist the registrant in a taxonomic profile of their taxon or taxa.
 - **If the originator cannot determine the genus of the trademarked entity** it will be rejected until that issue is resolved. Assistance will be provided by OROC at our expense in most cases.
 - **Trademarked entities which span several known cultivars groups, botanical formae, or most other infraspecific taxa within the genus** are accepted as a *de facto* **New Cultivar Group Associate (NCGA)**. A good example is a number of cultivars and trademarks of *Campsis radicans* which span f. *flava* (yellow, gold, and orange corolla) and the more typical red to scarlet f. *radicans*. They cannot be said as a trademarked entity to have one BFA or Botanical Forma Associate role. Then they are placed in the role of a Cultivar Group Associate (CGA) or now NCGA on the basis of their origin and shared traits (other than corolla color), forming what is essentially a new cultivar group. Modern cultivars and their trademarked entities span a wide range of genetics within a genus such as dwarfness, corolla color, leaf shape, and perhaps the traits of a specific famous cultivar. One has no need to look further than *Fagus sylvatica* to find weeping purple (f. *pendula* and f. *atropurpurea*), columnar gold (f. *zlatia* and f. *fastigiata*), and weeping purple oak-leaved (f. *pendula*, f. *heterophylla*, and f. *atropurpurea*) clones in the mix which draw from various interspecific groups and their curious genetics.
 - **Hybrid Group Associate (HGA)** - these may be defined in various ways by geneticists for OROC purposes we have selected to define this one term. The HGE applies to a specific set of species within a genus crossed with a specific parentage or pedigree whether or not a botanical hybrid species exists or not. There may be two, three, or more species in this known hybrid group. For example, *Plantus communis* x *Plantus vulgaris* may be known botanically as *Plantus x intermedius* and trademark of cross would be known as the HGA of P x *intermedius*. A breeder comes along and makes spectacular results by crossing *Plantus x intermedius* x *Plantus sinensis* from Asia and calls this the (CSV Hybrid Group) for the three specific epithets of the contributing species, set down in alphabetical order. Her SKY MASTER® series of hybrids including SKY MASTER® CROWN and SKY MASTER® RADIANCE have an HGA with the (CSV Hybrid Group).
 - **Formation of HGA names** has long been a subject of our work within the Cultivars of Woody Plants encyclopedia system. Lacking their definition in literature and establishment there, Cultivars of Woody Plants has established a **system of alphabetical order by specific epithet when grouping interspecific hybrids**. For example, a cross of *Plantus vulgaris* and *Plantus albus* would be called the (AB Hybrid Group) and not (VA Hybrid Group) because *albus* comes before *vulgaris* in alphabetical order. Because male and female parentage is likely to shift from one species to another, there is no harm in this system and it offers many advantages. The *albus* groups of hybrids appear together and in order such as crosses to *Plantus bicolor*, *P. chinensis*, *P. communis*, *P. incisa*, *P. roseus*, and *P. vulgaris*. If *Plantus* (AB Hybrid Group) x *P. chinensis* occurs with more than one named clone, a logical (ABC Hybrid Group) name

will be used to group both cultivars and trademarked entities in future. If *Plantus albus* x *Plantus vulgaris* were already well established in the literature under the hybrid species name *Plantus x smithii*, the cultivar and trademarked entities would be grouped under that name instead.

- **Botanical Forma Associate (BFA)** - a clear member of a botanical form or f. In modern terms, botanical formae are frequently single gene mutations or groups of mutation which alter just one trait such as corolla color, leaf shape, leaf color, fruit color, or leaf shape.
 - **Botanical Variety Associate (BVA)** - two good examples would be *Cornus kousa* var. *chinensis* and *Viburnum plicatum* var. *tomentosum*.
 - **Genetic Group Associate (GCA)** - a clear member of an established genetic group as a Diversity Group, genomic unit of any name or kind, mutation name (ie. AAaa=double white flowers), Hybrid Group, genomic cluster, or other terms favored by plant breeders in the interspecific and infraspecific classification of variation.
- **20.C.2. The Cultivar Non-Connection Rule (CNCR) : the trademark holder or creator has appended their trademark to an existing, established cultivar** with which they have no connection as originator, introducer, nominant, licensee, legal representative, exclusive distributor (as cultivar), or legal representative of same such as the estate of the originator. In such cases taxonomic equivalency is usually established and clear. Cases of appending trademark names to a cultivar established by other parties over 50 and even 100 years ago are known. For example, *Cotoneaster horizontalis* 'Variegatus' is marketed as NORTHERN BORDERS™ even though this taxon was established in the late 1800's by completely different parties **and** there is no claimed clonal difference. For our OROC purposes, the originator will be asked to create an entirely new cultivar name without documented differences between it and the established cultivars if any differences are claimed before the trademark equivalency can be evaluated. Lacking such a rule, we believe it is open season on all existing cultivar names to be given marketing names that falsely suggest they are new, improved, or otherwise special novelty creations. Registrants will be given opportunity to establish permission from the originator of the old cultivar, including their estates in law and relatives.
 - 20.C.2.1. **Rejection of trademarks applied to other, long-established taxa other than cultivars.** OROC will reject trademark names unless registered by an official government unit if they are long established in literature, trade catalogs, or other respected, well-distributed publications and determined to be document creations as new by a specific originator. Recently we saw *Pinus sylvestris* FRENCH BLUE™ as a trademark when the French Blue Strain is very old, respected provenience with some morphological and physiological distinctions. The party who used this trademark had no basis for claiming the strain as their own or doing any unique clones from it (which would require new, distinct names) so we could not accept that name as such.
 - 20.C.2.2. **Cultivar groups and certain other ranks established in literature are are not convertible to trademark names** in their exact form if validly or popularly established in literature and well-known documents for a genus. A distinct clone with a trademarked name may be named under a cultivar group such as *Plantus viridis* (Pendula Group) 'Yosemite Falls' but not as *Plantus viridis* PENDULA™ YOSEMITE FALLS if the 'Pendula' or Pendula Group was already known and accepted. Legally, the nominant or namer of trademark name has no restrictions based on the historical record of cultivar or cultivar group names but in OROC we respect this long history and wish to remove potential confusions, distractions, and nomenclatural disrespect before it occurs. We respect equivalencies and derivations there from but not reappropriation of names to the commercial side which will lead to problems of many kinds in commerce and science.
 - **20.C.3. Trademark-to-cultivar and cultivar-to-trademark conversions: prior legal establishment of the same exact name in a legal or official government document as a cultivar** will exclude the trademark from status and registration. For example, if an originator patents a cultivar called 'Golden Queen' in the US Plant Patent system and it is accepted and they thereafter market it as GOLDEN QUEEN™ 'Jonesgold', the cultivar to trademark conversion will be rejected. 'Jonesgold' becomes a later homonym under ICNCP rules. The originator would be free to use GOLD QUEEN™ 'Golden Queen' pair as they are not the exact same phrase. OROC recommends cultivar names not be too close to the trademark to prevent confusion.
 - 20.C.3.1. **Use of cultivar name as a trademark in non-legal, official media not approved by the originator or legal representative of the taxon** such a published by a nurseryman, author, or distributor does not in any remove legitimacy of the names as the originator and legal representatives intended or intends to designate them in the future. Legal publication is defined as the trademark, patent, plant breeders rights, or similar governmental agency document (including state universities and agricultural stations producing cultivar releases) which publishes official journals, databases, or registers. Valid publication by authors or cultivar registers is not a basis of legal establishment of a trademark status as such have no jurisdiction over that naming convention. OROC's authority similarly stems only from our acceptance or rejection of a trademark for purposes of assigning a registration number and inclusion in our publications. For example, *Juniperus horizontalis* LIMEGLOW™ 'Noslg' was published for a very popular chartreuse, lime, and winter purple and bronze sport of 'Youngstown' in Garden Junipers by originator Larry Hatch. It was first

published by Humphrey Welch in The Conifer Manual as cultivar 'Limeglow' based on correspondence that I had with him but not with my permission as a cultivar designation. He went print when in those days conifer cultivars were generally outside the trademark realm, making his cultivar ranks assumption logical but not cleared with the me. The first official distribution of this clone assisted by Dr. J.C. Raulston was through the Iseli Nursery or Boring, Oregon and it is still sold by them under the correct name of LIMEGLOW™ while many growers outside that network continue to use the incorrect cultivar designation, especially in Europe. Some nurseryman and authors "jump the gun" and publish names without full knowledge of the originator's desired or final intent.

- 20.C.3.2. **Once a cultivar always a cultivar - Once a trademark always a trademark** is the universal principle of OROC trademark acceptance. Conversion from one realm to the other requires a complex discussion of history in a manner that is logical, legal, and fair. We have a process so please email if you wish to go through the maze, a fair, logical maze at that.
- 20.C.4. **ICNCP naming rules are not applied to trademark names** and cannot be the basis for the rejection of a trademark name as the International Society for Horticultural Science has no jurisdiction or legal standing in the naming of trademarks.
 - 20.C.4.1 **Protected, inadvisable trademark names.** OROC Certified Registrars are asked whenever possible to alert registrants to possible issues concerning their plant name, especially if it might violate trademark laws known to us and use the name and terms protected worldwide. Please consult an attorney on record if you have any questions as to the legality or wise use of any name based on popular companies, products, or services. Please see your local trademark authority's website for guidelines on the range of products to which you name might be applied and in which countries. A plant using the trademarked name identical or similar to a popular soda, cartoon character, music star, food stuff, automobile, store, or vendor will likely have trouble if that original trademark is broadly based, covering many categories of product and service. Since an unregistered trademark holder does not go through the registration process, they may not be aware of the extensive coverage of an existing trademark and that it may well apply to their plant, inviting expensive and time-consuming litigation.
- 20.C.5. **Promotion of a resurgence of Latin named garden plants.** Latin is a beautiful language and especially botanical Latin. Many plant originators, young and old alike, mourn the day when Latin was banned in cultivar names; that being January 1, 1959. Trademark names have no such restrictions and the name game is wide open now. This new found freedom allows an originator to name a plant in Latin as one example such as HATCHII GLAUCA NANA™ 'Hatch's Blue Dwarf'. Maybe we could get more expressive and turn the ordinary 'Golden Queen' into it equivalency of ELEGANTISSIMA AUREA REGINA™. While OROC will continue to reject and hope to correct Latin cultivar names when submitted, we are offering the alternative of unregistered trademarks for those who wish a bit of ancient class to shine on their new plant creation. OROC is committed to given all plant originators a full range of freedom, options, and clarity when naming their fine new plants. Latin expression is just one way we go. As registration bodies like OROC published registered of trademarks, the reuse of Latinized names will be increasingly unlikely.
 - 20.C.5. **Requested and reasonal conversion of Latin cultivar name proposals to unregistered trademark status.** OROC has received to date two cultivar name registrations were partly Latin and the orginator was unwilling to vernacularize them. Frankly they sounded more interesting and elegant on the tonque. We encouraged them to designate these new monoclonal as unregistered trademarks and add a true, vernacular cultivar name as reasonable compromise. One declined and the other has agreed.
- 20.C.6. **The trademark name includes exact, established scientific, taxonomic names** such as the Latin or Greek name of a species or genus to which the cultivar belongs. SHINNING COLEUS™ is rejected but SHINNING™ COLEUS is not. Coleus is an established botanical genus name and cannot be trademarked in the plant kingdom. It could as a soft drink, laxative, or drug perhaps. Common names that relate to the same plant are accepted and in many ways trademark names conventiently serve in the creation of popular vernacular names in the trade. Olea europaea 'HIDSHURTLIFF' is sold as WESTERN WEEPING OLIVE™ which does not contain the genus name Olea and is thus accepted as ready common name and good unregistered trademark equivalency. Olive is a common name and nothing about trademark law we know prohibits this.
 - 20.C.6.1. **Name Reduction Policy: OROC Advocates trademark names to equal common names or serve as the basis** of a new plant common name whenever possible and feasible. This is a very convenient process because when a plant has a trademarked name, cultivar name, and common name, we already add three names to an already complex cultivar count such as 1050 in Juniperus and more than 1200 in Acer. If we double and sometimes triple on those cultivar counts for these trademarks this is becoming a far too convoluted and entangled nomenclatural platform. If Acer platanoides SILVER SENTRY™ 'Billsilver' becomes known as the Silver Sentry maple or Silver Sentry Norway maple we now have a reduction of names. A number of nurseries already take the trademark name and fashion it to the common name in their online catalog database. This practice is encouraged by OROC.
- 20.C.7. **The Unregistered Trademark Usurpation Rule (UTUR): unconnected reappropriation of unregistered trademark names rejected as a trade courtesy.** OROC will politely reject an unregistered trademark name that is reused,

reappropriated, falsely claimed, or otherwise usurped without the permission of the originating party of the established unregistered trademark name. We wish to establish a higher ethical standard and provide some added protection in the name of fairness, consumer awareness, and trade courtesy. For example, one nursery has established a series of dwarf *Buddleia* called SUMMER GARDEN CANDY™ with subclones in the same genus called WHITE, BLUE, and VIOLET. None are patented. Another, unconnected grower in another region created and now sells SUMMER GARDEN CANDY™ LAVENDER without permission of the first grower and originator of the name SUMMER GARDEN CANDY™; in essence stealing from his unprotected brand name and gained marketing reputation. Yes we know that the originator of SUMMER GARDEN CANDY™ has no general legal rights (see your own lawyers folks for exceptions as they are good at) to prevent anyone else from attaching to this name and using it at will. OROC will reject the name given without permission as a trade courtesy to avoid confusions and the generally undesirable, selfish behavior on the part of members of the ornamental plant community which is generally respectful, sharing, and kind.

- 20.C.7.1. Applicants will be given the opportunity to present documentation that verifies their permission to use the name and we note any correspondence or legal documents on file with us.
- 20.C.7.2. **Registered trademarks are legally protected from this kind of nomenclatural poaching** but an unregistered one is not.
- 20.C.8. **Simple language translations of the cultivar name** such as *Plantus albus* LA NIEVE™ 'Snow', the trademark phrase being a Spanish term for snow. It is very likely that 'Snow' will be sold in Spanish speaking countries as 'La Neive' anyhow.
- 20.C.9. **Rejection of simply adjectives as unregistered trademarked entities** much in the manner of ICNCP cultivar rule. OROC has seen some examples where names in form of MAJESTIC® RED™ or MAJESTIC® WHITE™ are being used as an odd combination of registered and unregistered protection. Since RED™ and WHITE™ cannot stand on their own as distinct nomenclatural entities, they are rejected, especially as they could well appear after other registered trademark names in other Cultivar Group equivalencies. OROC would in this hypothetical example accept distinct TM that follow registered names such as WHITE SATIN™ or RED SIGNAL™. The unregistered trademark name must not be a simple adjective, easily confused, or already used in the genus as trademark, cultivar, or common name.
 - 20.C.9.1. **Rejection of simple cultivar name adjectives appended to rejected trademarked names.** For example, MAJESTIC® is registered in the US and the subclones are sold as MAJESTIC® 'Red' and MAJESTIC® 'White'. The named 'Red' and 'White' have no standing as cultivar names any more than RED™ and WHITE™ as trademarks. The best use of this registered name would be MAJESTIC® RED not MAJESTIC® 'Red' nor MAJESTIC® RED™. The terminal epithet needs no protection because it means nothing without the leading, protected, registered or unregistered word. The leading registered trademark name must be respected and honored regardless of what terms or names follow it.
 - 20.C.9.2. **Special exceptions at the discretion of OROC Certified Registrars.** We received a name similar to *Plantus vulgaris* EMERALD™. Emerald is a common term for a range of green colors, gemstone, etc. and perhaps a simple adjective. Or is it? The name had no previous use anywhere in the genus so it was ruled to be acceptable.
 - 20.C.9.3. **OROC will request from the registrant or originator their intended status of Terminal Post-Trademark Epithets (TPTE)** after the trademark designation. For example, *Plantus roseus* JOYFUL SPRING® might be published in various catalog with one clone called JOYFUL SPRING® 'Rosebud', JOYFUL SPRING® ROSEBUD, and also JOYFUL SPRING® ROSEBUD™; the latter being the so-called double trademark. Any of these two designations for the terminal phrase is logical and likely legal. It is often unclear with new trademarked entities what status the originator intended as their labels, literature, and those of distributors may show two or all three of these variations. OROC will ask and if necessary explain the different options for the TPTE.
 - The trademarked name coming before the TPTE and directly after the species or genus name is known as the **Base Trademark (BT)**. If the TPTE is also a trademark also it is known as the **Terminal Trademark (TT)**.
- 20.C.10. **Rejection of trademark names accepted by governmental authorities in error.** Any trademark name granted by governmental authorities which already exists for a botanical or horticultural taxon of the same exact words in the same genus may be rejected on grounds of ignorance of the registering authorities who generally are not plant nomenclature experts not widely consult with same. OROC will attempt to consult the authorities when feasible but we reserve the right to reject any submitted names for reasons specified in detail.
- 20.C.11. **Any trademark name which is identical in letters, characters, or easily confused** due to 1-3 similar letters with any Latin family, genus, specific epithet, or botanical infraspecific taxon is rejected. This rule is intended to eliminate OROC registration and publication of trademark names based on species or genera and thus a *de facto* analog of it outside the botanical and horticultural naming codes.
- 20.C.12. **A rejected trademark name may still be noted** in ORCC Registers for purposes of historical documentation and promoting clarity but it will always be stated that the trademark name has no registration status and for what reason(s).
- 20.C.13. **OROC reserves the right to reject any trademark or cultivar registration based on deliberate fraud, misrepresentation of data, or falsification of facts.** These include but are not limited to mis-statement of parentage, origin and history, exaggeration of traits, falsified statements on pest and disease testing, renaming an existing clone with no changes or modifications, or permissions in the use of private cultivar or trademarked names. For example, if a breeder stated

they have permission of the estate of a well-known political or celebrity figure to use their name and OROC determines by investigation this is not true, the name will be rejected. If a newly named trademarked entity/cultivar is determined by thorough DNA analysis to be identical to an existing clone which may or may not already have legal protection, the name will be marked as REGISTRATION RESCINDED with a full statement of facts. This has happened in several genera where one grower seized upon superior material and calls it their own, mistating both the origins and their role in creating the new taxon.

- **OROC will demand proof of trademark status if registration is claimed** in some cases. We have found names using the American (R) or ® prior to acceptance at uspto.gov. This is unacceptable fraud and will not be tolerated. We are not a trademark policing organization and it is the responsibility of users of our documents including all OROC Books to do due diligence in their own checking of trademark databases around the world.

Principle 20.D. Valid publication and establishment of existing cultivar and trademark names. OROC Certified Registrars will use their judgement to determine if a cultivar name has been sufficiently established in literature, cultivar registers, trade catalogs, or other available documents when applying these rules relative to trademarks. They will seek advice of colleagues, specific genus experts we have on file, and all available information, publishing their decision guidelines and logic in the OROC Book Registers for the record. The database of all international authorities permitted to issue legal trademarks will also be consulted.

Principle 20.E. Lapse of a registered trademark name protection (LIVE to DEAD in uspto.gov terms) is a growing issue. Growers often listed cultivars with registered trademarks after the legal protection has lapsed one of several reasons that legal protection was removed by a governing body. These lapses are not generally reported in the nomenclatural and nursery communities.

- 20.E.1. **Registered to Unregistered trademark demotion in OROC documents.** If a registered trademark is known to be **DEAD** (bold black letters, uppercase in the US Trademark Office database, uspto.gov) the ® symbol is to be removed and replaced by the ™ symbol, noting when possible the date and reasons for this change in legal status. The USPTO uses an Abandonment Date in their files. OROC cannot maintain immediate, live, real time updates on all plant trademarks so those concerned are advised to study governmental records and databases themselves should any questions arise. For example, *Viburnum carlesii* SPICE BALL® was registered with US authorities on June 10, 2013 by Spring Meadow Nursery, later shown as DEAD with an abandonment date of June 24, 2014. It now is correctly listed by Spring Meadow, Proven Winners, and their distributors as SPICE BALL™ for this reason. Growers are free, pending any legal action to the contrary, to use the unregistered name with or without permission of the originator.
- 20.E.2. **Possibility of registered trademark renewals after a lapse or DEAD status.** It is further possible that a lapsed or DEAD registered trademark can be renewed, even after years of no protection, and reestablished in good standing or becoming LIVE. Consider this in your research, label printing, and other documentation.
- 20.E.3. **Possibility of trademark lapse or DEAD status in one country but not all.** Covering the registered trademark status in all countries is a daunting challenge for the thousands of known trademarked plant taxa. If a trademark is stated as DEAD and ALIVE in the United States or another country, it still may have protection in other countries.

Principle 20.F. Standardization of superscripts, fonts, and registration status.

- 20.F.1. **Registered trademarks** are noted like this example: *Plantus communs* REGMARK® 'Cultivar' or alternatively higher as *Plantus communs* REGMARK® 'Cultivar'. The higher superscript format can disrupt the word flow and spacing in some documents.
- 20.F.2. **Unregistered trademarks** are noted like this example: *Plantus communs* REGMARK™ 'Cultivar' or alternatively higher as *Plantus communs* REGMARK™ 'Cultivar'. The higher superscript format can disrupt the word flow and spacing in some documents.
- 20.F.3. **Trademarked names and their terminal names are to be in 100% uppercase** such as *Plantus communs* REGMARK® 'Cultivar' and not *Plantus communs* Regmark® 'Cultivar' nor *Plantus communis* 'Regmark'®.
 - 20.F.3.1 The ™ and ® cannot follow a cultivar name with or without single or double quotation marks. They have no meaning in the context of cultivar nomenclature.
- 20.F.4. **Default unregistered TM status.** In some countries there are trade or PBR names in uppercase which precede a cultivar name such as WINTER GEM 'Joessgem' but no particular superscript is shown by the originator or authorized licensed parties. In conformity with the US system of designations, OROC will assume the use of an unregistered TM unless the originator uses the PBR superfix instead. Unregistered trademarks require no communication with legal, governmental, and official agencies and are automatic merely by publication as such by the originator of any product including plants. The name would be changed to WINTER GEM™ 'Joessgem' under this rule whether published in the US or not. As far as we can determine the PBR superscript has no legal standing in any country to protect a trademarked or registered name.

Principle 20.G. The double trademark is accepted by OROC (except where one name violates 20.C.1. as a Multigeneric Marketing Entity) if both trademarks can be determined to have taxonomic equivalencies. For example, if *Plantus communis*

SPRING ROMANCE™ DIAMOND RING™ 'Caret' and SPRING ROMANCE™ WHITE WEDDING™ 'Veil' were the equivalent of a cultivar group (SPRING ROMANCE™) and its specific cultivar clone (either WHITE WEDDING™ or DIAMOND RING™), both trademarks names would be registered. This establishes both CGA and CE status under TEA guidelines. If SPRING ROMANCE™ appeared in more than one genus, it would be considered a Multi-Generic Marketing Entity and stated as such.

- 20.G.1. **The double trademark has four possible variations:** (R)+(R), (R)+(TM), (TM)+(TM), and (TM)+(R) such as GARDEN GLORY® RADIANCE®, GARDEN GLORY® RADIANCE™, GARDEN GLORY™ RADIANCE™, and GARDEN GLORY™ RADIANCE®.
- 20.G.2. The trademarked name used first is known as the **Base Trademark (BT)**. If the TPTE is a trademark also it is known as the **Terminal Trademark (TT)**.

Principle 20.H. Multiple trademark names for a single cultivar name are reluctantly accepted by OROC on the grounds that not all trademark names are legal, sensible, or suitable in every market and a single cultivar may in fact have to have more than one marketing name. For example, Weigela 'Slingo 1' is sold as CRIMSON KISSES™ by Monrovia in the US and as ALL SUMMER RED™ by the originator Vert Berhoef, the lines generally drawn between American and European growers. Likewise, Weigela 'Velda' is offered as TUXEDO™ and also EBONY AND IVORY™. While this practice is to be discouraged for its massive ramifications on making nomenclature more complex and confusing to the consumer, one must respect cultural differences and special situations in each region of the world.

Principle 20.I. Temporary unregistered status as a path to registration and full legal protection. OROC accepts and acknowledges that it is common practice to first sell a new trademarked entity under the unregistered TM while the legal, registration process is ongoing. This very much like a PPAF (Plant Patent Applied For) designation as a temporary bridge to discourage improper use of names and germplasm. Thus the conversion of a name from unregistered to registered is a normal, logical, and important process in the naming of plants and is not be discouraged nor condemned. It is the obligation of all cultivar registers, authors, taxonomists, and others concerned with proper trademark annotation to keep abreast of the status of applied names for the sake of accuracy in their databases and publications. This is very much a concern for curators who must create or purchase very expensive, permanent metal labels when the ultimate trademark status is uncertain.

Principle 20.J. Nomenclatural role of subscript symbol location in determining rank or status. It is important that all registered trademarks have the (R) symbol appear after the actually registered name and not the unregistered name variants which flow from it. For example, if I were given registration rights to SPRING GLORY® I would perhaps have clones of it called SPRING GLORY® RED, SPRING GLORY® WHITE, and SPRING GLORY® PINK. These would not be legal as SPRING GLORY WHITE® unless that full, three word name were registered on it's own with full documentation in the governmental database. Some large, successful growers do go to the added legal and process expense of registering many version of the base trademark with all the color variations covered. The same does not apply to unregistered trademark names except where rule 20.C.8 applies.

Principle 20.K. Automatic transfer of trademark data when specific name or generic name is changed or corrected.

Except by objection of the originator, all accepted trademark and cultivar information is transferred to the correct botanical name of the registered taxon in the event the originator uses an outdated, invalid, or otherwise incorrect name, OROC has accepted a new name for the base taxon, or genus changes for that specific species. This has occurred in the case of trademark cultivars of *Myrica* becoming members of the genus *Morella*.

Principle 20.L. Taxonomic Equivalency and Association (TEA) of a trademarked entity will not hinder application of existing cultivar groups or other interspecific ranks within the nomenclatural hierarchy. For example, a breeder creates two line of hybrids within the species *Plantus communis* called PRAIRIE SNOW™ and PRAIRIE GEM™, respectively. *Plantus communis* f. *albus* PRAIRIE SNOW™ CRYSTAL is the full name of one named clone as it is referable to wild-occurring, white-flowered f. *albus* but by no means represents all the known variation of that botanical form, wild or cultivated, Similarly, *Plantus communis* (Nanus Group) PRAIRIE GEM™ JADE is the full name of another named clone, belonging to the cultivar group Nanus Group, covering all dwarf taxa with the dwarfness gene(s) of old cultivar 'Nanus' from which JADE was bred. The trademarked names here thus serves almost as a subforma (though of no botanical standing) under f. *albus* and as Subcultivar Group under the Nanus Group, forming an even more complex hierarchy of names. Let us take this hypothetical example further to show the integration of botanical, horticultural, and trademarked names, registered or not.

- *Plantus communis*
 - f. *albus* - the wild, white-flowered form known occasionally throughout North Carolina, Tennessee, and Kentucky, rarely appearing in seed blocks
 - 'Albus' - the common clone of gardens, selected by Smith Nursery 1883
 - 'Albus Superbus' - a larger-flowered selected of the original 'Albus' from Jones Nursery 1901, not widely seen
 - 'Albus Marginatus' - a sport of 'Albus' with a very thin, yellow margin to each leaf
 - 'White Magic' - a popular modern American clone from about 1954
 - PRAIRIE SNOW™ - a new series of white-flowered hybrids from Metropolis State University 1990
 - PRAIRIE SNOW™ CRYSTAL 'MSU01' - a compact, very clear white corolla, dark green leaves

- PRAIRIE SNOW™ CRYSTAL IMPROVED 'MSU22' - as above but higher fungus resistant, corolla larger to 2.1 in. wide
 - PRAIRIE SNOW™ SNOWBANK 'MSU03' - a large growing form, slightly more creamy-white corolla than CRYSTAL
 - PRAIRIE SNOW™ FLAKE 'MSU17' - a medium-sized form, corolla nearly white, it's lobed slight incised suggesting a snowflake
 - 'Fancy Flake' - a white-margined sport of above, not eligible for use of the other parties' trademark name since unrelated in origin.
 - WEDDING DAY® - a new series of hybrids from Gotham City Nursery 1988
 - WEDDING DAY® BRIDE 'Gothbride' - compact, spreading, flowers pure white, larger to 2.2 in. wide
 - WEDDING DAY® GROOM 'Gothgroom' - tall, erect, flowers nearly white, 1.8 in. wide
- f. roseus
 - 'Roseus' - a polyclonal mix dating to England and France about 1888, very variable in quality and color
 - 'Roseus Grandiflorus' - a selection with the corolla about 1.8-2.0 in. wide
 - 'Roseus Jonesii' - a pale blush corolla, Jones Nursery about 1908, true clone possibly lost
 - 'Pink Queen' - corolla a reliably rich pink color, sometimes washed out to white or blush in full sun
 - ROSE GARDEN® - the darkest pink corolla known, very magenta-red in bud, leaves blackish-green, corolla to 2.3 in. wide
- f. communis
 - 'Green Magic' - a popular, compact hedge selection, larger than 'Nanus' and much more vigorous
 - 'Variegatus' - leaves irregularly margined white to cream
 - Nanus Group
 - 'Nanus' - 2-3 ft. tall, very dwarf, dense, named by Doe Nursery 1889
 - 'Pygmaeus' - 6-12 in. tall, very slow, tiny, used for bonsai, leaves very tiny at 0.5 in. wide by 1.0 long.
 - PRAIRIE GEM™ - a dwarf set of hybrids from 'Nanus' by Metropolis State University 1996
 - PRAIRIE GEM™ JADE - 1.5-2.0 ft. tall x wide, stays dense without trimming, rich bluish-green foliage
 - PRAIRIE GEM™ EMERALD - 2.0-3.0 ft. tall x wide, about 'Nanus' size but leaves a richer, darker green tone
 - BOWLING BALL® - very dense, globose, smaller leaves, a cross of 'Nanus' x 'Pygmaeus' from Generic Nurseries 2011
 - Salicifolius Group - more, narrowly elliptic to widely linear blades
 - 'Salicifolius' - the original clone from Paris Nurseries, France about 1897, blades 1.2 in. wide x 6 in. long
 - 'Green Spear' - an improved selected clone, blades 1.0 in. wide x 4-6 in. long, a darker green, apex more acuminate, sharp
 - 'Silver Spear' - a white-margined leaf sport of 'Green Spear', origin unknown

Principle 22. Printed and Bound Registers. Fees may be charged to persons or libraries wishing to have printed, traditionally published, or bound copies of registrations but only as a means to recover costs and this with an absolute minimum of expense to the buyer and as nearly as possible to no profit nor loss to the project. We will work to minimize these demands and costs via our online website and ebooks that satisfy the needs of the academic, scientific, and all other traditional library communities.

Principle 22.A. Free ebooks with registrations will be studied with the desire to offer these via iTunes, Google Play Books, Amazon Kindle, and similar services that support a worldwide audience.

Principle 23. The Board of Directors may delete or modify any of these principles with an 80% or higher majority vote and add new principles with the same voting standard.

Principle 24. Objective, non-evaluation mission. OROC will have no function in determining the usefulness, commercial merits, overly resemblant taxonomy, or otherwise comment on the scientific merits of a new cultivar as has been a declared abuse of ICRA in refusing registrations well outside their defined role. The declaration of these merits is the role of Plant Patent, PBR, and cultivar trial administrators and not the role of any Registrar.

Principle 24.A. Respect for the necessity of commercial resemblant cultivars. OROC understands the commercial needs, rights, and needs of nurseries and marketing firms in this highly competitive age with so many nurseries and garden failing and falling, that highly resemblant cultivars are logical and frankly required. Everyone needs their own dwarf purple Loropetalum, a compact gold-leaved Physocarpus, the super narrow, wintergreen and denser than coral Thuja cultivar, and that glowing (but not too harsh) pink Phlox paniculata with massive heads that do not flop above mildew-free foliage. OROC will refuse no resemblant registrations based on the natural convergence of commercial requirements in our big world, knowing that the competition of likes and near equals lead to better plants over time. We will seek to distinguish them when possible by noting comparisons and contrasts in detail.

Principle 24.B. Reference to existing, objective cultivar evaluations and trial reports. While it is not the function of OROC or any other cultivar registration program to determine the garden merits, distinctiveness, or commercial potential for a given cultivar, we do reserve the link to respected university, plant society, and third part evaluation and trial programs and include this data in a cultivar data sharing section. Persons are welcome to submit links to proven trial organizations to provide a diversity of viewpoints on a particular cultivar from trial grounds around the world.

Principle 25. Conditional ornamental qualifications. We will accept registration in certain genera which contain high ornamental, landscape-worthy plants but refuse registration of cultivars purely for pomological, agronomic, olericultural, or non-

aesthetic production of fruit, flowers, leaves, and other plants parts. Grounds for considering a taxon ornamental or semi-ornamental, even an edible-landscape plant, include but are not limited to: high colored or variegated foliage, highly colored and abundant fruit, unique plant habit, highly showy leaf colors such as gold, blue, or red foliage, showy bark or twigs, highly colored and abundant flowers, doubleness or incision of flower, incised or unusual lobing of the leaf blade, and fragrance of the flowers.

Principle 25. A. Subject to a 80% majority vote of the Board of Directors, OROC will only accept ornamental taxa in the following genera if proven or know to be ornamental and the originator must provide sufficient data to prove a highly aesthetic status: Brassica, Carya, Fragaria, Juglans, Lactuca, Malus, Musa, Pisium, Prunus, Pyrus, Punica, Rubus, Saccharum, and Zea.

Principle 26. Ban on Name Holding or Reservation. No system of cultivar name reservation or "holding" will be allowed or implemented. This ICRA abuse with hefty fees for name reservation and later for actual registration and later registration data changes will not be permitted at any time or place.

Principle 26.A. Fake cultivar rejection. Registrations based on previous "reserved" names fraudulently published for plants which do not yet exist, using doubtful images and descriptions will not be accepted. Some originators freely admit this practice and one had stated "the next good seedling I find will be called Y...and am laying claim to the name now". Registering a breeding or selection goal not extant or real will be rejected.

Principle 27. Preference for registration will not be dependent on any marketing opportunities, advertising participation, or other means of compensating the OROC project. All registrants will be treated equally regardless of participation, past or present.

Principle 27.A. All new cultivar registrations will be completely open on at least one website (currently the default www.cultivar.org) without requirement for membership, registration of use, signing up, transfer of personal information, ad presentations, or any other act even if free and without obligation. These listings are part of the OROC Data Sharing Program.

Principle 27.B. Complete, historical (past to present or past only) cultivar checklists and horticultural monographs if 100% free may require access by means of registration or sign for a newsletter, password, or similar program as a means of documenting use and assuring data integrity and security of these specialized, very large documents which fall outside the OROC Data Sharing Program. In most cases these documents contain images, text, and other contents which must preserve copyright compliance and previous legal agreements and are appropriate for sharing but maintaining the rights of authors, image copyright holders, and other considerations which do not permit free exchange without considerations or conditions.

Principle 27.C. Respect for Existing Cultivar Publications. Due to existing author agreements, previous sales promises to customers, copyright notices, and publication contracts, some content at cultivar.org and other allied sites, namedly CULTIVAR.ORG DIRECT ACCESS will be exempt from OROC Data Sharing. We will endeavor to convert some CULTIVAR.ORG DIRECT ACCESS material to 100% OROC free content as legal and contractual obligations pass. It is not the purpose or goal of OROC to render horticultural authorship in terms of cultivar checklists, horticultural monographs, and other cultivar databases obsolete by demanding no-cost access at all times. Indeed the profit motive is essential to get great, large works completed and allow the authors to retire with modest royalties as they deserve and require.

Principle 27.D. OROC will encourage free sharing of large monographs and checklists, mindful of the necessity of authors to fund their careers, expensive research programs, highly beneficial breeding and conservation projects, preservation of their valuable gardens and worldclass collections in an era of high taxation, but trying to maximize the amount of free material at all times within these practical boundaries. OROC will seek the donation of manuscripts from living authors as well as gifts from the author's estate via secured, long-term gift management.

Principle 28. Mandate for New Technologies. We will use new technologies, communication media, and all other techniques of scientific, commercial, and informational merit to communicate our data. Currently we use the resources of 123contactform which provide real analytics, graphs, Google Maps to cultivar origins and display gardens, social media feeds, video embeds, numerous free marketing tools for registrants, JPG image uploads, and many other modern tools.;

Principle 29. Response Time Requirement. Registrants and all parties will receive a response within 24 hours during business (weekdays) when possible and no later than 48 under any circumstance with a reply well-researched with due diligence, providing a complete answer when possible and a preliminary report when necessary. Followups must be swift and regular for complex projects at all times. We will never tolerate lack of responses and long delays as typical of ICRA and plant society communications under any terms as these are our valuable partners, friends, and worthy creators of our future gardens who demand respect and the highest level of honor at all times.

Principle 30. In the spirit of international scientific cooperation the OROC will at all times offer registration data to ICRA and other parties of similar standing and authority (such as well-known authors, breeders, scholars) in a given genus for their own use, consideration, providing no copyright restrictions on their use or sharing of this data. This effort will be proactive and not reactive, waiting only for requests.

Principle 31. Cultivar Group Registrations. Cultivar Groups may be registered as if an individual cultivar for the purposes of documenting this useful taxonomic grouping and establishing the originator or nominant in question. The group may be based on a trademarked entity such as FANCY® PINK, FANCY® WHITE, FANCY® RED, FANCY® PINK WITH WHITE EYE, FANCY® DARK RED, and FANCY® HOT PINK.

Principle 31. A. Cultivar Subgroup Registration. When a group of cultivars exceeds at least 8 taxa in terms of the combination of two major traits or two accepted Cultivar Groups or a clean genetic merger thereof, the Subgroup may be registered.

Principle 31. B. Cultivar Groups, SERIES, and trademarks. The group registration will be termed a SERIES if based on a trademarked entity such as FANCY® PINK, FANCY® WHITE, FANCY® RED, FANCY® PINK WITH WHITE EYE, FANCY® DARK RED, and FANCY® HOT PINK. This would known as the FANCY® Series but had their been 'Fancy White', 'Fancy Pink' it would be called the (Fancy Group) in the context of cultivar nomenclature

Principle 32. Annual Surveys for Improvement. OROC will conduct annual surveys of major plant originators, their organizations, and students to determine new ways to serve them better, communicate more information freely, efficiently, and in the most useful formats. The OROC Board of Directors is tasked for an annual action plan for implementation of the best survey ideas.

Principle 33. OROC Archives and INCA. We will archive all online and scanned documents in digital form to form an OROC Archive that will be distributed to all Board of Director members, Certified Cultivar Registrars (CCR), and selected universities for long-term storage and safe-keeping. Cultivar.org's INCA (Internet Nursery Catalog Archive) already has more than 40 gigabytes of cultivar description data since 2000 and will also be used in this archiving project. Due to copyright restrictions on nursery catalogs, academic journals, many websites, and formal books, the archive cannot be made available to the public. Our internal distribution is solely for purposes of maintaining the information over future years without loss of information as the internet or author's remove their contents.

Principle 34. OROC Non-profit Status. The OROC Board of Directors will consider and personally fund conversion of this group to an indendent non-profit corporation at such time it deems appropriate and helpful to the mission. No fees, taxes, or other considerations will be charged for administration of the OROC program.

Principle 35, Respect for Patent and PBR Processes. We will respect the needs and requests of any originator to follow Plant Patent and Plant Breeders Rights rules and not interfere in those processes by premature communication or distribution of plant data.

Principle 35.A. We do reserve the right to publish knowledge of a cultivar if it appears in existing publications or is clearly on display in admissible areas of a public garden, and do so on the ground that Horticultural Media have access to this same plant imagery and data.

Principle 36. Selection and Role of CCR. Whenever possible, Commisioned Cultivar Registrars (CCR) will be selected for broad knowledge of many plant types and genera so they assist each other in backup roles for others when unavailable and to educate themselves on a richer diversity of plants. We wish to avoid dependence on any one or two people for individual genera processing and thus have wider, deeper expertise from collaboration.

Principle 36.A. CCR and the Board will have a ready pool of specialists available to assist the CCR in specific genera situations and complex or difficult decisions.

Principle 37. Multiple submission tools and forms. We want the data whether by little or much effort, simple to complex, and so OROC will accomodate all originators with whatever level of time, devotion, detail focus, or control they wish when telling OROC about their new creation. When possible we will accept cultivar registrations with these styles of tools: 1) Just Tell Us. A simple email providing whatever data and links they can, 2) a simple short form that can but cut and pasted into email for even more information, and 3) a much more extensive, digital tool allowing capture of submitted images, Google maps, complex morphological radio and check boxes, more details history, social media feeds, multiple links and email approaches, and all available, powerful and yet useful techologies.

Principle 37.A. Mandate for registration tool innovation. Our volunteers including CCR and Board of Directors will at all time run experiments with new data submission and communication tools to not only offer better tools but new alteratives to familiar, existing, and more traditional ones. OROC staff will at all times educate themselves on new, affordable, rational communication tools, especially those free or at low cost to OROC, and always free to our consumers, learning from every new tool or platform, modifying them with skill, and always learning to be more, preserve more, and share more for the least possible effort and expense.

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Please link to www.cultivar.org rather than this file direct as the URL can or will change.

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