

INTERNATIONAL COLEUS SOCIETY SYSTEM OF CULTIVAR GROUP CLASSIFICATION

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Why do we need a cultivar group classification? There are three major reasons. Firstly, the variation of the genus in gardens, now over 1572 named clones, and the very genetics on the surface seems to place the leaf shapes in natural categories. Yes, all the Cultivar Groups (and that is taxonomic unit under the nomenclatural codes) do interbreed and form intermediates but many cultivars both new and old fit one group and one alone. We used measurements to define intermediate situations such as the width, length, number of teeth, size of teeth, amount of undulation, etc. Secondly, assigning a cultivar to a cultivar group (or limiting it to two choices) makes identification much easier. The battle is half won at that point. The International Coleus Society (ICS) puts a cultivar in a matrix with these cultivar groups running across the top and the leaf color patterns as rows. Define the group and color pattern, and those 1572 cultivars are narrowed down to perhaps 2-10 - at which point a more detailed, dichotomous key takes over. Thirdly, it helps us find gaps in the phenotype (visual set of traits) profiles of what we have and what we might want to breed or select for in the future. There is no all green Suborbicular though a new one comes very close. Never seen a Duckfoot in purple edges centered pink. I don't think we have an all blackish-purple Minimalist cultivar. That is something to work towards.

How did the ICS come up with this system? Society co-founder Larry Hatch was working on his encyclopedia of interior plants (called HITS and now Hatch's Interior Plants) and realized Coleus was a vast genus which needed to be tamed. There were some nice books but they were either all British or all America in focus and did not fully exploit the old literature and nursery catalogs. In describing more than 300 cultivars at first it became apparent some shorthand terminology was in order because so many cultivars have the same general leaf shape traits such as widely known Carefree Oak type. A rough system was laid down in 2010 and when the ICS was spun off into a group of Coleus nuts and scholars, it became apparent a published system was needed and should be standardized. That happened in 2013 with updates in 2015 and 2017. More than 20 Coleus collectors, breeders, and long-term students contributed to the wording and terminology. We are always open to new refinements and will continue to improve the system. The system is designed to fit 500 available clones.

COLEUS ID PROJECT FOUR

Available to ICS members uses this cultivar group system in a handy spreadsheet. Pick the cultivar group and then the color pattern. Your possible identification choices are displayed. If nothing shows up among the 350 cultivars known in the European and US trade, you may just have something special and worth registering. Even if similar things come up, we have the opportunity to define, describe, and document how our need creation is indeed different and wonderful.



(xCP) Coleus x Perilla cross -
8.22.2015,
recognized as a
group, named xCP.
Leaf shape is similar
to Traditional Blumei
or Wide Blumei but
usually a shorter,
more deltoid leaf,
always containing
dark purple shades
and normally a bright
pink center. There
are more golden
spots.

The lack of green
margins and
presence of purplish
ones is a good but
not always perfect
clue you have a
Perilla hybrid.



(T) Traditional
Blumei (ovate) - most
generic or average
have this medium
wide leaf shape,
usually with crenate
or serrate margins.

For purposes of
identification, the
society sometimes
merges the three
width of Blumei or
ovate blades.

The wild Blumei or
typical species in
nature is often
tricolored with a
green margin, pink
center, and muddy
brownish or reddish

zone of overlap. Mutants lacking anthocyanin red pigment appeared, giving rise to those with a gold center and green margins. Mutants for different leaf margins occurred next such as the Lacinate-Fimbriate type of edge.



(W) Wide Blumei (broadly ovate or suborbicular-ovate) - these are mostly very large blades such as with the KONG or Giant Exhibition Series



'Zesty Zucchini'

(N) Narrow Blumei (narrow ovate or elliptic-ovate)



(Su) Suborbicular (coin-like, nearly round) - most of these blades are about as wide and long, often coin-like in their 1 x 1 inch general size at maturity, usually have few teeth per side (rarely more than 3-6), teeth are quite rounded-crenate, and most have reddish or blackish centers due to their derivation mostly from *Coleus rehnelianus*. They are often low, mounded, or trailing in habit and rarely without a green margin or have any kind of mosaic pattern.

From the Duckfoot (and there are intermediates) these differ in a sinus just a few millimeters deep, much more shallow

or not with such massive bulbous outlines.



(Sa) Salicifolius (willow-shaped, very narrow, linear to narrowly lanceolate) - typified by the original 'Salicifolius' and today 'Butter Kutter' and 'Darth Vader', usually with 5-30 long sharp marginal teeth of variable sizes, often twisted, width:length ratio of 1:6 to 1:12, differing from the (F) Filiform in a wider blade and numerous teeth, excluding petiole- amended 8.22.2015.

The question has arisen that the Filiform Group looks more like a willow tree leaf than these since a Salix willow does not commonly have jagged teeth or lobes. True! However, this group is based on the original German 'Salicifolius' cultivar or strain with these specific traits and this name is retained for historical reasons, citing the original strain as the standard.



(Se) Saber-Elliptic (narrowly elliptic to linear-elliptic to broadly lanceolate) - typified by the Claude Hope's original Saber series and today by popular clones like 'Velvet Mocha' and the FLAMETHROWER™ series. Not as narrow or willowy as (Sa) and here with a width:length ratio of 1:3 to 1:5 excluding petiole. New group accepted 8.22.2015

(F) Filiform (narrowly linear, thread-like), these are generally long, linear and only 0.5-1.5cm wide (twice as wide as Salicifolius) and generally lacking



teeth or lobes though some minor undulations and very shallow lobes do occur. The recent UNDER THE SEA® - SEA URCHIN Series and Terra Nova's FANCY FEATHERS™ series are typical of modern clones though this group has existed for many decades.

(A) Anemone-Fingered (Fantasia of Pedley monograph) and in some ways this is a minimalist version of the Lacinate-Fimbriate Group with which it shares the trait of finely divided marginal teeth and lobes, having sublobes (teeth on teeth or teeth on lobes or lobes on other lobes) but generally not more than 5-10 lobes here. Lacinate-Fimbriate tends to have a wide, massive ovate to oval blade at its base with only finely cut teeth. These are so deeply incised or cut the lobes are noticed first. The modern UNDER THE SEA series is typical of these but they have occurred over the decades.

(T) Trident-Forked (sharp lobes) is a category rarely seen and 'Tripeak Arrow' from Taylor Greenhouses is one example. Young plants of it are more on the Filiform side

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partial, patch and purple are distinct. It is more a subdued chartreuse for most of us. C:



but mature plants often have 2-3 forked, very sharp lobes. These lobes are never rounded in this group.

(C) Carefree-Oak is based on a seed strain created by master Coleus pioneer and breeder Claude Hope. These are generally subglobose, very compact plants with a narrow oak shape. From the Wide Flat Oak they differ mainly in 1) a deep central groove or valley at the base of each leaf, 2) a long, prominent, elongated or pointed apex, 3) complex net veining below at shallow angles, 4) a more 3-dimensional, not very flat blade, and 5) lots of wrinkling, rugosity, or puckering. There are many colors available and 'Black Dragon' is one of the most popular though it's older blades show intermediacy to the Wide Flat Oak in some seedlings.

Carefree have what Coleus breeders call "the trench" or "the groove", a very rough set of lower tissues with very closely spaced veins that flows down into the petiole with the oaken, often ruffled, lobes in sort of 3 dimensions above and around it. The groove looks almost stamped on or embossed at times. Flip the leaf very and those very, very narrow vein angles of just 5-10 degrees become apparently. This is type of fasciation or clustering but it does not apply to the entire leaf.

The Wide Flat Oaks lack this channel or groove for the most part but many crosses of Carefrees with Wide Blumei have occurred to make intermediate

forms. There is historical evidence that oak-leaved or Quercifolius Coleus existed decades before Mr. Hope's Carefree strain.



(WF) Wide Flat Oak (Quercifolius?) is compared with Carefree in the notes above. This plate shows the wider, flatter blade with a lack of a basal channel or valley, less rough a surface, and a distinct cuneate or wedge-shaped base. The teeth tend to be more regular in size than Carefree but this varies a good bit. There are many intermediates between WF and Carefree so expect that. If one crosses an basic Blumei with a Carefree, this group often comes out in the seedlings.



(D) Duckfoot have short, reduced blades with generally 1-5 rounded lobes per side (far fewer lobes than Carefree or Wide Flat Oak), are mostly 1-2 inches long in the lamina or blade portion, are often just one or two colors with a bold color in each lobe. The lobes frequently overlap each other unlike the Suborbicular clones of C, rehneltianus and have often have a folder sinus. Intermediates do occur.

The Duckfoot originated, we believe, from early crosses of the Suborbicular, rehneltianus cultivars with something deeply lobed like an Anemone or both of the oak classes. It is certainly possible that genes for lobing appeared in Suborbicular seedlots without the benefit of hybridization.

(Mi) Minimalist (Toe-



like or spoon-shaped) - either one simple, entire (mostly toothless) blade shaped like a spoon or toe, or a blade with just 2-3 lobes, or formed of 2-4 widely spaced lobes of these shape. 'Definitely Different' in green and 'Sea Weed' (shown here) derived from Anemone UNDER THE SEA types are nice examples.

The 'Thumbelina' and 'Tiny Toes' cultivars generally have just one, toe-shaped or bulbous lobe but variation among those with 1, 2, and 3 lobes are very common and we see no reason to split this group further.

Terra Nova's TIDBITS™ series is partially based on these leaf genetics.



(P) Petticoat (skirt, twirled-spiral, round spiral, fan-shaped) - these usually have no defined terminal lobe and have fasciated or closely spaced fan-like veins, and most have lobe/teeth of some depth (0.5-2.0cm) there are boldly dentate. Most important is the skirt-like twist or swirl to the blade.

The two examples here are that of 'Gold Twist' which has one of the more bold, pointed set of lobes (10-16 in most) along with the popular 'Tilt-a-Whirl' with far more lobes (20-30) much more narrow anemone-like tentacles for lobes. The later is not an Anemone-Fingered cultivar because it is most deep incised and has a the whorled petiole attachment form.

(Mo) Monstrose (irregularly rumped, deformed) is in some



ways are catch-all group for highly odd and twisted clones of various origins. Our picture of 'Tapestry' here shows a blade with some Anemone traits, or a very much contorted and deeply incised oak type but also with widely spaced, sometimes Minimalist aspects.



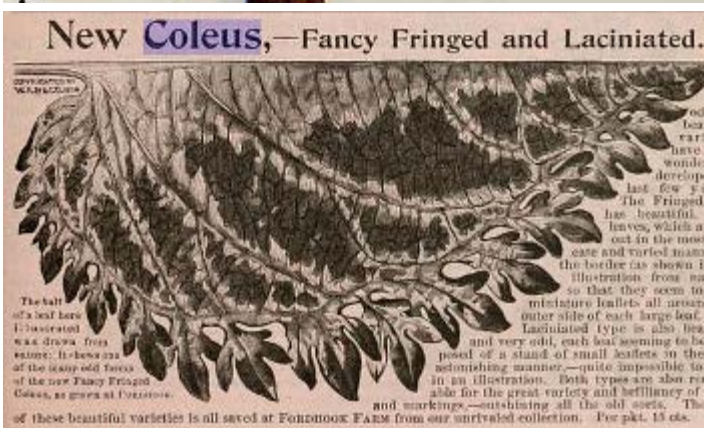
ed in that shipment)

(L) Laciniate-Fimbriate (lacy, fringed, **slightly to moderated incised (amended 8.22.2015)**), also undulate, frequently bilobate, occasionally trilobate) - proposed New Cultivar Group, **proposed 3.26.2014**, (typified by historical cultivar 'Verschaffeltii' and modern cultivars 'Peter Wonder' and 'Red Ruffles'). A velvet red center was most common among the early cultivars of this group. It is a distinct marginal variant of cultivar groups T, W, and N in most cases. It is based on 'Laciniatus' of the trade not var. laciniatus Miquel. **Accepted 8.22.2015, split from the new Lacerate-Pinnatisect group**

The two examples here are that of 'King Crab' and Burpee's 1896 release of a "fancy, fringed, and lacinated" strain clearly showing the sublobes and subteeth of this group.

The very popular 'Wasabi' is an all chartreuse member of this group though it's fimbriations are somewhat reduced compared to the most wild, extreme examples.

The Anemome type normally has very complex multi-lobed teeth and these often



New Coleus, — Fancy Fringed and Lacinated.

1/3 to 1/4 the width of the blade itself. The true Laciniate-Fimbriate has a large, usually wide ovate blade at its center, with the teeth being a marginal fringe only.



(LP) - Lacerate-Pinnatisect (highly incised, torn or lacerated, forming deep, distinct pinnate divisions) is one of the rarer groups in the trade today. They can be slow and weak owing to a lack of photosynthetic space. Differing from the Lacinate-Fimbriate which is also incised but have much deeper incisions at 50% or more of the distance from the margin to the midrib. This incision is typically 3-20% in Lacinate-Fimbriate. The blade may also appear to be lacerate or torn due to the extreme incisions and numerous divisions to tertiary and quaternary levels. 'Black Lace' and the old 'Pectinatus' typify this group. The margins may be bilobate, trilobate, or forked like (L). New group accepted 8.22.2015.

These are far more regular and symmetrical than the Anemone class though intermediates do occur. Anemones have much more massive, irregularly sized lobed which the LP group have side lobes of about equal dimensions. Another difference is that this group has lobes down to the base, covering more of each side. The Anemones often have a similar narrowly cuneate base but only have lobes in only the upper half to third.