

1. Spring Blooms 2018: Plants To Look Forward To
2. By the Numbers
 - 1,454 Fritillaria (fritillary) - 5 taxa
 - 4,200 Allium (ornamental onion) - 11 taxa
 - 5,800 Hyacinthus (hyacinth) - 13 taxa
 - 14,200 Narcissus (daffodil) - 35 taxa
 - 68,490 Tulipa (tulip) - 140 taxa
 - 35,800 everything else (Muscari, Galanthus, Eremurus, etc.)
 - 129,944 total bulbs
 - 267 bulb taxa - 99 more than 2017
 - 216 new to Newfields bulb taxa
 - 31,717 total annuals
 - 75 annual taxa - 50 more than 2017
 - 18 vegetable and herb taxa in displays (not including Orchard crops)
 - 18 distinct Viola cultivars
 - smallest crocus cultivars
 - largest Allium cultivars
 - 70,000 bulbs kept in the living collection from 2017
2. Reading the Signs
3. Bulbs, Corms, and Tubers Oh My!
 - Bulb – modified leaf/floral tissue with a basal plate with leaf scales nested together around developing flower bud – can be sheathed or unsheathed
 - Corm – modified stem tissue, basal plate with thin tunic and growing point
 - Tuberous roots –modified root tissue enlarged for carbohydrate storage
 - Rhizome – horizontal roots that spread laterally producing pips that can become new plants
4. Allium
 - among the largest plants in *Spring Blooms*
 - wide variety of *Allium* size, shapes, and colors throughout the show
 - garlic & onion relatives get their strong scents from a Sulphur derivative of the amino-acid cystein
5. Anemone (bulb)
 - Anemone from the Greek root “anemos” meaning wind and blanda meaning mild or charming in Latin
 - European origin
6. Bellevalia
 - genus has often been recategorized as *Muscari* or *Hyacinthus* but has significantly different genetics
 - plants in SWBG may be paler blue than the image (Turkish seed tends to be darker)

7. Camassia

- native to western North America
- colors in blue, lavender and white
- *Camassia quamash* is a traditional staple food for western indigenous peoples
- Lewis and Clark's western expedition was saved when they stumbled upon the Nez Perce peoples harvesting *kamas*

8. Chionodoxa

- translated from Greek as "glory of the snow"
- similar in appearance to *Scilla* but flowers face upwards and have bunched stamens with yellow pollen (compared to the many *Scilla* bearing blue pollen)
- there is still some taxonomic confusion about whether the two genera should be lumped together

9. Scilla

- European natives
- often have blue pollen (which can be seen on bees in early spring)
- open stamen structure helps distinguish from *Chionodoxa*
- can be used as a cut flower

10. Crocus

- Latin word for "saffron" and greek word for "yolk" in reference to the anther color
- *Crocus sativus*, a relative of the plants in the show (mostly *C. tommasinianus*), produces the bright yellow stamens used in cooking and medicinal cures.
- *C. tommasinianus* is typically the earliest crocus to bloom

11. Eremurus

- late blooming
- while treated like a bulb, they are actually rhizomes planted in the fall

12. Fritillaria

- mostly native to the Mediterranean and Middle East (with the exception of *F. meleagris* – Europe)
- *F. meleagris* specific epithet refers to the checkered pattern on the flower, named after the bird turkey whose genus is *Meleagris*
- bulbs are hollow in the center so we plant them on their sides to keep them from rotting

13. Galanthus

- *G. elwesii* native to eastern Europe & Turkey
- common name most likely from 16th drop earrings
- readily naturalizes throughout Europe
- *Galanthus* flowers have long had an association with church morality, specifically chastity
- the compound galantamine is used in drug treatments for Alzheimer's Disease and many central nervous system diseases

14. *Leucojum aestivum* 'Gravetye Giant'

- cultivar named for Gravetye Manor, the home of the horticulturist who introduced this larger flowered cultivar
- common name, summer snowflake, is misleading since this plant blooms in mid-spring
- more closed single-layered flower than *Galanthus*

15. *Gladiolus*

- native to sw Europe and northern Africa
- means “little sword” in Latin referring to leaf shape

16. *Hyacinthoides*

- sw Europe and nw African native
- has escaped cultivation in a handful of states/provinces in North America
- *Hyacinthoides* named due to the flowers' similarity to hyacinth

17. *Hyacinthus*

- went through its own bulb boom in the mid-18th century selling for over \$11,000 per bulb
- 19th century Europe had strong national color preferences
- intensely fragrant
- named from the Greek myth of the Spartan prince killed by Apollo during a sporting event

18. *Ipheion* 'Rolf Fiedler'

- Uruguay native
- early flowering, fragrant
- taxonomy of this plant is shaky at best

19. *Iris* (reticulated)

- *reticulata* meaning “netted” in reference to the bulbs sheathing
- extremely early flowering and petite – a favorite among rock gardeners
- Middle Eastern native may often be hybridized with *I. histrioides*

20. *Iris* (Dutch)

- *Iris* × *hollandica* is taxonomically shaky
 - i. most likely a hybrid of *I. xiphium* and *I. tingitana* (two Iberian/African species) cultivated by the Dutch
- both cultivars in *Spring Blooms* share a name with bearded iris counterparts
- leading *Iris* in the cut flower trade

21. *Ixiolirion tataricum*

- western Asia native
- later blooming bulb
- more open flower structure than *Triteleia*

22. *Triteleia* (*Brodiaea*) 'Corrina'

- native to California (and possibly sw Oregon)
- common name Ithuriel's spear refers to a variety of religious works

23. Muscari

- while *Muscari* are found predominately in central Asia they thrive in a wide range of habitats
- many color and height variations
- often planted with other bulbs to use fall foliage as a marker

24. Narcissus

- some of the best daffodil breeders are amateurs and enthusiasts
- Narcissus comes from the Greek root “narco” meaning numb in reference to its moderate toxicity
- part of the Greek myth of Narcissus who was mean to the wood nymph Echo. She then punished him to fall in love with the first face he saw which happened to be his own reflection

25. We have a representative of all 13 Daffodil Divisions in the gardens

- i. Division 1: Trumpet Long-Cupped – one flower to a stem, corona as long or longer than perianth
- ii. Division 2: Large-Cupped – one flower to a stem, corona more than one-third but less than equal to the length of the perianth
- iii. Division 3: Small-Cupped – one flower to a stem, corona not more than one-third the length of the perianth
- iv. Division 4: Double – one or more flower to a stem, clustered corona, perianth, or both
- v. Division 5: Triandrus – typically more than one flower to a stem, head drooping, perianth segments often reflexed and silky
- vi. Division 6: Cyclamineus – one flower to a stem, perianth segments significantly reflexed, corona usually straight and narrow
- vii. Division 7: Jonquilla – typically more than one flower to a stem, usually fragrant, stem is round, foliage is rush like
- viii. Division 8: Tazetta – three to twenty flowers to a (short) stem, fragrant, very short cupped, perianth segments rounded and often somewhat crinkled
- ix. Division 9: Poeticus – typically one flower to a stem, perianth segments pure white, corona very short or disc shaped, usually with a green or yellow center and a red rim, fragrant
- x. Division 10: Hoop Petticoat – typically one flower to a stem, perianth segments insignificant compared to large corona, small flowers, *N. bulbocodium* and its hybrids
- xi. Division 11: Split-Cupped – corona split for more than half its length
- xii. Division 12: Miscellaneous – plants that don't fit the definition of any other division
- xiii. Division 13: Species – distinguished solely by botanical name, species and reputedly wild forms

26. *Oxalis adeonophylla*

- South American alpine plant
- fine gray-green foliage with pale pink/lavender flowers

27. Why the odd tulip in the bunch?

- Tulipomania and TBV
- Field production sizing and replanting
- Random mutations
- Breeding

28. Dutch Tulip Famine of 1944-45

29. Tulip Types

- i. Single Early
- ii. Double Early
- iii. Triumph – tall, mid to late season
- iv. Darwin Hybrid – single large egg-shaped flowers on tall stems
- v. Single Late
- vi. Lily-flowered – pointed and reflexed petals
- vii. Fringed
- viii. Viridiflora – green midrib on outer petals
- ix. Rembrandt – no longer in cultivation
- x. Parrot – streaked and deeply fringed petals
- xi. Double late
- xii. Kaufmanniana – derived from *T. kaufmanniana*, short and early
- xiii. Fosteriana – derived from *T. fosteriana*, early
- xiv. Greigii – derived from *T. greigii*, short large flowers
- xv. Species –
- xvi. Multiflowering

30. Tulip Types cont.

31. Tulip Types cont.

32. *Anemone coronaria* 'Lord Lieutenant'

- Lord Lieutenant is a volunteer position appointed to one person per county by HM the Queen to represent her and uphold the dignity of the Crown
- double to semi-double blue flower

33. Edible Ornamentals

- adds color, form, and texture
- cabbages, kales, greens, mustards, bok choy
- bok choy and pak choi are the same thing, just different englishizations of the Chinese word that translates literally to "white cabbage"

34. Antirrhinum

- genus meaning “snout-like”, the English common name snapdragon, and Indian (where the plant has naturalized) common name dog-flower all refer to the flower shape
- flower shape favors bumblebee pollination
- been in cultivation in Europe since the 16th century

35. Erysimum

- while native to the eastern Mediterranean wallflower has been cultivated in Europe since the 13th century
- traditionally worn in the caps of wandering minstrels to commemorate a Scottish princess who fell to her death trying to elope with a well-known troubadour of the time
- Winter™ series was introduced for longer flowering and larger blooms

36. Heuchera

- entire genus is native to North America
- sometimes gets a bad reputation for being short lived due to their clonal nature
- broad range of foliage colors, shapes, and sizes

37. Iberis

- small, tough, semi evergreen perennial
- favorite among rock gardeners

38. Lupinus

- from the Latin for “wolf”
- 270 species across temperate northern hemisphere
- popularized as an English garden plant in the early 20th century
- short-lived due to ecological history
- seeds have been used as a bean and coffee substitute and an oil used for soaps

39. Matthiola

- In 19th century Upper Saxony Germany each village was organized to produce seed of only one flower color to illuminate cross pollination
- sweet scented
- related to cabbages and kales (though you would never know it)

40. Nemesia

- species or hybrids of South African species
 - i. grassland perennial with a woody taproot to survive fire and winter frost
- snapdragon relative

41. Papaver nudicaule Champagne Bubbles Group

- thrives in cool temperatures
- long slender stems with a variety of brightly colored flowers

42. Ranunculus

- brought to Europe from Ottoman in the late 16th century by Clusius (the same gentleman that started the tulip breaking chaos mentioned earlier)
- extremely popular as a florist plant until the mid-19th century

- recently back in the limelight thanks to the Dutch nursery industry

43. Viola

- pansy from the French “pensée” meaning a thought, like a remembrance
- in cultivation since the early 19th century
- traditionally the common name, pansy, refers to *Viola × wittrockiana* while the common name viola refers to *Viola cornuta* and its hybrids

44. Spring Ephemerals

- perennial plants that grow quickly in the spring and die back to the roots after a hastened reproductive phase
- increased perennial spring ephemerals add to the depth of the exhibition and continue to impress yearly
- heavy use of US natives

45. Questions