

Canadian Bred Reticulata Iris

Report and Photos by Alan McMurtrie of Toronto

Great news: several new Reticulata Iris, bred in Toronto, are now commercially available...and more are coming.

Why is this of interest?

I have done something truly magical! I have created, and am continuing to create, an array of colours and patterns that were never imagined possible. Including green, brown, and orange, plus combinations of yellow and wine red, etc. “Whites are easy.”

It has taken 30 years for this to happen: to create something exceptional; to build up stock in Holland; to get wholesalers and retailers interested in carrying them; and now, making you aware they exist. It has been a long uphill battle, which continues today. I can tell you from experience, it's not been easy. For me this is a hobby—something that is supposed to be fun. Working with some nurserymen in Holland has turned out to be very, very challenging. But now, happily, the first cultivars are starting to be sold.

Until now Reticulata Iris have largely been blues and purples. We also have the lovely lemon yellow *Iris danfordiae*, but unfortunately it has a reputation of disappearing after about two years. Typically, bulbs from Holland give 100% bloom the first year, and are large enough the first season to help regenerate two bloom-size bulbs for each original bulb. So you get close to 200% bloom the second year. However, our growing conditions aren't quite good enough for bloom-size bulbs to regenerate after that. If you were to dig up the bulbs would find a lot of rice grain-size bulblets, which is why people say *Iris danfordiae* “shatters” (note: with hybrids these bulblets can be quite helpful).

Keep in mind the clone in Holland is a triploid. It was selected for being larger (more showy), than the others that were collected at the time it was being evaluated for commercial production. Remember also that Holland has ideal growing conditions—in particular a long growing season. Which is to say, we need varieties that are better suited to our growing conditions. This doesn't just apply to *Iris danfordiae*. I got similar results when I also planted 100 bulbs of William van Eeden's lovely 'George' (named after the Russian botanist, Dr. George Rodionenko). It too gave ~200% bloom the second year; then very little after that; eventually dying out.

Thirty years ago, in 1985 and 1986 I went plant collecting in Turkey for three weeks each year, with the express goal of finding a diploid form of *Iris danfordiae* for use in hybridizing. I was also looking for any other Reticulata Iris that would be more genetically diverse than existing available clones. Back around 1955, E.B. Anderson made a cross between *I. histrioides* and *I. winogradowii* that resulted in the lovely

'Katharine Hodgkin'. In the early 80s I wondered what sort of hybrids I might be able to create if I had a fertile *Iris danfordiae*.

As rock garden enthusiasts, we love pure species, but sometimes they are very difficult to grow in our gardens. This is where a little hybridizing between species can help to make plants that are more robust for our gardens. A few people are not happy. They want only plants that are found in nature. Everything else is an abomination. It may be that those people thrive on the challenge of growing things that are difficult!

I love species, but at the same time, if I can create something amazing, that's easy to grow, then why not? We should be encouraging other people to enjoy alpines. If they give it a go, and many of their plants die, they're simply going to give up. In a sense all I'm doing is giving Mother Nature a helping hand. If *Iris danfordiae* and *I. sophonensis* were to come together in the same valley in Turkey, then many of my hybrids would be the result. (It is also fascinating to wonder how the various species came into existence in the first place.)

Last year, two of my hybrids were available in select locations in British Columbia as a trial: 'Spot On' and 'Eye Catcher'. I am glad to report sales went well, and as a result this year four more will be available: 'White Caucasus', 'Sea Breeze', 'Splish Splash' and 'Sunshine'.



'Spot On'



'Eye Catcher'



'White Caucasus'



'Sea Breeze'



'Splish Splash'



'Sunshine'

Note: although 'White Caucasus' and 'Eye Catcher' might both be considered "whites," 'White Caucasus' is a late blooming pure white, which nicely compliments the early blooming 'Eye Catcher' (white with blue accents: blue style ribs and fall dotting).

This year Veseys is the only retailer carrying 'Scent-sational'. It should be more widely available next year, along with 'Mars Landing' and 'North Star'.

There's a good chance all of these will be on display at



'Scent-sational'



'Mars Landing'



'North Star'

Butchart Gardens next Spring. I've been told the Retics bloom there at the end of February, into the beginning of March.

One unique feature of 'Eye Catcher' is that it tends to give extra flower parts. You might think that would be a negative, but I think you would agree that in fact it adds an interesting twist: 'Eye Catcher' with Multiple Flower Parts.

Earlier this year when I was in the field in Holland, I wondered if some day a sport of one of my hybrids would be found. Little did I know that I would actually find one during my visit. Here is an 'Eye Catcher' sport I found with light yellow falls:

This flower with deeper yellow shows how a sport can start. In this case about one-quarter to one-third of the standard is also yellow.

I moved the bulb so we can see what happens next year. Conceivably a bulblet from that corner of the bulb may eventually yield a flower with yellow falls and standards, but with white style arms.

A previous Dutch grower of my 'Eye Catcher' had allowed 'Amazing' (00-KN-1) to be mixed in. In 2015 I spent about two days overall during the week I was there, going through the 150 m of 'Eye Catcher' and pulling out the 5-10% "contamination" and replanting it elsewhere. This year there was less than 1% and I was similarly looking over the bed (now 280 m) and taking out 'Amazing' and replanting them



'Eye Catcher' with Multiple Flower Parts



Yellow Eye Catcher



Eye Catcher in Straw



Eye Catcher with Yellow Fall

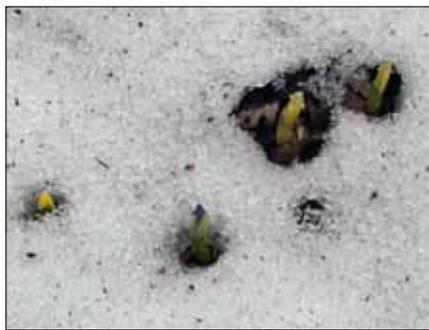


'Amazing' (00-KN-1)

with the others that had been rescued the previous year. It was because of carefully looking over the bed that I discovered the sports.

'Eye Catcher' is beautiful. What will people think of the sports? Are they something that should be tossed away? Will that characteristic show up in hybrids—yellow on the fall and not in the style arms or standards? Time will tell...

The thing I particularly like about Reticulata Irises is they are one of the first plants to bloom each year. Here in Toronto, they bloom right as the snow is disappearing—perfect for helping get rid of the Winter blahs. Some years they seem to come up right through the snow. Individual flowers last three to seven days (sometimes longer), depending on the temperature. Overall, the bloom season is three weeks in length, but can be longer if mild conditions allow for an early start to Spring. Occasionally we get a snowfall while they are in bloom, and they stand up fairly well to this; picking themselves up so-to-speak as the snow melts (I don't have photos of them fully recovered because at that point I'm more interested in what's new).



Retics coming up through Winter snow

Fresh snow on blooming flowers

I have been paying a lab in Holland to covert some of my hybrids from diploids to tetraploids (going from two to four sets of chromosomes). One of the benefits is the flowers should be 20-30% larger, and the petals should correspondingly be thicker and stand up even better to the weather. Does this mean the flowers will similarly last a little longer? That's something I'm looking forward to studying once I have some in my garden. In Holland I have seen that tetraploid 'Orange Glow' flowers are indeed 25% larger.



'Orange Glow'
(left: diploid; right: tetraploid)

The reason for wanting larger flowers is diploid *Iris danfordiae* flowers are small, as are flowers of an unnamed purple species I collected near Çat, Turkey (i.e., the Çat species) and am using in my breeding (it's responsible for orange). For large-scale commercial production I keep being told the market wants large flowers. For hybrids that are small, a 20-30% boost will mean they'll be an acceptable size. As alpine enthusiasts we don't mind small flowers, but of course I want my hybrids to be enjoyed by as many people as possible.

A second, and extremely interesting reason is, with tetraploids you can intercross the various groups, and importantly maintain fertility. I am looking forward to seeing where this will take me.

A unique characteristic of Reticulata Iris is they have square leaves. After flowering these leaves elongate to 18-24 inches (45-60 cm). A new bulb is forming at the base of each leaf, so it is important not to damage the leaves. A bit of low nitrogen fertilizer can be helpful after blooming to aid the bulb generation.

I have been working closely with the firm Jacques Amand in England to show off my hybrids. At this year's Royal Horticultural Society show in London on February 16-17 about half the display was of my hybrids.

Over the past two years we have been able to put a number in front of The Joint Rock Garden Plant Committee and received several awards. In early March Jan Ligthart had a nice display of my hybrids, along with his Tulips, at the Lentetuin ("Spring Garden" in Dutch) flower show in Breezand, Holland (an hour north of Amsterdam by train).

Plans are under way for next year to additionally feature my hybrids in Jacques Amand's display at the Philadelphia Flower Show.

Ideally we want to plant our bulbs and have them bloom year after year. The good news is my hybrids will form clumps. They aren't perfect, but they were selected under the somewhat harsh Toronto conditions, with its modest 10-week growing period. I do recommend planting a variety in two locations, that way if something happens to one clump, you've still got the second one. Also one can be in a sunny location, and the second can be in a shaded/cooler location where it will bloom slightly later.

Jan Ligthart's display at the Lentetuin flower show—His Tulips with my Reticulata Iris in front



Jacques Amand Stand at RHS show



It's hard to give gardening advice since everyone's situation is different. In England where there's lots of moisture I would emphasize raised beds, which can be as simple as dumping a wheelbarrow of soil on top of a garden to make a raised area. A key would be not to plant by a tree whose roots will dry out the soil in late spring. The bulbs need as long a growing period as possible so they can get up to bloom-size.

I'll point out *Iris sopherensis* has died out in four different spots in my garden. Each time I was fortunate to move a bit to a new location prior to it dying out in the previous location. Currently it's doing quite well at a friend's farm, where I have been given some space, but have to dig up the bulbs and store them in my garage over summer. So another solution, although it requires a bit of work, is to dig up the bulbs, just as the leaves are starting to turn brown (slightly earlier if you discover you are having problems with disease). The bulbs can be stored in mesh bags, and then replanted in the fall. Key of course is to ensure the bulbs are all properly dried before being stored. For Toronto that's typically not an issue because of how hot it is at that time of the year.



Retics being dug and stored in netted bags

I think it is important to give the bulbs a bit of space initially, rather than planting them close together for an instant clump effect. You might even try planting a couple of individual bulbs off in different spots to see how they do. So, about 3 inches deep (7 cm), and ideally about a similar distance apart.

To get them to bloom every year it's a matter of giving them conditions where the bulbs can properly regenerate. Often in our gardens other "friendly" plants will tend to crowd out the things we really want. For example Cornflowers, Daisies, Violets, Forget-Me-Nots, strawberries, etc. It's a matter of keeping them under control and not letting them smother the good things.

The Dutch tell me "Alan, you've got too many." In some ways they are right. Once-upon-a-time I had a list of my top 10. Now the truth is, there are too many to count. Have a look at my Popped Photos webpage and see what you think (www.reticulatas.com/HTML%20Pages/Popped%20Photos.html).

Keep in mind Dutch large-scale growers are looking for ease of production. They would rather grow two hectares of one variety rather than two hectares of four different varieties and have to stop and clean their machinery in between each variety. Worse yet (from their point-of-view), would be two hectares of ten varieties. To me, "Variety is the spice of life."

There's a lot more that can be said. The key point for the moment is to let you know my hybrids are available, and you should check fall catalogs at retailers like www.botanus.com, www.flowerbulbsrus.com, www.phoenixperennials.com and



'Katharine Hodgkin' in middle 4 rows Versus Small Stocks or Lots of Very Small Test Quantities

www.veseys.com. Last year GardenWorks in BC was one of the garden centres trialing sales of my hybrids, so I expect they will carry some again this year. 'Spot On' and 'Eye Catcher' are being offered to nurseries across Canada. It's a matter of getting the nurseries to see there is demand, and at the same time, getting people to realize something new and exciting is available. Ideally retailers need to "shout out" that they have something truly new. Otherwise most customers aren't going to know.

A future article will provide more information about why I have been able to create these hybrids.

I will be speaking at the 2017 British Columbia Iris Society's Annual General Meeting on March 13, 2017 in Saanich, BC, giving a special 2-hour talk, including wild forms. I will also be speaking to the Alpine Gardeners of Central Vancouver Island on May 8 at Qualicum Beach and to the Alpine Garden Society of British Columbia on May 10 at the Van Dusen Botanical Garden in Vancouver.



Alan McMurtrie is a retired Electrical Engineer. He has been an Iris "nut" for close to 40 years. In 1985 and 1986 he went plant collecting in Turkey with a primary goal of finding diploid Iris danfordiae. As a result of his hybridizing work, he has opened up a whole new world of colours and patterns for Reticulata Iris. "So far we are only seeing the tip of the iceberg."

See the new world at his website, www.reticulatas.com. Also, for further information and photos, check out:

"Eyeing up new iris" by Phil Clayton, in RHS' The Garden, February 2016, pp. 50-52.

"Breeding new Reticulata Irises" by Alan McMurtrie, in RHS' The Plantsman, March 2016, pp. 20-27.