

Reticulata Hybrids

By Alan McMurtrie

My first hybrids involving diploid Iris *danfordiae* bloomed this spring! Sixteen from three crosses with *histrioides* ssp. *sophensis* as pod parent opened. They were all from 1989 crosses. They didn't germinate until 1991, so 1994 is their fourth year of growth. They aren't nearly as striking as Katherine Hodgkin, but they are nice. Interestingly, most only contain a very small amount of yellow. The shade of blue varies between them from light greyed blue to medium blue. One telltale mark of their *danfordiae* heritage is faint wide greenish-yellow ribs on the back of their style arms; most, but not all of the *danfordiae* hybrids had this. Standards range in width from 0.3 mm to 3.0 mm; all being 2.0 to 2.5 cm in length. Typical I. *reticulata* standard width is 7 to 10 mm. Each of the three crosses were fairly consistent in their standard's width: in one case all 7 plants had approx 0.3 mm widths. In one plant, the style arm lobe area was quite wide, as typical of *danfordiae*. Fall blade width varied from 10 mm to 14 mm.

One plant had a reasonable amount of yellow on its fall blade. The effect was a greenish, dark bluish, grey: 89-AC-4. I had of course hoped for more striking effects -- however, this is a start.

I was QUITE surprised to find that good seeds were set on the *histrioides* ssp. *sophensis* x *danfordiae* hybrids!!! (11 of 16 worked, with *h x d* as the pod parent, giving 131 seeds) I had intercrossed the clones just for sake of argument. I didn't think the crosses would work, but I had to try, just to be sure (and I'm certainly glad I did). One cross with *histrioides* ssp. *sophensis* x *danfordiae* pollen worked (20 seeds). I wish I had done more. I only tried 3, since I was very, very, very doubtful they would work (the other two didn't work). These second generation seeds should yield much more variable, and thus much more interesting, hybrids.

The hybrids all had a reasonable number of bulblets, which is not surprising, since both parents are well know for producing a fair number of bulblets. The main bulbs generally "split" into two, with at least one being bloom sized.

Brian Mathew requested a few bulblets for chromosome analysis. It will be very interesting to hear what he learns.

I couldn't believe my eyes this year when a white Armenian Caucasus *reticulata* bloomed. It was nearly pure white. A very slight difference could be detected in the whiteness between the normally coloured tissue and the normally white areas. This could only be detected with close inspection. The falls have a bright yellow-orange ridge. I used its pollen in as many crosses as possible. It was a late bloomer so there wasn't a lot still open and not already hybridized. Of course the progeny from these crosses will very likely be coloured. It will be possible that some Alba forms will show up in its 2nd generation crosses (10 or more years from now!). The plant itself has two leaves (meaning two bulbs will be produced). Clearly it's not a great increaser, but I will keep my eye on it and likely move one of the bulbs to, what should be, a better position in the garden.

My Reticulata hybrids 87-BN-1 ('Gordon' x Armenian Caucasus) and 87-BB-1 (Armenian Caucasus x {'J.S. Dijt' & 'Purple Gem'}) have done quite well. Both are good increasers, and have showy flowers. They had 11 and 15 blooms respectively this, their third year of bloom. Most others from 1987 crosses only had ~4 on average. Hopefully I'll have about triple those numbers next year.

One very, very beautiful hybrid was from 'Purple Gem' x *bakeriana*. It looked like a beautiful pastel rosy purple *bakeriana*: picture *bakeriana*'s blues changed to similar shades of rosy purple. Sadly when I went to replant it last fall, I found the complete virgin clump of bulbs wiped out! What a shock! Only the outer reticulated coats were left. There had been quite a few bulbs. It's too bad that I didn't separate them after the leaves died down. That way the bulbs wouldn't have still been all linked together as well as touching each other; possibly some would have survived. I never would have thought that something like this could happen. The whole thing wouldn't have bothered me as much as it did if at least a single small bulb survived; but no, total wipe out. I had viewed this hybrid as my most beautiful, and I expected it to do reasonably well (based on the number of leaves that had come up), though not exceptionally well. I was looking forward to using it a fair bit in my hybridizing. Of all the hybrids, why was this one wiped out?

Four siblings exist, however they're not nearly as lovely. I've repeated the cross, but it's unlikely that I'll ever get a similar clone.

Bakeriana is a good parent when used in combination with 'Pauline', 'Purple Gem', and 'Gordon' (a back cross). Using it with 'Cantab' is a waste of time, since only poor 'Springtime'-like hybrids are produced. Unfortunately I repeated the cross a number of times prior to learning this (15 in total, though only 5 produced seeds).

A few other hybrids which seemed like "reasonable-doers" were also lost. It's always sad to loose nice clones, however, the bottom line is, if it doesn't do well, get rid of it. The only way to get superior clones is to use the best parents. The

only qualifier to this is the desire to mix up the genes as much as possible to get new colours, etc. It may require bringing in clones with poorer characteristics, but with a new genetic lineage, to do this.

I have a number of other good hybrids coming along. One interesting note were two or three tri-tone hybrids: falls, styles, and standards all slightly differently coloured. It seems that style arm colour and standard colour are very tightly coupled, but the coupling can be broken. It will be very interesting to see what shows up in 2nd generation hybrids from these tri-tone parents.

The next step with my hybrids is to build up stock of the best clones. As shown below, it takes between 5 and 8 years build up a reasonable number of bulbs (i.e. more than 100). If a doubling were to occur every year, it would take 18 years to reach >100,000 bulbs; which is a small number by Dutch bulb grower standards. This shortens to 11 years, if a tripling occurs.

	<u>Years</u>							
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>
If doubling:	1	2	4	8	16	32	64	128
My best hybrids:	1	4-5	11-15	30-45*	100-150*			

* indicates a "guestimate"

Figure 1 Number of Flowers

This year 354 out of 609 Retic crosses were successful, yielding 6000 seeds. Most of the crosses involved at least one of my hybrids. This means the progeny will yield a wider range of variation than the parents did.

I'm finding that the best conditions overall for Reticulatas is sandy loam soil in situations where it doesn't dry out too quickly as hotter summer weather starts.

There are a number of fascinating topics that could be covered in future Year Book articles. If you would like to read more, write to the Year Book editor expressing your interest in Reticulatas.