



Courtesy of Google maps we can see that Australia and the USA are about the same size. Canberra, where I live, is about as far south as Bakersfield in California is north (between Los Angeles and San Francisco); and similar to Nashville in the east.



If we turn Australia upside down and match Bakersfield to Canberra you get a better sense of Australia's climate. There is a mountain range down Australia's east coast (now on the left hand side) which helps explain why Australia has more rainfall on the eastern side than the western side.



I've used a 2,000km line to compare Europe and Australia.

Tangier in Morocco North Africa has a similar latitude to Canberra.

Morocco Portugal and Spain are the center of the evolution of daffodils, and Canberra almost has a Mediterranean climate, so it is not too surprising that Canberra is well suited to growing a great range of narcissus; and it is not surprising daffodils will naturalize in the Canberra region. Canberra is not coastal so some daffodils do better here with some protection from frost.

Whereas the 2000km across Europe takes us to a daffodil heaven in Ireland, the bulk of Australia's landmass heads towards the equator.

Given this geography it is not surprising that the English speaking breeding tradition draws on types that are from the mountains of southern Europe and it is not surprising that the classification system for hybrids is biased towards them.



Zooming in on the south east corner we can see that a lot of South east Australia is rugged country that is still covered in forest.





The yellow asterisk marks where I grew up: - at the edge of a forest that extends 50 miles to the coast both east and south and much further than that into the mountains to the west.



This photo is from the 1980's. This property was originally selected by my great grandmother in the 1880's, about 40 years after leases were first taken on the area.



In the 1980's the buildings were demolished and all but the house blocks were planted in Monterey pine, Pinus radiata, from California. Unfortunately, unlike the native bush, it is not fire resistant. Much of it has been burnt and destroyed once, some of it twice.



These houses were just 2 km away from an ancient path called the Bundian Way that goes from the coast to the mountains.

Australia has been peopled for about 60,000 years which is much longer than the Americas and most of Europe. What happened to these people is a grim, mostly untold, mostly unrecorded, story. I will be talking about places where the colonists no longer live. It is right to note that this was preceded by a much more severe depopulation.



Van Sion still persists.



Orange Phoenix



I spread these bulbs to other family properties in the 1970s.



This is Orange Phoenix and also Yellow Phoenix.



This is a house of a similar vintage. The photo is probably from the mid 1970s.



This is some of the daffodils there. I have not been able to re-locate this site so it may no longer exist.



Yet another site from the same period. This is where my father grew up. This site is now under pines and completely destroyed but many of the daffodils from here persist elsewhere.

The daffodils here came from a site a couple of kilometers away.



My father's sister told me she collected daffodils from this site when she was young (about 1920). This property was a small remote block that is now bush and plantation. It is hard to see how it could ever have been economic. Perhaps it never grew much except daffodils. Land titles suggest this planting probably dates to about 1880.

The photo is from the mid 1970s.



Here are the daffodils in 2017. The site has been disturbed by an encroaching plantation. Van Sion is in the background. I assume the daffodil in the foreground is close to the species Narcissus pseudonarcissus. I would be interested to hear other suggestions.



Here it is again in late September 2023. On this visit it became clear to me that the daffodils are naturalizing. It is hard to tell the extent because there are a lot of small non-flowering bulbs

So the site is interesting not only because it is a sample of 19th century daffodils. It is also interesting because it is a century and a half experiment in naturalization.

An authority on weeds in Australia, Tim Lowe, has observed that introduced plants come to occupy the niches to which they are suited over the long term. Here this would take a very very long time so I don't think we need to be concerned about these daffodils as weeds.



This naturalizing experiment is a particularly interesting one. The contributing plants are both singles and doubles and the Phoenix doubles are triploids and may have some pollen and seed fertility. This white daffodil may also be from this site. My guess is that it might be 'Amabilis Argentius'.



The doubles here are especially interesting because some are single or very nearly. I think the white yellow is a semi-double Yellow Phoenix. One of the Van Sion from this clump has set seed and another looks like it might be fully single. That would make it Narcissus telamonius. They might be seedlings but I doubt it.



There is no telling what will become of these daffodils or the country around them. But it seems likely that there are many such sites scattered across southern Australia and Tasmania, and that somewhere daffodils will survive the chances of time.



Near Canberra there is a similar site in the Brindabella Ranges, called Sherwood.



Sherwood was occupied from 1863 to 1922. It is said that an acorn from Sherwood Forest in England was planted here as a reminder of home.



There is evidence that daffodils have been self seeding here for a long time. All the daffodils appear to be diploid and none have orange in their coronas. And so this is a different natural experiment to the one 200 km further south.



Van Sion is here, and paperwhite and Straws (Minor Monarch). There is at least one further yellow double and there are singles that are quite different to the ones from the previous site.



I think these are both probably Van Sion.



I think it is clear these are not Van Sion and I would guess they are not the same as each other. I don't think top left is dwarf and therefore it is not Rip Van Winkle. Again, if anyone has ideas on the identity of these flowers I hope they will share them.



Singles growing in the same clump as doubles is hard to interpret because there has been disturbance at the site. They might be seedlings, sports, or just coincidence. I wondered if there might be a Van Sion that had sported back to a single but measurements and its occurrence throughout the site suggests this is not the case.



My guess is that this is Narcissus bicolor or nearly.



I have tried to identify the single yellow daffodils using Pugsley's "A Monograph of Narcissus" 1933 and Barr & Son's "Catalogue" autumn 1886. My guess is that they are not N. pseudonarcissus because N. pseudonarcissus is rarely expanded or distinctly lobed. It is like N. pseudonarcissus var. pisanus, double forms of which are known (Pugsley p.59). This might help explain some of the doubles and mixed clumps at the site.

Possibly the one on the left is "Hume's Giant" (Barr & Son p.12).

These two clumps are clearly distinct and I wonder if the one on the right is a seedling from the one on the left with the strange double as pollen parent.



Bickley Valley is 3000 km west of Canberra in the hills just east of Perth. This property belonged to Marie Parton who was a daffodil breeder with an extensive collection of daffodils old and new, including Princeps, Gayi and the original King Alfred.

In the journal "Australian Daffodils 1997-98 Marie contributed an article on the history of daffodils in Western Australia. She writes: No-one knows when the first daffodils were brought into W.A., but since the first colonists came to the Swan River in 1829 with agriculture as their prime means of survival, chances are that along with grain seed, vegetables and fruit stock, they bought a few flower seeds and bulbs. In 1839 a group of pioneers moved from Perth to Flinder's Bay on the Blackwood River, where the town of Augusta now stands, and exploration around the remains of the original houses has revealed a few clumps of tazettas still growing. Were they growing in the first days of the new "settlement? Who knows?

HISTORY TELLING https://trove.nla.gov.au/					
		TROV	E	ABOUT HELP NEWS PARTNERS	S
Explore	Categories	Community	Research	First Australians	
 Historians tell histories from their own knowledge base. Historians tell us about themselves. Trove vastly increases our knowledge base. Marie Parton's inference was probably right: - "that along with grain seed, vegetables and fruit stock, they bought a few flower seeds and bulbs". 					

So the question is: - what is the early history of daffodils in Australia?

The National Library of Australia and partners are digitizing all of Australia's newspapers and making them available online for anybody anywhere in the world to research.

- Historians tell histories from their own knowledge base and therefore tell us something about themselves.
- Trove vastly increases our knowledge base.
- Marie Parton's inference was probably right: "that along with grain seed, vegetables and fruit stock, they bought a few flower seeds and bulbs".

SURVEY OF 19TH CENTURY AUSTRALIAN NEWSPAPERS

- 1836 1st daffodil advertisement The Hobart Town Courier Friday 15th July 1836: -Daffodil, Narcissus, Pheasant's Eye, Polyanthus
- 2. 1870 The Sydney Morning Herald Thursday 8th September, in a report on the Horticultural Society of New South Wales, mentions Mr. Magill showing 8 varieties of new daffodils.
- **3. 1874** An article titled "The Narcissus" in the Weekly Times Sat 19th September 1874 observes: "Propagation is effected by seed for raising new varieties, and offsets for perpetuating old ones." Nevertheless I saw no mention of local seedlings in the 19th century.
- 4. An article in 1882 notes that daffodils are coming back into fashion again.
- 5. The colonists saw themselves as British and kept close contact throughout the century.

Conclusion: - Australian was closely connected to British horticulture in the 19th century and continuously imported from there and elsewhere.

1/ From Trove we learn that the first (so far) record of daffodils advertised for sale is in Hobart Friday 15th July 1836. It is sometimes said that colonists bring plants with them to remind them of the old country but this huge catalog suggests the colonists were farmers and gardeners interested in plants of all kinds, including the local plants. The date is important because it contradicts some histories of daffodils and better accounts for old plantings and their diversity.

2/ It is clear from the newspapers that throughout the 19th century the colonists were continually importing bulbs from Britain and elsewhere.

3/ There are numerous articles on the types of daffodil and their cultivation. There undoubtedly were seedling daffodils raised here but I found no mention of any, not in show reports or show classes.

4/ I found it amusing to read that daffodils had come back into fashion during the 19th century. It is easy to think of 19th century as single blob of time and it takes effort to think of it as a long period of time in which a lot can happen. In terms of telling history it is easy to suppose that a writer in 1890 will struggle to be an authority on gardening 50 years earlier in 1840.

5/ It is clear colonists thought of themselves as British and they featured British gardening reports in their newspapers. They were probably as well informed about British daffodils as the readers of British newspapers were. When Peter Barr "The daffodil King" visits and

lectures in 1900 his audience is a well informed British one with up to date collections of daffodils.
AUSTRALIAN DAFFODILS 20TH CENTURY

The contribution of Australian breeders begins in the 20th century based on British 19th century developments

- Pink trumpets (Pink o' Dawn)
- Yellow orange trumpets (Trumpet Call)
- White orange trumpets (Lutana)
- Red pink (Mabel Taylor)
- Binkie 2Y-W

A national focus is not the best way to look at Australian daffodils because breeders here have always looked abroad, be it to Britain Ireland the USA Holland New Zealand the Mediterranean or China. Conversely, material from Australia has influenced breeders elsewhere.

Of particular note are pink trumpets starting from Radcliff's Pink o' Dawn; yellow orange trumpets from Fairbairn's Trumpet Call; white orange trumpets in which Radcliff's near-trumpet Lutana seems most influential, and the red pink coloring that is visibly present in Mabel Taylor. It puzzles me that red-pink was developed in the USA rather than here in Australia. A few other notables are Fairbairn's white trumpet Lady Slim, which gave Lady Diana, David Jackson's 2Y-Y Impeccable and Jamie Radcliff's 2Y-R Redlands Too.

Highlighting the international character of the contribution from Australia is Binkie, probably the first reverse bicolor, which arose from Guy Wilson seed from Ireland that was sent to Tasmania.



My comments on 21st century daffodils and the future will mainly be about my own daffodils and where I hope they are headed.

Burbidge's lecture to the Daffodil Conference in London in 1896 was published in Australian newspapers. In it he remarks that "It is most conducive to success if pollen is used from flowers grown at some distance from the seed-bearing parents." He means that we should out-breed daffodils, and I think it is fair to say that although there have been enormous improvements in the 20th century there has not been a lot of outbreeding. I suspect that needs to change.

This is possibly my best daffodil. It is an early pink, has broad overlapping perianth of great substance, has a good stem and is vigorous and hardy. It also has a beautiful pedigree, as I boasted on Daffnet when it first flowered in 2015.

10 401	04_04 04_04 1W-YYP	TURAKINA SILCOCK 1Y-YYP	
10_124 10_124 2W-WP~ 15_04	05_21 05_21 2W-YYP	FLORENCE JOY 01_156 01 156	MISTY GLEN DECOY
15 04 2W-WWP->1 10_112 10 112	FLORENCE JOY		
1W-WWP/0->	02_09 02_09 2W-Y	FORTE REDLANDS TOO	

I have put a number of pedigrees into this presentation. They are included more for later reference. For me they are a history lesson about daffodils and breeders but I don't plan to say much about it.

The pedigree of 15_04 looks like this. The international character of the flower is obvious: -Turakina and Florence Joy are from New Zealand, Forte and Redlands Too from Tasmania, Misty Glen from Britain and Decoy from the United States.

The earliness comes from a number of these flowers. The form and substance comes from Radcliff's 2Y-R Redlands Too. I think the lesson is: - if you want an exceptional quality then use a flower that has it.



I have crossed 15_04 with just about everything, including a tetraploid tazetta, but my main goal is well colored 1Y-P and 1W-P. I am hopeful the cross with this classical Fred Silcock flower will give good results.



My current favorite reverse bicolor is 03_141 Yaziverse. It has weak points but it is hardy floriferous and long lasting.

	TRISTRAM?	
03_141 03_141 1LLW-WWL~ 23_08E 23_08E	IMPECCABLE?	
6Y-W 06_14D 06_14D 6W-W	99_02D 99_02D FeY-Y	

I hope to use Yaziverse to obtain very hardy reverse bicolors. This triploid cyclamineus hybrid, which flowered for the first time last season, might be a step towards a good 6Y-W.

The cyclamineus contribution here is interesting. The Gayi x cyclamineus seedlings are elegant and hardy but being diploids lack the substance to be show flowers.

I call the Swagger x cyclamineus 'Peberdy' after its breeder Colin Pebery. If ages to white and has won awards from time to time. The aim of the pollen parent breeding is hardy miniature 6W-Ws.



This is Colin Peberdy and his Swagger x cyclamineus seedling.



So of course, I have crossed Yaziverse with some of Fred Silcock's other flowers, so here's hoping.



23_07 is a new seedling from Yaziverse. Hopefully it will turn out well.

	02 1/1	TRISTRAM?
	03 141	
	1LLW-WWL~	IMPECCABLE?
10_93		
20-WWO->		CELTIC GOLD
	04_72	
	2L-L	REFERENCE POINT
<u>23_</u> 07 <u>23_07</u>		
2Y-Y rev		GOLDFINGER
	10_231 10_231	
15_20	1Y-Y	
15 20 1LLW-WLL		
	GWEN BEST	

It's pedigree draws on list of great flowers. The classic form is most like Fred Silcock's Gwen Best.



Right now my favorite yellow is a seedling from David Jackson's Habit. This is one of the first of the big daffodils to flower here and is wonderfully smooth and refined.



It's pedigree shows it is an attempt, maybe, to get an orange trumpet but mainly to get the quality of Redlands Too into yellow trumpets.



This yellow trumpet is one of Fred Silcock's. It showed unbelievable vigor in the seedling beds. I'm not sure how much better yellow trumpets can get. I expect the future of yellow trumpets will be backwards, that is, breeders will inject species back into them and select them for their own local conditions.



08_10 has way too many faults but it is very early, has good substance, and appears to be the most indestructible white I have.



I am hoping this seedling from 08_10 will have fewer faults but I am not optimistic.

The pedigree of 08_10 doesn't explain much because I have not managed to track down Superwhite. I think 98/51 is Loophole x Merry Princess.



My main hope for whites is 09_215. It's pedigree is better than its appearance, but its appearance is not too bad given that it is Saint Keverne 2Y-Y x Lady Diana 2W-W. The aim was to outbreed the white with a yellow that has a reputation for being rot resistant. Hopefully when crossed with the classic Silcock white it will produce classy seedlings. I should also have crossed it with a reverse bicolor but I can't see that I have.



At the end of last season I saw this flower and crossed it with N. triandrus because I liked the cup. But then it straightened up and changed color. I wish I'd made a more respectful cross.

15 232			
23_24	05_182 05_182 2W-P	MERRIDEE 00_17 00_17 2W-WWK	MISTY GLEN DECOY
3Y-WWY 55 11.1	02_289 02_289 2W-WWY	QUASAR 97_36 97_36 3L-WWL	LEMONADE
	05_182 05_182 2W-P	MERRIDEE	MISTY GLEN DECOY
		<u>UU 17</u> 2VV-WVVK]

It has an interesting pedigree, though some of it is an educated guess. It is embarrassingly inbred but that can happen when you get disoriented in a cold windy paddock. The intention was 3Y-P, which shows that this color code is hard to achieve. The seed parent cross was inspired by the Grant Mitsch Limpkin/Wedding Band series.



My favorite and best 2O-O is 16_86. Unfortunately I could only find a picture of its first flower. It is tall vigorous floriforous and sunproof. Its main fault is that it could do with a stronger straighter stem.



Red Hot is a New Zealand flower as is Red Haze at the bottom of the pedigree. The MP WM flower is a Marie Parton seedling and 02_191 is the flower I named "Marie Parton" because of her interest in all-orange flowers.



I've crossed 16_86 with some of Fred Silcock's seedlings to get trumpets and better color and also crossed it with the double Iterate with a long term view of producing an all orange double even though the stem is not suitable.



My best all pink daffodil is Cockatoo Dreaming – Fragrant Rose x Decoy. It has faults but two great strengths – It has a pink perianth and it is also a hardy garden flower. Perhaps its best breeding future is though 15_04 that I showed earlier but I will be very surprised if the first generation from that kind of cross will have pink perianths.



Ian Dyson put some effort into all pink daffodils. These are now being grown on at Hancock's Daffodils.



My favorite Y-O is 09_70. It is Impeccable x (Fly Half x Redlands Too). Unfortunately it is neither indestructible nor a miraculous parent.



You would hope that 09_70, and Yazrim would produce something wonderful. That hasn't happened yet but I expect to get a good rimmed trumpet soon, although the pedigree may turn out to be odd.



The first development of a white with an orange rim for me was a Clearwater seedling 08_178



Fred Silcock didn't specialize in these kinds of rimmed trumpets so the flowers I am working with are my own seedlings.



The best trumpets of most kinds that I know of have been bred by Fred Silcock.



I think Fred Silcock's white pink and yellow pink trumpets are the best I know of. I've already shown some of his white pinks. These are a couple of his yellow pinks.



11_46 is Hawley Rose x Silcock 1W-P. It is not the most beautiful color but it is close to red.



23_09 came along after years of trying to produce early 3W-O and 3Y-O. This picture was taken on the 21st of August, almost a month before the Canberra show.

	00PS		
11_44 <u>11_44</u> 3L-YO		97_09	
	05_02 05_02	97_09 2W-Y 98_35	VODA, BANDIT, FLAS
23_09 23_09		98 35 3W-O	GOTCHA,YUM,VIRID,
37-0	SYMPTOM		
09_43 09_43 3Y-O		97_39	TURAKINA
	02_46 02_46 2W-O	97 39 2W-	VODA, BANDIT, FLAS

The pedigree is a bit doubtful but it explains the flower pretty well. The injection of trumpets into division 3 is an important element.



The key flower for the earliness of the 3Y-O is 05_02. It is one of the first big daffodils to flower here. It is only useful as a pollen parent and has never set seed. My guess is that these types of daffodils need trumpets to keep the stigma warm at this time of year. It is always buckled but it can produce improved early division 3 seedlings.



23_09 has been crossed with an early Fly Half, Redlands Too, Tia seedling. Hopefully that will deepen the color and give a neat acorn cup.



I have a few flowers that are dependable show flowers that I probably should name.

02_238 is also a good parent and can give pink perianths the way Fragrant Rose can.

04_171 is a mild yellow pink that gets improved substance and smoothness from Crystal Blanc

10_444 is an attempt to get Redlands Too form and substance into division 3 white reds. An enduring fault in this type is that they burn. This one is not too bad. In the future I think it would help if 1W-O's, maybe 1Y-O's, were bred down to division 3, for a number of reasons, but not least is the fact that they must be perfectly sunproof.



My favorite double is David Jackson's Fortescue.


Iterate is my favorite double of my own breeding. It has been bred from Fortescue. It has faults. It has slightly too short a stem, which it gets from Nynja, the stem needs to be stronger for such a flower, and it would be better with more distinct color. But it has wonderful form and has good vigor. Last season was a bumper year for doubles pollen so I have been able to make crosses that aren't usually possible.



15_105 is pinkish and bred from Iterate. It is not doing well so I'm left to hope that its seedlings will be pinker and tougher.



The pedigree of 15_105 is interesting because although Florence Joy can throw pink, it is likely that most of the color comes from 01_236, which is Kung Fu, a 2Y-R, cross Decoy, a white-red pink.



15_105's sibling 16_144 doesn't show pink but it might be a better flower. It has also been given some opportunities to prove itself as a parent.



This segues neatly into the split coronas because, this year, Yazender was one of my chosen seedparents for Fortescue pollen. It is my feeling that, because division 11's already have well organized split corona segments, they may well prove to be the best parents for doubles.



Similarly Iterate pollen has been put on 11_214

			SASHAM
BENDER 90_221			
		99_28	
		2Y-YYO	
-			MEETING, FLASHING LIC
<u>5</u> /-O		11_214 11_214	
	МООМВА	117-0	MONDRAGON
01 76		03 71	
01 76		03_71 11Y-0	
200-110	REDLANDS TOO		REDLANDS TOO

These are the pedigrees of those splits. The Bender seedling was a great gift from Richard Ezell. In both cases Redlands Too has been used to improve the substance of the splits.



This is my favorite split even though it takes a while to mature to this color. I think the the three colors and mid length corona with a sharp rim are all valuable features.



I put Yazamaze into last season's show. It was agreed that it was a decorative "ladies" flower. I also showed 16_242. It is probably one of my best 11b's but it is far from perfect. Its breeding is mainly pink.



I like the Tricollet form. 12_188 is my favorite because of its substance and color contrast but it needs improvement. Obtaining flowers that have clean missing segments is a goal.



After the 2022 Canberra show Sue Thompson gave me a stem of her own seedling poet along with a few other flowers. I didn't pay much attention to the poet until a few days later when I realized it was a really nice flower. I checked the pollen and the grain size suggested it was a tetraploid. This, I think is the future of poets, because tetraploids are likely to have superior substance.



Obviously Sue's seedling is a great improvement on Actaea or my own seedling 09_13P.



I try to avoid breeding with poets because the cups are not sunproof and can be ugly when they disintegrate.



Consequently I am now trying to breed poets from division 3 flowers that I know to be sunproof. Whether they will be welcomed into division 9 is an another matter. For me the most obvious candidate is Limey Circle and its seedlings. Unfortunately they are late so earlier flowers will need to be introduced as well.



10_683 opens like this.



And ages to this.



This is its sibling.



The pollen parent 01_430 is an interesting flower in its own right. It opens with a green rim. The cross was aimed at green rims, no success there, but it has instead given sunproof rims. There is probably a relationship between these two characteristics.



There is a notable exception to the "don't breed with poets" rule. There seems to be a special relationship between N. cyclamineus and poets (Beryl for instance) and the seedlings can be hardier than either parent. It might be the case the pseudonarcissus miniatures would benefit from crosses with these hybrids. That said, I don't have selected seedlings from this plant so perhaps I am wrong.



Last season I crossed 06_50D with my favorite near miniature, 16_04D. I cross this with just about everything. I have two main interests in this area of breeding: - to cross cyclamineus with hardy species and then backcross to obtain good horticultural cyclamineus-like plants; and to use the small diploids to breed the tetraploids down in size with a view to obtaining tetraploid miniatures. I put 16_04D on Pink China, for example, and hopefully have a seed or two from it from Brooke Ager and a Silcock pink trumpet.

09_27D			
<u>99 27D</u> ->1W-W			
16_04D 16_04D 1W-W	04_14D	TRACEY	
09_28D 09_28D ~1Y-Y	04 14D 6Y-Y	CYCLAMINEUS	GAYI
	04_04D 04_04D	99 03D 6Y-Y	CYCLAMINEUS CYCLAMINEUS SWAGGER

The pedigree of 16_04D is interesting and very international. The New Zealand triploid 6W-W Tracey was meant to give a tetraploid but instead gave a disappointing diploid which in turn gave a disappointing seedling. I suspect the hardiness comes from Tracey and Gayi and the quality from Leone Low's breeding.



I don't think I need to say much about intermediates except to say that I have quite a few and that I'm trying to breed them down to miniature. In the future, I think the best and hardiest miniatures from the narcissus/pseudonarcissus section will be tetraploid.



At the moment my mainstay exhibition miniatures are apodanthi. I can't see them being beaten any time soon. This is my exhibit in transit. The flower on the right is a species tazetta, the one on the left a nice late bulbocodium seedling. The remainder are apodanthae. In Canberra miniature growers are left to stage as they see fit. I put a small wad of cotton on the bottom of the bottle for the stem to sit on, fill the bottle with water, put a piece of cling film over the top that is held with a hair tie, puncture a hole for the stem and insert the flower. Labelling has been difficult for things so small. In future I plan to have clearly numbered bottles and will place a card next to the exhibit that lists bottle number and name.



I discussed division 6 a few years ago and don't have much more to add. I still think the Graeme and Tony Davis seedling 11/16 is the finest division 6 I have seen and was pleased to see it win best 6 at this year's Canberra show. Graeme kindly game me the flower in 2020 and I have put it on just about everything. I expect to get very nice seedlings from this and say to Graeme that he is welcome to pollen from those any time he likes.



Graeme was rather more protective of the pollen from this new seedling. It is a bad division 2 and a bad division 6 but it has a pink cast in the perianth and is just waiting to be bred into a 6Y-P or better.



My own best division 6 is still 14_19D. It is tetraploid and should have an E number and not D. It can open with a pinkish cast in the trumpet. The pedigree shows why.

TRACEY		
14 190		
14_19D		
6W-W		
	FOUNDLING	
09.460		
09_46D		
~6W-O		THE LITTLE GENTLEMAN
	99_05D	
	<u>99 05D</u>	
	~6W-Y	DEAR ME?
		LI

For those who don't know it Dear Me is a small very refined pink trumpet



Seedlings from 14_19D are starting to come through. Perhaps the best so far is 22_22E. The choice of seedparent, 16_169, is understandable, but it is not likely to give really good cyclamineus form. It is disappointing that the hoped for whiteness has not come through.



12_00D, a triploid from Terminator x cyclamineus, continues to produce nice fertile seedlings that are smooth and have good substance but they are not good 6s.



Fred Silcock has bred cyclamineus hybrids but they are triploids and it remains to be seen whether they will be useful parents.

Т	HE HISTORY OF CLASSIFICATION
 19th Century (B I Magnicoron 	aker) appearance based classification at; II Mediicoronati; II Parvicoronati
 1908 appearan Long Trum Doubles , VII 	ce based classification pets , II . Short Trumpets , III . Large Cups , IV . Small Cups , V. Flat Cups , VI . . Bunch - flowered
 By 1910 breedi Div.1 Trumpe Div.5 Triandru Tazetta and ta (including species) 	ng/appearance based classification t Daffodils; Div.2 Incomparabilis; Div.3 Barrii (plus Burbidgei); Div.4 Leedsii; us hybrids; Div.6 Cyclamineus hybrids; Div.7 Cyclamineus hybrids; Div 8 azetta hybrids; Div.9 Poeticus varieties; Div.10 Double varieties; Div.11 Various ecies)
• Now	
Breeding : -	Div. 1,2,3,6,9 are Narcissus/Pseudonarcissus only (N/P for short); Div. 5 Triandrus hybrids, mostly with N/P but increasingly with jonquilla Div. 7 Jonquilla/Apodanthi/ Juncifolia hybrids, mostly with N/P Div. 8 Tazetta hybrids including hybrids with N/P Div. 10 Bulbocodium hybrids
Appearance:	- Div.4 Doubles; Div.11 Splits

19th century daffodil classification was very simple. Flowers were divided according to the relative length of the cup. This system was expanded then dropped.

By 1910 daffodil classification had changed from a purely appearance based classification to a system based on breeding and appearance that is broadly similar to our current system.

The origin of division 2 from Incomparabilis makes it clear that these have always been thought of as hybrids between poets (narcissus) and trumpets (pseudonarcissus). The removal of bulbocodium from division 1 means division one is really a division for pseudonarcissus even though it doesn't say so. So although divisions 1 to 3 look like they are appearance based, they are implicitly an appearance-based division of narcissus/pseudonarcissus hybrids. Narcissus/Pseudonarcissus is a tongue twister so I will say N/P from here on.

There are exceptions to my description of the current system, but it is a fairly good summary.

THE FUTURE OF CLASSIFICATION
For historical reasons that still persist the current system is centered on the N/P section.
Emerging Problems: -
 Historically divisions have been formed around intersectional hybrids with N/P. Other intersectional hybrids are hard to classify.
• Division 7 is muddled. The apodanthi are quite distinct from the jonquilla.
I expect N. serotinus will become a significant parent in new hybrids.
Future Solutions: -
 a version of the rejected appearance based system of 1908. a system based on the genetic sections that contribute to the hybrid. a system that notes both the genetics and the appearance.

For historical reasons that still persist the current system is centered on the N/P section. This still seems natural and I doubt there are strong calls for change. The N/P and tazettas have been the most significant horticultural plants in the past and remain so. However it is easy to imagine that a system that was developed in Turkey or Morocco might look rather different. For me the bias is more evident because I flower tazettas though the autumn and bulbocodiums through the winter.

I think the way forward is clear. We are not going to show bulbocodiums with trumpet daffodils as in option 1. We are not going to show cyclamineus and poeticus hybrids with trumpets as in option 2. The current system classifies by both appearance and genetics. I expect this will be expanded and made more systematic. Such a system would be flexible for people who like to show and more useful for gardeners.



The reason why I digressed into classification at this point is that, apart from a mention of miniatures, up till now I have been discussing hybrids within the N/P section only.

There are forms of triandrus species that are perfect just the way they are. I find the form of this flower irresistible and although I appreciate that connoisseurs in the 19th century loved the hybrids with N/P, which is why we have division 5 in the first place, I think they are so much less than they could or should be.



These are Keira bulbs species triandrus.



More Keira bulbs species triandrus



The best intersectional hybrids in Division 5 include input from jonquilla because this gives them hardiness and grace but such hybrids are highly sterile and also color limited to white and yellow. Orange might be obtainable in hybrids with tazettas but I know of no orange triandrus/tazetta hybrids and certainly no fertile ones.

The finest fully fertile intersectional hybrids between triandrus and N/P that I know of are those from Keira Bulbs.

I am not aware of any flowers of this type that have an orange or pink cup. Keira Bulbs may have some but I can't vouch for it. I think this is the central problem in triandrus breeding.


These are some of Keira Bulbs fertile hybrids. They are as close to the grace of the species as any hybrids I have seen.



I can't yet boast of any great advances in the breeding of fertile N/P triandrus hybrids. Perhaps my most interesting things are those that include bulbocodium breeding. There seems to be an affinity between these two sections.

22_11RM, for example, doesn't look like a triandrus hybrid but it does have triandrus breeding and it has ongoing fertility.

	02_01MB	ALFRISTON	
13_19MB 13_19MB	10Y-Y	BULBOX2	
	04_01RM?		
22_11RM 22 11RM 10Y-Y	02 01MB	ALFRISTON	
15_15MB 15_15MB	02 01MB 10Y-Y	BULBOx2	
<u> Ү-Ү</u>	12_01RB 12_01RB	04_978 04_978 10Y-Y	00_578 00_48B
	10Ү-Ү	09_01R 09_01R 5L-L	05_01R;04_01RM

It's pedigree looks like this. I have no idea what to make it. It's an inbred muddle that is more bulbocodium than triandrus. My hope is that this line of breeding will somehow produce good fertile triandrus hybrids that are exceptionally hardy.



I probably crossed it with 23_06RM, which appears to be highly fertile, but was too pessimistic to actually record the cross. I think its sibling 22_25RM is a better flower. I am expecting it to also have reasonable fertility.



22_07RM also has some bulbocodium ancestry through Gold Step and appears to have ongoing fertility. The pollen parent 12_12RM is probably my best sterile triandrus hybrid. It does have some fertility though. No orange has come through even though Gold Step, Pzaz and probably 04_01RM have genes for orange.



I gave a zoom talk in 2020 that looked at advances in the higher divisions in detail. 4 years is not a lot of time in daffodil generations so I don't have much to add. I am hoping to have some interesting new 7's and 8's in the coming months. Probably my best fertile N/P jonquil hybrid is 10_03MJ which I have named Virifall. It is tall, greenish and is so fertile that it needs to be deanthered for hybridizing.



Here it is again with some of the florets de-anthered.



I hope this year to see seedlings from Graeme Brumley's Timbarra Pink. I expect it to give fertile pink jonquils that flower in a range from autumn to spring.



22_26MJ is tall with good substance and texture and is extremely long lasting. I think it gets the lasting ability from viridiflorus and predict that the best division 7's in the future will have viridiflorus in their ancestry.

	07_03MJ	HILLSTAR	
14_01MJ 14_01MJ		EMERALD SEA	LIMEQUILLA
7W/Y-L 7W/Y-L 22_26MJ 7L-L 10_01MJ 10_01MJ 10_01MJ 10_01MJ 10_01MJ 10_01MJ	09_02MJ 09_02MJ 7L-Y	03_01MJ 03_01MJ 7W-Y FERNANDESII	EMERALD SEA
	03_01MJ 03_01MJ 7W-Y	LIMEQUILLA	
	01_01MJ 01_01MJ 7M-6		
	D-WY	VIRIDIFLORUS	

This is the pedigree of 22_26MJ. 10_01MJ is Viriaut, a sibling to Virifall. The grandparents are all named: - Viriverse, Theoquil, Viriquilla and Virivest. There is more Emerald Sea in this than I would like but I have done my best to outbreed.



This is the reverse cross. It flowered two months earlier in May.



I was able to look at some of Fred Silcock's viridiflorus hybrids. Many have been bred from my flowers and I was struck by how miserable they are in his climate. He does have some happier seedlings though and these are, to my eye, very strange. This one, for example, looks like it is has some viridiflorus ancestry but it is also quite fertile. I don't know what to make of it and I don't know what its potential is.



My most useful N/P tazetta hybrid is still Nomatta. Here it is inside in a pot for easy pollination. I value it because the orange doesn't burn. This is presumably from Ballymarlow 2Y-R rather that the poeticus in Matador

	MATADOR		
10_04MT 10_04MT 8Y-O	WELCH 95/1	MATADOR	AUT.SOLXBALLYMARI
18 01MT 8W-Y	99_02WT 99_02WT 8W-Y	NOT PW GRANDIFLORA BAIRNS SOL?	
<u>13 01MT</u> 8Y-O	03_151 03_151 11W-O	97_30 97_30 2W? MONDRAGON	ICE FOLLIES CHEERLEADER

I have been trying to obtain fertile hybrids from the Matador type hybrids (seedparent in this pedigree) with the Taztep hybrids (pollen parent in this pedigree). 99_02WT is Taztep. There is not much fertility in the N/P Taztep hybrids. I assume this is because the 10 tazetta chromosomes don't pair up well with the 11 paperwhite chromosomes, but 13_01MT is not too bad.

(The pedigree used to include Cloth of Gold but I think the color of 10_04MT must have come from Welch 95/1.)



This is the seedling. Examination of the pollen showed 18_01MT to be highly sterile but this year it produced a single seed. We can guess this hybrid is genetically a bit messed up but hopefully it will become a useful parent.



16_28T and 19_129T are both tetraploid tazettas from Bill Welch seed. 16_28T looks a bit like Taztep and may produce the same fertility problems in hybrids with N/P. Hopefully 19_28T is a tetraploid with 40 chromosomes and capable of producing fully fertile N/P hybrids. These kinds of seedlings are slow to mature so I don't expect to find out any time soon.



My favorite pure tazetta is 16_18T. It is solidly yellow but has the green/brown/orange color from elegans.

I'm hoping to have lots of spectacular new seedlings flower this year, as breeders always do, but I'm also bracing myself for disappointment. I hope to achieve some color breaks and hope to produce larger tazettas with elegans ancestry and appearance. We'll see.



My pedigree says 16_18T is a cross between these two but I'm doubtful.



It is hard to guess what the mistake might be but this pedigree looks more likely. If true this would make 16_18T inbred with Bairns Sol a twice grandparent, which means it needs to be outcrossed. That is easier said than done.



2023-24 has been a mild wet summer. The result is that I have 3 tazettas that started flowering naturally in January, and which are flowering right now. This is a first for me. They are all 8Y-O, all have elegans ancestry, and they are flowering out of the expected seedling number order. There are a mix of triggers for autumn tazettas. Obviously these respond to cool wet summers.



I don't have much new to say about bulbocodiums.



They are companions through the winter but my breeding efforts haven't produced startling new flowers since my last presentation.



These are some of my 2020 selections pictured July 2023.



This year I crossed a suite of Gold Step hybrids with Brooke Ager and 17_20E, a 2Y-O intermediate but, given past failures, I am not optimistic.

22_63MB, for example, has been crossed with Brooke Ager but it itself is meant to be Gold Stride crossed with a red pink. Clearly that cross failed.



22_77MB has been crossed with 17_20E but similarly, expectations are low. The pedigree of 17_20E is interesting.

10 348			
10 348 20-0 17_20E 17 20E	02_191 02_191 10-0~	RUDDYNOSEY 97_37 97_37	CREAG DUBH RED HAZE, FLASHING
2Y-O 10_343 10_343 2O-R	RORY'S GLEN	Image: TIA	
	99 17		[]

The smallness comes, perhaps, from both Tia and Trumpet Call (in the ancestry of Ruddynosey).

	ALFRISTON		
02_01MB 02_01MB 10Y-Y	BULBOX2		
<u>15_01MJ</u> <u>15_01MJ</u> <u>15_01MJ</u> <u>15_01MJ</u> <u>15_01MJ</u> <u>15_01MJ</u>	07_06MJ 07_06MJ	(HILLSXQUICKSTEP) EMERALD SEA 03_01MJ 03_01MJ 7W-Y	LIMEQUILLA EMERALD SEA
	11 03MJ 7G-G	01_01MJ 01_01MJ 01_01MJ 7W-G	WESTHOLME VIRIDIFLORUS
19_01MB ages from Y-Y	′ to W-Y		

It has been the case in the past that the best informed advice has led to a long period of failure. I don't want to be an advisor of that kind and regardless of my advice I hope people will try things that are different. In my own case, I think I will cut loose with the bulbocodiums and try the absurd. This is motivated by the fact that, for no apparent reason, their seems to be fertility in hybrids that should be highly sterile. 19_01MB, for example, has tried to set seed even though it is undoubtedly an intersectional jonquil/viridiflorus N/P hybrid with Gold Step, which is a bulbocodium N/P hybrid. It should be impossibly sterile.



I will finish this presentation with Section serotini, the species Narcissus serotinus.

In my view Narcissus serotinus is an exciting potential parent for warm climate autumn flowering daffodils. This is because it has half the chromosome number of tazettas. This solves the problem of the slow growth that comes from having too many chromosomes.

This, for me, is a completely new area of breeding but I know Harold has done some breeding in this area. I hope more people will do so.

On this note I would like to say thank you for listening to my Australian perspective on past present and future, and thank the ADS for giving me this opportunity.