

SMALL HYBRID DAFFODILS

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I DECIDED to take small hybrid daffodils as the subject of this talk because, although a great deal has been said and written about the large daffodils, whether for exhibition, garden decoration, or market—and the narcissus species have received quite a lot of attention—the smaller hybrids seem to have been rather neglected.

I must mention here, right at the beginning, that although I have used the word hybrid in the title of this talk, I am including plants which are not strictly of hybrid origin, such as sports or mutations; in fact, I shall include anything which I think worthy of mention which is not a species or, at least, is not known in the wild state.

When I came to prepare this paper I was greatly surprised to discover what a long time has passed since any attention at all has been given to this group of daffodils. I turned up a catalogue of MESSRS. BARR dated 1933 and found that, apart from a few old garden plants of unknown origin, there were only two cultivars listed which could possibly be considered as small, let alone miniature, hybrid daffodils.

Before we come to consider in detail the best of the hybrids raised during the last 30 years there are two matters I should like to dispose of. The first of these is to try and anticipate the question as to why we should raise and grow these small hybrids. Every year, when, in January, the first blooms of *Narcissus asturiensis* open, I say to myself that if I went on breeding daffodils for another 100 years I could never raise

anything nearly as beautiful. There are, however, several reasons why, even if this is true, we still go on hybridizing. I will only mention three. One is to endeavour to extend the flowering season at both ends. Another is to try and raise plants with better constitutions than some of the most beautiful species, or rather plants better adapted to our English climate. The third reason is to try and produce new forms and colours, for Nature has not thought of everything; miniature red-cupped narcissi, for example.

The other matter I want to deal with concerns the title of this talk. Some people will have wondered, I expect, why I have used the word "small" instead of "miniature". The reason is quite simple. It is because I wished to include many plants which, by the R.H.S. definition, are not miniatures.

This question of a suitable definition is a very thorny one. As most of you will know, the R.H.S. says that a miniature must not be more than 12 inches high and 2 inches across with the perianth segments flattened out. No one will quarrel with the height limit of 12 inches, I am sure. In fact, I think it too much and would reduce it to, say, 9 inches. The 2 inch limit for diameter is, however, another matter. Many sorts, species in particular, which everyone would look upon as a miniature are well over 2 inches across under normal growing conditions; *N. triandrus albus* is an example. At shows, this creates difficulties both for the exhibitor and judge; it means that a judge may be forced to give an award to an undersized specimen and disqualify a well-grown one.

Our American friends, in trying to get round this snag, have approached the matter from quite another angle: they have by-passed measurements altogether. The American Daffodil Society has appointed a committee who have drawn up a list of sorts which, by general appearance, they consider to be miniatures; to decide this, they were asked to consider, "First, would a plant look well in a rock garden; second, would it appear out of place on the show table amongst other sorts of standard size for the division?". Only plants included in this list can be shown in classes for miniatures at American shows. The list includes about seventy-five cultivars and fifty species. Had I been called upon to compile the list, there would not have been more than three or four which I would have excluded as being too large, but there are about a dozen sorts which I think might well have been included. Between one-third and one-half are outside the R.H.S. limits. There is something to be said for both the British and the American methods of determining a miniature; it is possible, I think, that in the future a compromise definition may be arrived at.

The word "small", rather than "miniature" is especially suitable for the lesser hybrid daffodils since, actually, there are very few really tiny ones comparable in size with the smallest of the species. Furthermore the purposes for which the hybrids are most suitable are rather different. For clumps in pockets in the small rock-garden, or in the sink garden, where the nearest approximation to the wild is the aim, it is the species

that are most suitable every time. But for borders, bowls, and the larger rock-garden, where something slightly less rustic is not out of place, the small hybrids come into their own. Some, it is true, are as strictly formal in appearance as their big brothers seen on the exhibition bench, yet many are as graceful as the species but with a grace that is a blend of nature and artifice.

There is one important point in their favour that is worth stressing. Although many of the species are not to be outrivalled for sheer beauty, it must be admitted that not all of them are easy to grow, especially in the open. On the other hand and almost without exception the hybrids are much less exacting in their demands. This is not to be wondered at since a hybrid, if it has not a good constitution, will not be propagated by its raiser and get into commerce. In addition to intentional hybrids there remain a number of other plants which I am including which are old garden hybrids, or sports, of unknown origin. Why, you may ask, should we grow these? The answer is, for the same reason that we grow the modern hybrids, their constitution. Had they not possessed good constitutions they would have died out from our gardens generations ago.

Let us now consider individually some of the best of the small hybrids which are available to the general gardening public, or are likely to be available in the near future. I will go through them briefly, following the R.H.S. classification.

First then, the trumpets, Division 1. Most, if not all the really small cultivars in this section have *Narcissus asturiensis* somewhere in their ancestry. The good forms of *asturiensis* have by far the best shape of any of the wild trumpets until one gets to a plant of the size of *obvallaris*, the Tenby Daffodil. *N. asturiensis*, although it may have the best form, has not, alas, the best constitution in our climate, but several of its descendants are excellent doers and will naturalize where *asturiensis* itself will not.

Of the very small self-yellow trumpets 'Wee Bee' is, perhaps, the best for general purposes. It is some 3 inches high and vigorous enough to thrive in short grass. 'Charles Warren' is just as dwarf, has a larger flower and blooms much earlier. I know nothing of its origin. It was found growing on a bank near Truro; it closely resembles *Narcissus pumilus* but this species is taller and later. How 'Charles Warren' came to be on a Cornish hedge-bank I cannot imagine. One of the very best small 1a's is the Dutch-raised 'Little Gem', a nice stiff flower, some 6 inches high and excellent for pots as well as for open ground. My own 'Tanagra', which is *asturiensis* \times *obvallaris*, is a charming flower, very early, with overlapping perianth segments; its only fault is a slightly weak stem. One must just mention *nanus*, an old garden plant; it is useful for naturalizing, and is cheap, but the colour of its perianth is a rather muddy yellow.

When we turn to the bicolor trumpets there are only two sorts so far that the ordinary gardener is likely to come across in bulb merchants' lists. If required for naturalizing, or for largish drifts in the border, or

a large rock-garden, there is 'Bambi'. This is probably a sport from the wild *pseudo-narcissus*; it is certainly more than 2 inches across, but is not much more than 6 inches high. It is very early, very prolific, and very cheap. The other bicolor is 'Little Beauty', raised by MR. GERRITSEN, who also produced 'Little Gem'. 'Little Beauty', only some 4 to 6 inches high, is a very well contrasted bicolor of much substance and in every way desirable but not yet very cheap.

With the Ic's, the white trumpets, we come to a curious state of affairs. Here we have a number of old cultivars, or sports, but nothing modern or really small. The best known is 'W. P. Milner', registered as far back as 1890, but still popular. It makes a beautiful pot plant, but is really cream rather than white. *N. moschatus* is truly white, in spite of its name, and probably of garden origin; it is quite a good doer and will naturalize in short grass. In size and form it closely resembles 'W. P. Milner'. Back in the 1880's nurserymen, such as MESSRS. BARR, listed a considerable number of smallish white trumpets. Some of these persisted up to a few years ago and perhaps still do in a few old Irish gardens. One of them, 'Colleen Bawn', registered by HARTLAND in 1889, is still in commerce. It was due chiefly to poor constitutions that these old sorts died out. One which had, perhaps, a better constitution and so survived, was sent to me a few years ago from America; it was called 'Silver Bells' and was said to grow freely in old gardens in Virginia. It is nice to imagine that it might have been taken to America by an Irish emigrant a hundred or more years ago after the famine, to remind him of the "ould country". Of the more modern sorts, 'Rockery White' and 'Rockery Gem' are both useful, but the latter is rather on the large side, and neither are easy to buy. I have quite a number of delightful little white trumpets raised from *asturiensis* crossed with some of the smaller trumpets such as 'Rockery Gem'. They are not more than 3 inches high but their failing is that they seem slow to increase so I am afraid it will be a long time before there will be what we know as "a commercial stock".

There are very few hybrids that can be placed in Divisions 2 and 3. The reason for this is not hard to find. All plants in these divisions should rightly have *N. poeticus* somewhere in their ancestry. All good wild or hybrid Poets are tall plants and it is very difficult to reduce their descendants sufficiently to qualify them for inclusion here.

From *poeticus* crossed with *asturiensis* I raised 'Mustard Seed' and 'Marionette', nice little plants, the latter being the only real miniature I have produced so far with a red edge to its cup. I have lost both, but I think they persist in America. The pink-cupped 'Lady Bee' is worth growing as the only really small pink daffodil; I have never managed to raise anything from it and it looks as though it is sterile. My own 'Goldsithney' is a very good border plant but the flower to my mind is rather too large for its height. Several charming little flowers such as 'Rosaline Murphy', 'Xit' and 'Picarillo' are registered in Divisions 2 or 3, but, actually, they all have jonquil blood in them. This, alas, makes

them sterile, so one cannot use them for breeding! Smallish old garden hybrids, such as 'Backhousii' and 'Nelsonii', seem almost to have died out; only 'Macleayi' remains and this is very rare.

The doubles, Division 4, offer us some interesting plants. None of them are the result of intentional crosses and all are, in fact, of unknown origin. Two of them, *moschatus plenus* and *pseudo-narcissus plenus*, are definitely the double forms of *moschatus* and our own Lent Lily respectively; they sometimes revert to the single form as a proof of this. *N. moschatus plenus* is a favourite of mine and is not difficult to grow; it is very nice in a pot. The double Lent Lily is very rare and not at all a good doer in my experience. After waiting many years to acquire it, I was at long last sent a few bulbs found by a friend in a Devon orchard. A plant of my own, 'Kehelland', rather resembles it, but, whereas in 'Kehelland' the flower is of the full rose form, in the double Lent Lily the doubling is confined to the corona. I have an idea that 'Kehelland' may be a sport from *nanus*.

A very beautiful little double is *capax plenus*, Queen Anne's Double Daffodil, a very old plant in cultivation but not, unfortunately, a very good doer. I read the account recently of a show held in Ireland some 80 years ago at which about 500 or 600 *capax* were on exhibition; no one today could produce anything like that number. *Capax* is also known as *eystettensis* and the entry in the Classified List reads "eystettensis = a hybrid of *triandrus* L. syn. *capax plenus*". I do not think it has been definitely proved to be a cross between *N. triandrus* and a trumpet, but I believe a rather similar plant has been raised by using pollen from the old 'van Zion' on *triandrus albus*. There would seem to be scope here if some of our budding hybridists used the pollen of the large modern doubles on *loiseleurii*. There are two double jonquils which must be mentioned, 'Pencrebar' and 'Wren'. The origin of 'Pencrebar' is again shrouded in mystery. It was found in the garden of Pencrebar, near Callington, in Cornwall, once the home of ISAAC FOOT, and distributed by the late H. G. HAWKER in 1929. So far as I know, no one has suggested what its parents could be; I cannot think of any small jonquils which might fill the bill, and it never seems to come single to give us a clue. 'Wren' closely resembles 'Pencrebar', and, seen separately, they are hard to tell apart, but 'Wren' is somewhat larger, more vigorous and slightly different in colour. Although it is registered as having been raised by the late GUY WILSON, it was actually sent to him from a garden in the South of Ireland and its origin is as much shrouded in mystery as that of 'Pencrebar' of which it may well be a sport.

In all the years during which I have been interested in small daffodils I have only seen, or even heard of, one double *bulbocodium*. This turned up some years ago in a stock of *nivalis*; I managed to keep it for a few years but then, like many another good thing, it "softly and silently vanished away".

There are a fair number of small *triandrus* hybrids, Division 5, nearly all in section B. In section A I shall pass over 'Queen of Spain' as one

must regard this as a wild plant, but apart from this there are only two or three one is likely to come across. The first and smallest, 'Sennocke', is a delightful little plant with up to four creamy white flowers on each stem and was raised by MR. FRANK WALEY from *bulbocodium* \times *triandrus*. There is also MR. BLANCHARD's 'Tristesse', a pure white with a white trumpet for one of its parents. Both this and 'Sennocke' are, unfortunately, slow to increase. My own 'Poppet' with two or three creamy flowers on each stem, raised from *triandrus loiseleurii* \times *cyclamineus*, promises to be of greater vigour.

In the small-cupped section there are several charming plants from the cross *triandrus* \times a *poeticus*, but they are rather too tall to be included here; 'Dawn' is a well-known example. Small enough, however, for us are three very valuable little cultivars; they are the New Zealand 'Hawera' (Fig. 160) and my own 'April Tears' (Fig. 166) and 'Mary Plumstead'. The first two closely resemble each other; the last is similar in form but a soft greenish yellow instead of full yellow. They are all *triandrus* \times *jonquilla*, and this same cross has produced other lovely seedlings. *N. triandrus* crossed with *juncifolius* has given some very small and beautiful plants, 'Shrimp' and 'Peaseblossom' are two of them.

N. triandrus \times *N. dubius* gave me 'Raindrop' (which gained an Award of Merit) with a lovely little tazetta-type flower. I have now lost it although it still thrives in America. In any case, it is now surpassed by MR. BLANCHARD's exquisite 'Icicle' (Fig. 161). Other nice flowers in the section are my 'Frosty Morn', 'Cobweb' (Fig. 169) and 'Arctic Morn'; the last has a strange and elusive flush of pink in its small cup. Lastly, there is 'Samba', almost too large for inclusion here, but unique in its colouring for a *triandrus* hybrid; it has a brick-red cup the colour of which suffuses the deep yellow of the perianth, after the manner of 'Rouge'.

Division 6, the *cyclamineus* hybrids, provides us with quite a number of small cultivars; most of these are the result of crossing *Narcissus cyclamineus* with trumpets, *poeticus* or *tazettas*. One of the chief reasons why hybrids in this group are relatively plentiful is that trumpet crosses are always fertile, while *poeticus* and *tazetta* crosses are sometimes so. These give a much greater scope for development as it is possible to continue breeding beyond the F_1 generation, and also to back-cross and self these F_1 seedlings.

The trumpet crosses are all, of course, 6a's and one of the oldest of these is *minicycla* which, as its name indicates, is *minimus* (now *asturiensis*) \times *cyclamineus*. The cross has been made many times by different people, but the resultant seedlings always seem to lack stamina and soon die out. Better results can be obtained by bringing in the blood of some more vigorous trumpet and I have found *obvallaris* useful in this respect. If the result of this cross produces plants that are larger than are desired, the seedling can be crossed again with the species and one will usually get smaller and more refined flowers. 'Greenshank' is

a pretty little cultivar on the same lines as *minicycla* (Fig. 170) but, in my experience, with the same poor constitution. My own 'Jetage' is, I think, about the best very small 6a that I know of. On a rather larger scale, a very nice plant is 'Baby Doll'; this is some 6 inches high and is equally good inside and out and not expensive. 'Golden Cycle', also, is good and very early flowering in addition; 'Little Witch' is good to fill in at mid-season.

'Jack Snipe' is almost the only bicolor 6a available; it is very attractive but rather expensive. In the white 6a's 'Snipe' is the only one listed to date. It is a lovely little thing 4 to 5 inches high, but it is not too good a doer (Fig. 164). It will, I feel, be superseded by my 'Mitzi' (Fig. 167), if and when this comes on the market.

Soon after its rediscovery in Portugal in the early 1880's, MR. A. W. TAIT, who lived in Oporto, crossed *N. cyclamineus* with 'Soleil d'Or' which happened to grow in his garden. This cross produced the charming 'Cyclataz' (Fig. 168). After more than 80 years this is still a rare plant, but none the less desirable. It is not quite hardy enough for the North, but is doing well in most places in the South and West. Once, owing I suppose to some freak of climatic conditions, a single flower in my stock of 'Cyclataz' set seed, self pollinated. From that seed-pod three cultivars have arisen, 'Quince', 'Jumblee' (Fig. 163) and 'Tête-a-Tête' (Fig. 165). All three are more vigorous than their parent, and the last of the trio is perhaps the most satisfactory plant I have ever raised; it has an F.C.C. for pot work.

In the *cyclamineus* × *poeticus* group the relatively old but well-loved 'Beryl' is still grown extensively. Its only failing is that the red in the cup burns out very easily in the sun. 'Beryl's Little Sister' is quite charming but with a much paler cup.

It is when we come to Division 7, the jonquil hybrids, that we find quite a large selection to choose from. Three species which have formed the basis of this group are *juncifolius*, *rupicola* and *jonquilla* itself; the first two being the parents of the really small plants and the last a parent of the medium-sized ones. I will start with three inter-specific crosses. 'Kidling' (*jonquilla* × *juncifolius*), is a very delightful cultivar; it is almost exactly intermediate between its parents in every respect, but later to bloom; it is very free flowering and strongly scented. 'West Wind', the white *watieri* × *jonquilla*, is a lovely little thing, greenish primrose in colour, but is not yet in commerce. 'Shrimp' the smallest of the three, is *juncifolius* × *triandrus albus*.

A very old garden hybrid of unknown origin is *tenuior*, the Silver Jonquil of old authors; it is a very low growing plant and is quite cheap. Another little jonquil of mysterious parentage is 'Sea Gift' which I found growing in a garden hedge in Cornwall many years ago. An old lady in the cottage next door told me the following story regarding its origin. Many years before a ship had been driven ashore near-by, and all the tin-miners in the district flocked down to the beach, as was the custom, to look for pickings as the ship broke up. All the crew were

drowned with the exception of one sailor. The miners were preparing to push him back into the sea, believing in the old adage that "dead men tell no tales", when he was rescued by a poor woman who took him back to her cottage and nursed him back to strength. When, at length, the time came for him to leave, he told his rescuer that, although he had no money that he could give her, he would send her a gift when he got home. In due course she received a parcel of bulbs—'Sea Gift'. It is a romantic story but as likely as any other to account for the presence of a small hybrid jonquil in a remote Cornish garden.

Two old and well-loved cultivars, small if not quite miniature in size, are 'Orange Queen' and *rugulosus*, very similar in form, but differing in colour, the former coppery orange, the latter butter-yellow. 'Orange Queen' was raised by CARTWRIGHT and GOODWIN and registered in 1908, but *rugulosus* is an old garden plant whose parentage is unknown. In buying this sort care must be taken to obtain the right plant as *campernellii* is often sold under the name *rugulosus*, but it is a much taller plant with an expanded, campanulate cup. The bulb sold as *rugulosus plenus* is the double of *campernellii*; *rugulosus* has, as far as I know, no double form.

Before *N. rupicola* was used in the breeding of small jonquil hybrids, a series of nice little flowers was raised by MESSRS. BARR who used *juncifolius* for one parent and a *poeticus* for the other. This cross produced flowers some 6 inches high, late flowering, with butter-yellow perianths and flat orange or brick-red cups; 'Lintie', 'La Belle' and 'Little Prince' are well worth growing, but only the first is at all easy to buy these days.

N. rupicola was not widely distributed until shortly before the last war, and I think that I was probably the first person to use it at all extensively for hybridizing. As was only to be expected, whilst *juncifolius* crosses generally gave plants that carried two or three flowers on each stem, *rupicola* hybrids always had solitary flowers. These are carried on very stiff stems from 4 to 6 inches high and have flat imbricated perianths and nearly always flat cups. The first I registered was 'Sun Disc' in 1946, a clear yellow self (Fig. 162). 'Bebop', which followed in 1949, was very similar, but 'Bobbysoxer', also registered in 1949, has an orange cup edged with brick; its sister seedling 'Stafford', has an entirely red cup. All these are excellent doers, but rather on the late side. Very much earlier to bloom, and also dwarfer, is 'Sundial' of a pleasing greenish yellow shade. If *watieri* is used instead of *rupicola* the seedlings have the same symmetrical form but with white perianths and yellow cups; my 'Segovia' is an example. The flower with a white perianth and a red cup is still a dream of the future.

In Division 8 there are, at the moment, no small hybrids available, but there seems no reason why some charming things should not appear in due course. One can visualize a group of semi-miniature Poetaz having *N. canaliculatus* for one parent and a *poeticus* for the other. I have a good stock of a nice little *tazetta* × jonquil cross some 6 to 8 inches tall; this may well be a useful plant; I also have a charming thing, *rupicola* × 'Soleil d'Or', but neither is yet available.

There are no small hybrids in Division 9 and, so long as the present R.H.S. definition stands, there are unlikely ever to be any.

There remains only the Cinderella of the divisions, Division 11, and in this there is, as far as I know, only one small group of flowers that need concern us here. These are the charming *bulbocodium* hybrids raised by MR. BLANCHARD and are the result of crossing *bulbocodium romieuxii* with *bulbocodium foliosus*. As is only natural, they are very early flowering and therefore seldom seen at shows; they have better constitutions than either of their parents. Four sorts are available, 'Jessamy', 'Muslin', 'Taffeta', and 'Tarlatan'.

So far as I know, nothing has turned up yet in the "ruffle" section of interest to us here; my own opinion is that small editions of these might well be showy plants for the border or pots.

In this talk I have had two aims. The first has been to try and interest a few more people in a group of plants not, I think, sufficiently appreciated up to now. My second aim has been to demonstrate to anyone interested in hybridizing how much more scope there is here than in the realm of the large daffodil. In doing this I have tried to indicate something of what has already been done so that future breeders may obtain some sense of direction and guidance in their efforts to produce worthwhile results.

I cannot stress too greatly how rewarding work on the breeding of these small daffodils may be. For every daffodil that is seen on a show-bench a hundred, no, a thousand, are grown in gardens or in pots up and down the country. As things are today, for every small daffodil registered, one hundred large cultivars find their way into the Classified List. I need not dilate on the implications of these facts; they speak for themselves.

Before I close, however, I should like to discuss for a few minutes some matters concerning hybridizing in general which are, I feel, worth bearing in mind. I am not going to try and talk about genetics, firstly because I have never been able to grasp more than the fundamentals of that abstruse science, and secondly, because nothing more than a knowledge of its underlying principles is likely to be of much real value to the daffodil breeder. The really new breaks may well, in some instances, depend not so much on the application of a knowledge of genetics as on new advances in the technique of breeding. Much could be done if we were able to raise F_2 generations of *triandrus* and jonquil hybrids. All we can do, as things are, is to make first crosses between likely looking parents and hope for the best. Were we able to devise some method of producing fertile F_1 seedlings we should not only be able to make further out-crosses but also be able to employ such well known and proved devices as selfing and back-crossing to enable us to make real progress.

Even as things are, however, something can be done in this matter by anyone with ample material to work on and time on their hands! As already mentioned, my 'Tête-a-Tête', etc., were produced from the

one fertile flower of 'Cyclataz' that I have ever come across in some 30 years of growing that plant. Freaks like this do occur; if the number of plants of any one sort grown runs into thousands, the chance break may happen, be spotted and propagated.

This matter of numbers makes it clear why it is so difficult to apply the findings of geneticists to the breeding of daffodils. A person who works with, say, poppies, can raise one, or even more, generations each year; from each cross he can raise hundreds, often thousands, of seedlings. With this wealth of material spread out before one, it is easy for the trained eye to see how the laws of inheritance work. How different it is with the poor daffodil hybridist; he considers himself lucky if he gets twenty or thirty seeds from a cross. Often he gets only one or two; he then has to wait 3, 4 or 5 years before he can see the results of his work.

There is something else which complicates things still further. As a general rule the F_1 generation of seedlings in daffodils will be found to be, in many respects, intermediate between their parents. This indicates, I understand, that quite a number of genes are involved; I read that if thirteen genes are involved there are 1,500,000 combinations possible. If we got an average of thirty seeds per cross we might need to repeat the same cross thousands of times in order to get the exact combination we require.

But let no prospective breeder be discouraged by all this; if most hybridizing of daffodils still remains largely a hit-or-miss business, he will, at the very least, raise, if he persists, something which will please him personally, even if it never wins an A.M. or an F.C.C., and I am certain he will gain much happiness in so doing. After all, it is better to travel hopefully than merely to arrive, and we may be sure that by the time we reach one goal, if we ever do, another one will at once come in sight. Such is hybridizing!
