MINIATURE DAFFODILS

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THE subject of miniature daffodils is a very fascinating one, but whether I shall be able to show where the fascination lies is quite another matter. For the purpose of exhibition the R.H.S. Limits the term to flowers which do not exceed 12 inches in height nor 2 inches in diameter of the perianth when flattened out. These measurements can

Property Of American Daffodil Society, Inc. include most, but not all, of the species. It might be possible to find blooms of N. pseudo-narcissus, the English wild daffodil, which would come within these measurements, and the same with the nearly related N. pseudo-narcissus var. abscissus from the Pyrenees, but the wild forms of N. poeticus and N. tazetta would, I think, almost all have to be excluded. Still, the species which do come within these measurements with all their different forms and their hybrids cover a large field. And here I should mention that one of the great difficulties in dealing with these flowers is the great variation in forms of some of the species. One may have been growing one form of a species for many years and have considered it as typical. Then one comes across another plant flowering perhaps a month earlier, taller, wider, and carrying one or two blooms on a stem, whilst the stem of the plant one knows carries five or six blooms. Yet the botanists tell us that botanically there is no difference between them. This is an experience we have had with N. juncifolius. For a contrast one can take what in the past we have called N. bulbocodium monophyllus, the beautiful spring flowering white hoop-petticoat. This has now been removed from the N. bulbocodium group altogether and has, with other white bulbocodiums, been transferred to N. cantabricus, which to the uninitiated seems queer for plants whose home is in North Africa.

Yes, these different forms provide a very great puzzle and to me it seems that nobody can claim to speak with authority who has not seen and studied the plants in the wild for more than one season at least. I have not been able to do this myself and my own experience is limited to growing all the species that I can obtain either in a cold house, in frames or outdoors in various positions, in raising species from seed coming from different sources and in crossing the species between themselves or with other flowers. And here I should say that anyone who grows the species should sow seed regularly. Some of the plants are short-lived. Others are slow of increase by division, and apart from that there is always the chance of a new or improved form appearing among the seedlings. Seedling raising of daffodils is often considered a slow process, but with the miniatures it is not necessarily so. Some plants, and in particular N. dubius, are slower than others, but among the N. bulbocodium forms and related species we have had occasional flowers in the third year from seed.

One of the great advantages of the miniatures is that they extend the flowering season substantially. Of the recognized autumn flowering species, my own experience is practically nil, and in any case they are

mostly not miniatures.

However, there are other species which flower early. We have had seedlings of the tiny N. hedraeanthus flowering in October. N. cantabricus ssp. cantabricus var. foliosus, the autumn-flowering white hoop-petticoat usually opens in the first or second week in November, and before that is over various other hoop-petticoats, both yellow and white, have made their appearance. By mid-January there are usually quite a number of

different plants in flower, and from then on until the end of the season there is no lack of bloom. With regard to these early flowers I am speaking of their growth in a cold house without protection. The flowers are really too fragile to stand the buffeting of winter gales and they can be seen and enjoyed much more fully in pots inside. The bulbs may be hardy enough to keep alive outside, but to bloom well they need a fuller ripening than they can get in the open. We have, too, found the advantage of sinking the pots in the cold house in ashes up to soil level. It keeps them both moister and warmer and there is less risk of frost

damage to the bulbs.

As to soil it is difficult, or perhaps it would be better to say unwise, to lay down any hard-and-fast rules. In the open we have found that many species are happy growing on a sloping grassy bank facing southeast while some are happier with a north-east aspect. Others do better under light shade and not in grass. N. cyclamineus and its hybrids want wetter conditions and in nature the species appears to be almost, if not quite, a bog plant. It is not happy on our soil, which is a rather light loam over chalk, and tends to die out, so that we need to keep on raising it from seed. For potting we rely on John Innes potting compost with plenty of chips at the bottom for drainage and a layer of chips on top to discourage moss. But for the Cyclamineus group we add more peat, and for Triandrus forms extra peat and sand. The very tiny N. bulbocodium nivalis is inclined to get coarse on a rich diet and needs about half the potting medium to be of chips or something similar.

I notice that I have now started to use the pronoun "we" rather than "I". This is because for a good many years my son and I have worked on the daffodils together. He has done a very full share of the work and he is solely responsible for the colour photos used to illustrate this talk.

To discuss the various flowers themselves, the best method seems to be to take them in their order of flowering rather than to stick to their strict classification or to that of the better known exhibition and garden forms. So we must return again to the hoop-petticoats. I use this description advisedly, for N. bulbocodium is very close to N. cantabricus and the various forms will hybridize. Normally the first flower to open with us is N. cantabricus ssp. cantabricus var. foliosus which comes out about November 10 and in cool conditions lasts until after Christmas. It is a milky white flower and when fully out is about 6 inches tall, but the corona is rather narrow. Next to these we have a series of flowers raised by us some years ago which are crosses between foliosus and N. bulbocodium ssp. romieuxii. Four of these seedlings were selected, grown on into stocks and named 'Tarlatan', 'Taffeta', 'Muslin' and Jessamy'. The first three came from foliosus × romieuxii and the last from the reverse cross. They open normally in the order given. Later generations of seedlings open at the same time as these and they vary from white through pale yellow to a good full yellow. Our aim in breeding these has chiefly been to get strong early flowers with the beautiful wide corona of romieuxii, and particularly to get good early yellows.

While these crosses are flowering, the wild forms are also moving and soon after Christmas three more are opening. These are N. bulbocodium ssp. romieuxii var. rifanus which has varying forms, N. bulbocodium ssp. albidus var. zaianicus forma lutescens and N. bulbocodium ssp. romieuxii var. mesatlanticus (Fig. 113). All these are of shades between primrose and pale lemony yellow and, though to a specialist they are all quite distinct the differences are slight and by the uninitiated might well be overlooked. But a quite distinct one is N. bulbocodium ssp. romieuxii itself. Normally this opens just about Christmas, though this year it was about a month later. It is rather large for this group and opens when 3 to 4 inches tall but grows to about 5 inches. The colour is a good lemon yellow and the corona can be compared to a beautifully pleated ballet skirt, wide and flaring. When selfed seed of this is sown there is some difference in the seedlings and both pale lemony flowers and good deep yellows have been selected from them. Later on, about the beginning of February if we are lucky, we have a good flowering on the white spring hoop-petticoat now called N. cantabricus ssp. cantabricus var. monophyllus. This has a much wider corona than the autumnflowering var. foliosus and is of a sparkling icy white. It is a very beautiful flower. But even better is a flower which obtained an Award of Merit in 1956, which was then thought to be a form of monophyllus but which has now been fully investigated by DR. FERNANDES and named N. cantabricus ssp. cantabricus var. petunioides (Fig. 111). This has a corona which is quite flat or even slightly reflexing which is rather bigger than a halfcrown. There is another very dainty little white flower in this group which should be mentioned. This is N. bulbocodium ssp. tananicus. It is a small flower widely opened with a corona less than an inch across which faces directly or almost directly upwards so that outdoors a few drops of rain fill it like a chalice (Fig. 112). And after that comes the smallest of the group, N. bulbocodium vulgaris var. nivalis which as I have previously said should be treated as a scree plant. In such conditions it grows about 3 inches high and has a bright yellow tube-like corona not more than 1/4 inch wide at the mouth. We have a few of the later-flowering hoop-petticoats scattered about the garden but do not give them much attention. They do not seem to have the grace and attractiveness of the earlier ones and also have to face the competition of the miniatures in some of the other groups which have a charm that they lack.

Before leaving the hoop-petticoats I should say a few words about a closely related species which has just been mentioned previously. This is the rather quaint little plant called N. hedraeanthus. It comes from Andalusia in southern Spain and the flower is in form like a small rather pinched pale yellow hoop-petticoat. The chief difference is in the stem, which, instead of standing up straight, bends in an arc of a circle so that the bloom is held only just above the ground. It flowers at any time from October to March and though the bulbs are not inclined to divide, large ones will throw up as many as nine flowers.

Apart from the hoop-petticoats the first of the other babes is *N. asturiensis* which generally opens in late January or early February. The normal form of this is a sturdy little bright yellow flower about 3 inches high which is a real yellow trumpet daffodil, slightly waisted, in miniature. But again there are various forms of it. The one known as 'Navarre' has longer and more winding perianth segments which are set nearer the ovary than in the better-known form (Fig. 110).

Another form which we grow is like a miniature form of N. hispanicus (formerly called N. maximus). It is so distinct that it looks like another species and we are anxiously awaiting the flowering of seedlings from it to find out if it breeds true. But the most striking form which we grow is one collected by SIR CEDRIC MORRIS on the borders of Spain and Portugal. This has the typical form but grows as much as 8 inches tall and opens normally about the end of November. Perhaps in view of this it is as well that the name of minimus has been abandoned for this species.

N. cyclamineus, which has already been mentioned, usually opens early in February. It is a most attractive plant with its totally reflexing perianth of a good deep yellow and has the merit that its flowers will last in good condition for at least a month. It is also a very useful plant to hybridists as it almost always passes on its durability, form and lasting qualities to its children. The plant we grow as × minicycla, a cross between asturiensis and cyclamineus, is a delightful little thing showing strongly the characteristics of both parents. It is about 3 inches high when it opens but the stem gradually lengthens to 4 inches or a little more. It seeds fairly freely. The same cross is always worth repeating. The resulting seedlings are usually very pretty plants but vary considerably in every way.

Among other crosses of *N. cyclamineus*, MR. A. M. WILSON's lovely 'Snipe' must not be overlooked; it is practically a white *N. cyclamineus* although the perianth does not reflex quite so fully, but sometimes when fully grown it exceeds the permitted measurements (Fig. 107). MRS. BACKHOUSE'S 'Little Witch' is another delightful plant and an excellent grower on our grass bank. MR. COLEMAN has raised a set of most beautiful hybrids but they are too large for our classification. There is also the very curious little flower known as 'Cyclataz', a cross between 'Grand Soleil d'Or' and *cyclamineus*, but it is far too much the fat boy to be welcome in this group. It has, however, the advantage of increasing and flowering very freely with our southerly grass bank treatment.

By the end of January or early February the first of the jonquil group should be open. This group contains some of the best of the miniatures and very lovely they are, added to which they are all more or less scented. The first of them which we have flowered is a form of N. jonquilla received from the Cambridge Botanic Garden which in favourable seasons flowers in January or early in February. One of the next is N. calcicola which is found wild in only one location in Portugal. It is a strong plant, often carrying three or four blooms on a stem,

golden yellow with a slightly deeper coloured cup and sweetly scented, but it cannot be described as one of the easiest to grow.

The smallest of all the daffodils that we have, other than N. bulbocodium nivalis which is of a very different type, flower about this timeif we are lucky. Of those, N. scaberulus is the better known. This has a perianth about $\frac{3}{8}$ inch across and a pale orange cup, but the stem at about 5 inches is too tall for the flower. According to the usual description the leaves typically curl about on the ground like snakes, but we have not found this to be constant among seedlings we have raised. The other plant which in flower is very similar to the last is N. gaditanus. The only differences between the flowers that I myself have been able to see is that the corona of N. gaditanus is a rounded bowl while N. scaberulus is straight sided, like a saucepan or casserole, and that in N. gaditanus the cup is rather deeply cut, showing the six lobes like the perianth. The main difference is in the foliage. N. scaberulus, as I have said, is prostrate and curling but flat and rather wide for the size of the plant, whilst N. gaditanus has leaves that are round, rush-like and very fine like one of the smaller bulbocodiums. However, I doubt very much whether many of you will ever see N. gaditanus in flower. We have had it for many years, but up to this year have only once had blooms so we have not yet mastered its tricks. We have again, however, had a single spike this season.

The dwarf jonquils continue to the end of the season. There are many of them and as different forms of each have different times of flowering it is almost impossible to give any real chronological order. A particularly good form of N. rupicola is often the next. It has a very round perianth about 3 inch wide and a nearly flat corona, the whole flower being a good buttery yellow. Other forms of N. rupicola go on till almost the end of the season. Most of them are good but it is advisable to discard any which have narrow perianth segments. Coming from one restricted area in North Africa is N. rupicola var. marvieri, but this is of a uniform yellow, both perianth and corona, and flowers rather earlier. It is a very fine plant in pots but we have not yet given it sufficient trial outside to form an opinion of its worth for such conditions. We have had one very interesting seedling from this plant. Among a pot of seedlings one came up which was quite distinct and which we at first thought was a stray calcicola though a much stronger plant. Further investigation showed it to have the scent of marvieri, which is quite distinct from and harsher than that of calcicola, so we can only think that insect pollination has given us a very useful hybrid. From CAPTAIN COLLINGWOOD INGRAM we had a very interesting plant under the name of N. apodanthus which agrees with the description of that plant by Boissier and Reuter in 1842. But this seems now to be treated as a form of N. rupicola, although to a gardener it appears to be quite distinct not only in flower but also in bulb and in seed.

Next we expect to have N. atlanticus, a milk-white jonquil from North Africa carrying only one bloom on a stem. We are indebted to SIR FREDERICK STERN for this plant which he introduced. Our experience with it is that it should be raised from seed regularly as young bulbs seem to do better than old ones.

The only other white jonquil is *N. watieri* which only has one locality in nature and that is near Marrakech in Morocco. This is a charming plant and about the whitest daffodil that there is. It grows about 5 or 6 inches tall with a rather narrow perianth and the corona is quite flat and even whiter than the perianth. It is not the easiest plant to grow well, being a native of pine woods, and with us does best in a rather dry position and some shade.

The best known of the small jonquils is N. juncifolius which has a very wide distribution over southern Spain, the Pyrenees and the south of France as far east as Marseilles. We have collected it in seed at Gavarnie, but though it is said to be common there we only found it in one small location, but there it was plentiful. Probably the foliage and seed heads elsewhere had been made into hay or eaten by the numerous donkeys which carry pilgrims from Lourdes and other tourists in their thousands to the Cirque. It is a very small plant but good tempered

and seems willing to grow and thrive in any conditions.

We have, however, a form of it which is rather a puzzle to us. This originated in a pan of seedlings of N. elegans, the seed having come from a correspondent at a distance. The seedlings of N. elegans were killed by frost but this one survived and when it flowered we had difficulty in naming it. Enquiry both at the Cambridge Botanic Garden and at Kew produced the information that it was N. juncifolius, but it was from the gardener's point of view quite distinct. Compared with the form of N. juncifolius which we grow it is about half as tall again, the blooms are much wider but the perianth segments much narrower. It carries one, or at most, two blooms on a stem as against four or five on the ordinary form and flowers three weeks earlier. 'Kidling' which MR. ALEC GRAY raised from N. jonquilla $\times N$. juncifolius is a first-class flower and a

very good garden plant.

The other most important group is the *Triandrus* forms. DR. FERNANDES, who is the chief authority on the small daffodils, considers that there is only one species here and that all the forms now grown are varieties of it. All the *Triandrus* are very similar in shape, the corona being a hanging bell and the perianth reflexing and often twisting. The best known is *N. triandrus albus*, a milky-white flower often called "Angel's Tears". Most people take the name at its face value but there is some reason to believe that when the plant was first collected by PETER BARR his guide was a man of the name of ANGEL or ANGELO who was driven to weep by the extremely cold conditions at that time. The finest of this group is *N. triandrus loiseleurii*, formerly called *calathinus*. It is pure white and much larger and stronger than the other forms and is of great value for breeding. Curiously enough it is the only form not confined to the Iberian Peninsula, but came from the Île de Glenan, south of the Brest Peninsula where I believe it is now extinct. The



Photo: J. E. Downward
FIG. 107—MINIATURE DAFFODILS
Narcissus 'Snipe', a fine cyclamineus hybrid
raised by A. M. Wilson (see p. 354)

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Photos: John Blanchard

Fig. 109—Narcissus 'April Tears' (see p. 357)



Fig. 110-Narcissus asturiensis 'Navarre' (see p. 354)



Fig. 111—Narcissus cantabricus petunioides (see p. 353)



Fig. 112—Narcissus bulbocodium subspecies tananicus (see p. 353)



Fig. 113—Narcissus bulbocodium subspecies romieuxii var. mesatlanticus (see p. 353)

forms concolor, pulchellus and cernuus are mainly pale yellow with minor variations and I find great difficulty in distinguishing them as they appear to me to run into each other with intermediate forms. N. triandrus aurantiacus to me, as a gardener, is quite distinct with a single leaf and a bright golden colour, but I understand that the botanists are now inclined to include this in concolor.

Of the Tazetta group only the form commonly known as canaliculatus really comes in the category of miniatures. The official name for this is now N. tazetta ssp. lacticolor forma canaliculatus. This is a small flower, white with a light orange cup and very strongly scented, which may be 4 or 5 inches high when it opens but becomes almost too tall before it finishes. A good spike can carry four or five blooms. It increases very fast by division but is a little chancy about flowering. N. dubius comes on the edge of this group but has been shown to be a cross between a Tazetta and N. juncifolius. It does, however, breed true. From seed it is slow in reaching the flowering stage and it is not free-flowering, but it is of great value in breeding and generally gives quality to its seedlings.

Coming to the matter of cross breeding one finds that there are very few among the miniatures that fall into the regular divisions of the large daffodils. Crosses between the small trumpets do not seem to give very interesting flowers, while bicolour and white trumpets are, apart from alpestris and moschatus, which are now subspecies of N. pseudonarcissus and often exceed the measurement laid down, almost, if not quite, non-existent. N. obvallaris, which also is now listed as a subspecies of N. pseudonarcissus, crossed with N. asturiensis has given some nice results, particularly MR. ALEC GRAY'S 'Tanagra'. This is a true medium cupped flower, strong, with a beautifully frilled corona of good colour, but there are few others, and as far as I know no short cupped flowers

and few, if any, poeticus.

To get really satisfactory miniature hybrids one must make use of the Triandrus forms and the jonquils, and many of the best come from mating the two groups. 'Hawera', which was raised in New Zealand, from N. jonquilla × N. triandrus concolor is one of the best known and is a very charming pale yellow flower and fairly early for this group. MR. GRAY'S 'April Tears' is a rather similar flower, coming a little later and with better quality (Fig. 109). But one of the most beautiful of all is the same raiser's 'Raindrop' a white flower of the very highest quality. This was raised from a white triandrus by pollen of N. dubius. Unfortunately it does not seem with us to have as good a constitution as the others although I see that in many parts of the U.S.A. it is excellent in both growth and flower. Rather curiously we have raised two lots of seedlings which are very similar to 'Raindrop'. The first batch came from N. triandrus loiseleurii \times N. dubius which is probably the same cross as MR. GRAY's. But the other set came from N. triandrus loiseleurii × N. rupicola. Yet the result was practically the same in spite of the pollen parent being a yellow flower. An unusual and most interesting

cross is one raised by MR. FRANK WALEY called 'Sennocke' which comes from inter-breeding N. triandrus and N. bulbocodium. It is a very good garden plant and almost the only cross using N. bulbocodium and any other species that I know. Another very attractive little hybrid which should be mentioned is 'Picarillo'. This was raised by MR. MULLIGAN from N. watieri by pollen of N. minor, a small yellow trumpet. It has rather the form of N. asturiensis but with a much shorter corona and its colour is somewhere between lemon and primrose. It succeeds with us on a grass bank but in those conditions does not increase fast.

There are many more good hybrids in commerce and to go further into these would take more time than you can spare. But to those of you who are interested enough to grow the miniatures I will only suggest that you give some time to raising seedlings from your own crosses. We all find that 99 per cent of the chickens we hatch from the regular exhibition daffodils are only barn-door fowls but the one swan is well worth waiting for. The average from the miniatures is, however, a good deal better. But do not be too sure that the swan has arrived when it first flowers. It may show faults later that were absent from it originally, so wait until it has, so to speak, grown up, and you have a small stock of, say, half a dozen bulbs. Then if all the blooms are good you will know that you have a plant with a future.