

MINIATURE DAFFODILS IN AMERICA

by

Roberta C. Watrous

THE goal of most miniature daffodil fanciers in the United States is to grow "everything in Mr. Gray's catalogue", and a surprising number have almost succeeded. Although a limited number of small daffodil species and varieties had long been grown in this country their present popularity as a special group is due largely to the many delightful new hybrids produced by Mr. GRAY, and to the other small species and varieties he has made available. They are being grown here in rock gardens, in borders or beds, along woodland paths, in rows for cutting and exhibiting, and in pots with varying degrees of protection. Occasionally one hears of an established naturalized planting of *Narcissus cyclamineus*, *N. triandrus*, or *N. asturiensis*, increasing and renewing itself from seed, but these are not common, and many gardeners conscientiously remove all faded flowers "to avoid exhausting the bulbs".

Many people first become acquainted with miniature daffodils by seeing them at shows. In recent years our large daffodil shows have provided special classes for miniature varieties, with species and garden hybrids sometimes combined. The flowers are exhibited, usually without foliage, as single stems, three stems of a single variety, or collections of five or more varieties. They are staged in small glass containers. Our daffodil shows rarely include classes for bulbs in pots, even though some people think that miniature daffodils appear to best advantage when shown this way. Sometimes there are classes for arrangements utilizing miniature daffodils.

There is no general agreement as to the definition of the term "miniature". In conversation and writing some people, even dealers, seem to include everything outside Divisions 1-4 in the "miniature" category; others use the term "intermediate" in referring to varieties that are small in comparison with standard types but more than 8 or 10 inches tall. The term "dwarf" is occasionally used interchangeably with "miniature", but some of us would prefer to see it limited to varieties having large flowers on very short stems. Show committees

have tried several methods to avoid pitting such very small flowers as *N. rupicola* against only moderately small ones such as *N. pseudonarcissus* subsp. *obvallaris* by setting a height limit of 8 inches, or 10, or by subdividing the class into two sub-classes, under 6 inches and 6 to 12 inches. None of these methods completely avoids the problem of borderline cases, or the differences due to conditions of culture and weather, and there is a demand that the American Daffodil Society establish a definition or provide a list of varieties that should or may be exhibited as miniatures in shows operating under its auspices. A listing of "intermediate" and "dwarf" varieties might also prove desirable.

Various topics relating to small daffodils are being discussed in the two Miniature Round Robins started in the American Daffodil Society last year. Despite their rather cozy name, the Miniature Round Robins are in effect private periodicals, with questions, answers, opinions, and original contributions by each of the members. The two groups, limited to ten members each, now include growers in various states of the Atlantic seaboard from Massachusetts to South Carolina, in the Middle West (Indiana), and in the Pacific North-west (Oregon). Climatic conditions range from mild to very severe winters, cool to very hot summers, and include various combinations of rainfall and humidity; soils vary widely, also, in both pH reaction and texture.

We believe that the special problems miniature daffodils present, in gardens and in shows, can probably best be solved by the combined efforts of such groups, working within the framework of the American Daffodil Society. Some of these problems are:

(1) to agree on definitions or lists of varieties for such categories as seem needed for shows or for dealers' catalogues, as mentioned above;

(2) to determine climatic limitations of various species and varieties. Those that produce foliage in the autumn present special problems where winters are severe, and some varieties (or species) are intolerant of long hot, humid summers;

(3) to gather and disseminate information on cultural methods most suitable for miniature daffodils, especially where these may differ from the treatment of larger varieties. A special phase of this study would be to report on failures and try to learn the reasons for them;

(4) to encourage more people to grow the species from seed, and to make crosses with miniature species and hybrids, with special reference to our various climatic areas.

Meanwhile, members of these groups and other members of the American Daffodil Society collaborated last year in the 1958 American Miniature Daffodil Symposium, to select the most popular varieties in

two height classes, under and over 5 inches. For species and wild hybrids under 5 inches *N. watieri*, *N. rupicola* (Fig. 30), *N. triandrus albus*, *N. cyclamineus*, and *N. × tenuior* were the favourites; for those 5 to 10 inches *N. jonquilla*, *N. pseudo-narcissus* subsp. *moschatus*, *N. bulbocodium* subsp. *vulgaris* var. *conspicuus*, *N. triandrus* var. *loiseleurii*, and *N. × tenuior*. For garden hybrids under 5 inches 'Raindrop', 'Wee Bee', 'Flomay', 'Nylon', and 'Tanagra' headed the list and for those 5 to 10 inches 'April Tears', 'Hawera', 'Xit', 'Beryl', and 'Kidling' were the choices.

Botanists are always being criticized for changing the names of plants, but I am inclined to think that the failure of some dealers to conform to approved botanical identification is even more frustrating to the gardener. Too often we order *N. jonquilla* and receive *N. odoratus*; *N. juncifolius* and receive *N. rupicola*; *N. gracilis* and receive *N. tenuior*. In this country those of us who are interested in growing and identifying the less common species work under many disadvantages: the distances that separate us from each other, from libraries where reference material is available, and—most of all—from the places where *Narcissus* species grow wild. We read with envy of apparently easy jaunts to Spain, Portugal, and North Africa to see wild daffodils growing by the thousands—and to collect bulbs!

In the spring and summer of 1957 Dr. FREDERICK G. MEYER, a botanist who was collecting ornamental plants in south-western Europe under a grant from Longwood Foundation, in co-operation with the Plant Introduction Section of the United States Department of Agriculture, collected about fifty small lots of *Narcissus* bulbs. These bulbs were dug while in bloom and sent (packed in plastic bags after careful washing away of all soil) by air mail to the United States Plant Introduction Station, at Glenn Dale, Maryland, where they were immediately potted and grown on in greenhouses. In the late summer of 1958 I was one of the fortunate people who received a selection of these bulbs for use in breeding or for study. The most interesting lot I received consisted of several bulbs of a small sulphur-yellow trumpet tentatively identified as the very rare *N. pseudo-narcissus* subsp. *tortuosus*. (Material has been sent to Dr. FERNANDES for confirmation.) The flowers closely resembled *N. pseudo-narcissus* subsp. *moschatus*, but retained the pale straw-colour instead of turning white. Two bulbs of *N. asturiensis*, from an altitude of about 4,800 feet in the Picos de Europa of north-western Spain, described as growing 3 to 7 inches tall, bloomed here (Washington, D.C.) at about 2 inches; one was pale yellow, beautifully formed, with wide perianth segments and a com-

paratively wide serrated trumpet; the other was a deeper shade, with narrow trumpet and twisted segments, a more familiar form. Bulbs of *N. jonquilla* from the Alentejo district of Portugal, home of the variety *henriquesii* of Sampaio, failed to bloom this spring, as did two other lots of *N. jonquilla* from northern Portugal—comparing these lots will have to wait another year. Plants of *N. bulbocodium* subsp. *obesus* differed from those I had previously in having fine, grass-like leaves. From five bulbs of *N. scaberulus* came the smallest *N. scaberulus* bloom I ever saw—about $\frac{3}{8}$ of an inch in diameter, as well as several larger ones. Some of these variations remind us of the danger of being too dogmatic in describing species by size and height.

A windfall of newly-collected bulbs such as these does not often fall to the lot of an American devotee of small daffodils. We do, however, have a source of “non-commercial” and sometimes unusual material in old southern gardens, farmyards, and cemeteries. Daffodil bulbs were probably brought or imported from England as early as the seventeenth century, and in some cases they have become more or less naturalized. The most common in Virginia is a yellow trumpet locally called ‘Early Virginia’ or ‘Trumpet Major’, but identified as *N. pseudo-narcissus* subsp. *major* var. *spurius*. In Virginia these will thrive wherever they touch the ground—planting is not necessary! The same is true of *N. biflorus*, and over an area extending westward to Missouri. *N. jonquilla* and *N. odoratus* are plentiful farther south, until *N. tazetta* forms become most prevalent in Florida and along the Gulf of Mexico. Some of these “local varieties” are of value chiefly for reasons of sentiment, or because they are so easily available, but there are several of special interest to collectors of miniature daffodils. The small white trumpet known as ‘Moschatus’, or ‘Silver Bells’ is neither the *N. moschatus* of Linnaeus nor the *N. pseudo-narcissus* subsp. *alpestris* Pugsley, and probably not the ‘Silver Bell’ registered in 1908 by WILLIAM WELCHMAN, who began raising daffodils in 1902. This Virginian ‘Moschatus’ is held in much affection by its owners. The nodding blooms have generously flanged trumpets and twisted perianth segments. Their substance is delicate, requiring the protection of some shade. More sturdy are forms of *N. odoratus* and *N. jonquilla* varying in size, form, and floriferousness, and including several very early and extremely late forms of *N. jonquilla*. As some of these are found in territory once held by Spain and France it is tempting to think the bulbs may have come directly from their native homes.

A very small jonquil that may be the *N. jonquilla* var. *minor* (Haworth) Baker listed in the Classified List is occasionally seen, and the “large-



Photo: W. H. Gannaway]

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FIG. 29.—Narcissus seedlings, *N. triandrus albus* N. \times *jonquilla*, raised by Mrs. George D. Watrous, Jr.



Photo: J. E. Downward]

FIG. 30.—A fine pan of *Narcissus rupicola*



Photo: W. H. Gannaway]

FIG. 31.—Narcissus seedling 'Seville' \times *N. juncifolius*, raised by Mrs. G. D. Watrous



Photo: W. H. Gamaway]

FIG. 33.—Narcissus seedling, *N. cyclamineus* × *jonquilla*, raised by Mrs. George D. Watrous, Jr.

cluster jonquil" of certain southern gardens appears to be *N. intermedius* Loiseleur. I hope that in time more of these choice forms will be made available through trade channels—at present they must be obtained chiefly through friends or advertisements in local farmers' marketing papers. The latter method of securing them may lead to disappointment, as the bulbs are advertised under their local common names, and many people, especially in the South, call all daffodils "jonquils".

Several of our daffodil breeders have used the small species in their work, but few really small varieties have been produced in quantities sufficient for distribution. The late EDWIN C. POWELL, of Maryland, in 1946, introduced 'Chicopee' (*N. obvallaris* × *cyclamineus*). This jaunty little flower was usually the first daffodil to bloom in the raiser's garden. I hear that this variety is doing well in some gardens in Maryland and South Carolina. Mr. POWELL's 'Cheyenne' and 'Kiowa', white and cream jonquil hybrids, and 'Hiawassee' ('Cassandra' × 'Paper White') are sometimes referred to as miniature, although nearer standard size for their types.

Mr. GRANT E. MITSCH, of Oregon, and Messrs. JAN DE GRAAFF and Earl HORNBECK of Oregon Bulb Farms are our leading commercial daffodil breeders today. While much of their attention must be given to larger flowers they find some time to work with the small ones. Mr. MITSCH has introduced 'Estrellita', a smallish 6a, and he has several other cyclamineus hybrids and one or more small jonquil hybrids with pink cups on the way toward introduction. This year he is introducing 'Pixie' (*N. juncifolius* × *jonquilla*?), produced by a neighbour, Mr. M. FOWLDS. Similar to Mr. GRAY's 'Kidling', this blooms about two weeks earlier. Mr. MITSCH is also performing a real service by supplying home-grown bulbs of *N. asturiensis*, *N. cyclamineus*, *N. juncifolius*, and *N. watieri*.

From Oregon Bulb Farms has come 'Forty-Niner', a sulphur-yellow triandrus hybrid with what Mr. DE GRAAFF calls a "cut-and-come-again" habit of flowering. This variety, with as many as four long-cupped flowers to the stem, will hardly qualify as miniature, but, because of its comparatively short stem may be very desirable for growing in pots when stocks are more plentiful. Mr. DE GRAAFF has also crossed *bulbocodium* forms with some of the larger varieties. He says the flowers are not pleasing in form, but they are extremely vigorous and have a very long blooming season. Perhaps more should be attempted using *bulbocodiums* and small varieties or species: unconventional proportions might prove attractive in small flowers.

Mr. and Mrs. KENYON L. REYNOLDS, of Pasadena, California, grew many daffodil seedlings in the 1930s and early 1940s, and Mrs. REYNOLDS wrote of a number of their small *cyclamineus* hybrids in the April 1945 issue of *Plant Life*. Pollen of *N. cyclamineus* was used on a number of varieties, including 'Lady Hillingdon'. 'Beryl' and 'February Gold' were used successfully as seed parents, and one seed was obtained from *N. cyclamineus* × 'Paper White'. ('February Gold' × 'Fortune') × 'Pentreath' gave "a delightful midget" with "deep yellow, overlapping, reflexed perianth and a blazing sun-proof cup". At least two of the REYNOLD's *cyclamineus* hybrids were registered, as 'Jack-be-Nimble' and 'Jack-be-Quick', but I have never seen them offered commercially.

Also in southern California, and about the same time, Dr. S. STILLMAN BERRY produced some delightful small daffodils, including a series from *N. jonquilla* × *cyclamineus*. These were illustrated in *The Daffodil Year Book*, 1942. It was these illustrations that first inspired me to attempt hybridizing daffodils, following an unsuccessful effort to buy some of the bulbs.

Parts of our South-west have the mild winters and long, hot, dry summers that make it possible to grow the fall-flowering *Narcissus* species, *N. elegans*, *N. viridiflorus*, and *N. serotinus*, out of doors with little trouble, once the scarce bulbs are obtained. Mr. L. S. HANNIBAL, in southern California, made some efforts to use these species in hybridizing in the early 1940's, and discussed the possibilities and difficulties in the January 1953 issue of *Plant Life*. In recent correspondence Mr. HANNIBAL tells me that in his present location, farther north, he has been making *triandrus*-*tazetta* crosses in the hope of producing "a yellow Silver Chimes", as well as other crosses using *N. triandrus* *loiseleurii*, *N. triandrus aurantiacus*, *N. jonquilla*, and *N. bulbocodium*. He also reports a California version of the "old gardens" story: 'Queen Anne's double jonquil' found growing in the Mother Lode gold mining country of 1848 fame.

Other amateurs here and there are beginning to make crosses using small species and varieties, and in the next few years this phase of interest in miniatures may become more important.

My own efforts at hybridizing have been on a very small scale, but have given me much pleasure. *N. cyclamineus* × *jonquilla*, my first successful cross between species, first bloomed in 1950 and three of the four cultivars are still my pride and joy (Fig. 33). Their sprightliness and the jonquil fragrance, are their chief appeal. Most of the flowers from *N. triandrus albus* × *jonquilla* have had rather long, narrow

perianth segments, but one has wide, overlapping segments, and the flower is similar to 'April Tears', but smaller (Fig. 29). I have used various of the smaller forms of the *jonquilla* and *triandrus* groups, but to date have flowered only one such cross, 'Seville' \times *N. juncifolius* (Fig. 31). The two cultivars resulting from this cross promise to be rapid increasers and free bloomers: one carried six stems this spring, only five years from the seed pod! Unfortunately this lot shows a disconcerting habit of bearing flowers with seven or eight perianth segments instead of the conventional six.

A few of my crosses using *N. jonquilla*, *N. triandrus*, and *N. cyclamineus* on larger flowers have given cultivars worth keeping, although too large to qualify as "miniature". The best have come from 'Odessa' \times *N. cyclamineus*, 'Odessa' \times *N. triandrus albus*, and 'John Evelyn' \times *N. triandrus albus*.

All gardeners need patience, the amateur hybridizer most of all. Our best results always seem to be on the way, rather than already here. This year *N. lobularis* \times *N. cyclamineus* bloomed for the first time, and the flowers were disappointingly similar to each other and to 'Mite', an unregistered 6a that is fairly well known here. One pod of self-fertilized seed may bring a little variation—in four or five years. Other lots whose first blooming I look forward to with special interest are *N. triandrus loiseleurii* \times *poeticus praecox* (and vice versa), 'Seville' \times *N. watieri*, *N. asturiensis* \times a white tazetta, 'Mite' \times *N. calcicola*, *N. bulbocodium nivalis* \times *triandrus loiseleurii*. As some of these seeds have just been harvested I have a long wait ahead, and—"There's many a slip . . ."