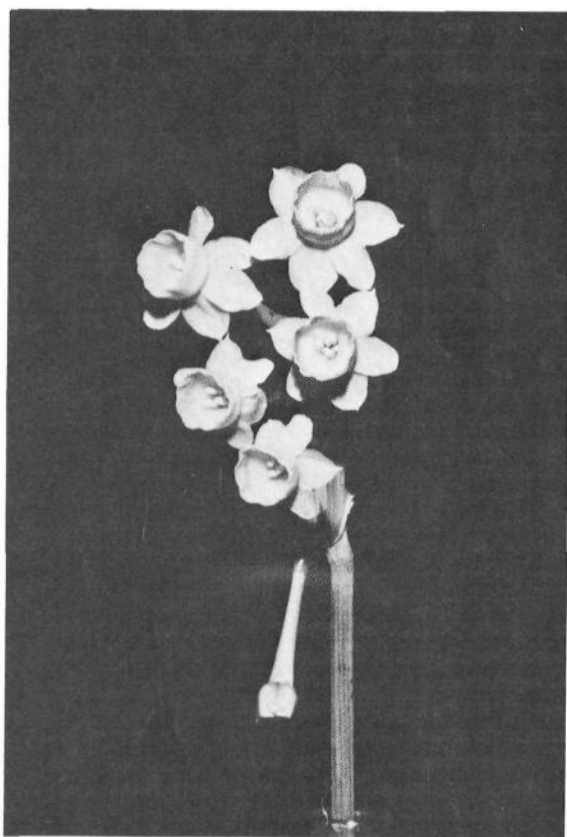


Vol. 17, No. 4  
June 1981

The

**DAFFODIL**

**JOURNAL**



Quarterly Publication of  
**AMERICAN DAFFODIL SOCIETY, INC.**

# The Daffodil Journal

ISSN 0011-5290

Quarterly Publication of the American Daffodil Society, Inc.

Vol. 17

Number 4

JUNE 1981

## OFFICERS OF THE SOCIETY

MRS. JOHN BOZIEVICH, *President* 6810 Hillmead Road, Bethesda, Md. 20034  
MRS. ERNEST K. HARDISON, JR., *First Vice President* 1950 Chickering Road, Nashville, Tenn. 37215  
QUENTIN E. ERLANDSON, *Second Vice President* 9 Burnbrae Rd., Baltimore, Md. 21204  
MRS. MARVIN V. ANDERSEN, *Secretary* 7 Perth Drive, Wilmington, Del. 19803  
WELLS KNIERIM, *Treasurer* 31090 Providence Road, Cleveland, Ohio 44124

## Executive Director — WILLIAM O. TICKNOR

Tyner, North Carolina 27980 (Tel. 919-221-8388)  
All correspondence regarding memberships, change of address, receipt of publications, supplies, ADS records, and other business matters should be addressed to the Executive Director.

THE DAFFODIL JOURNAL is published quarterly (March, June, September, and December) by the American Daffodil Society, Inc., Tyner, N.C., 27980. Second class postage paid at Tyner, N.C., and additional mailing office. Subscription price (including membership) is \$7.50 per year, \$20.00 for three years. Single copies of current or back numbers are \$1.50.

© 1981 American Daffodil Society, Inc.

Chairman of Publications  
Mrs. Robert Cartwright  
1216 Goodloe Dr.  
Nashville, Tennessee 37215  
(Tel. 615-373-0814)

Editor, Daffodil Journal  
Mrs. Paul Gripshover  
Rt. 3, 1206 Natchez Road  
Franklin, Tennessee 37064  
(Tel. 615-790-6202)

Articles and photographs (glossy finish) on daffodil culture and related subjects are invited from members of the Society. Manuscripts should be typewritten double-spaced, and all material should be addressed to the Editor.

DEADLINE FOR THE NEXT ISSUE IS JULY 15, 1981

## SCHEDULE OF MEMBERSHIP DUES IN THE AMERICAN DAFFODIL SOCIETY

Individual.....\$7.50 a year or \$20.00 for three years  
(Juniors, through 18 years of age, \$3.00 a year)  
Family.....\$10.00 a year for husband and wife,  
with one copy of the Journal, or \$27.50 for three years.  
Individual Sustaining Member.....\$10.00 a year  
Individual Contributing Member.....\$15.00 a year  
Overseas Member.....\$5.00 a year or \$12.50 for three years  
Individual Life Membership \$100.00

## ADVERTISING RATES

Advertising rates for the *Journal* are as follows: full inside page, \$75.00; one-half page, \$45.00; one-quarter page, \$30.00. For additional information, write the Chairman of Publications, Mrs. Robert Cartwright.

## IN THIS ISSUE

The California Convention . . . . .	Frances Armstrong	195
Tazetta Breeding at Rosewarne . . . . .	Barbara Fry	203
Bulletin Board . . . . .		206
Financial Statement . . . . .	Wells Knierim	208
Report of Committee on Health and Culture . . . . .	Willis Wheeler	209
Hybridizers and Their Interests . . . . .		210
Citation for the Silver Medal . . . . .		212
Citation for the Gold Medal . . . . .		212
Walter E. Thompson . . . . .		212
From a Letter to Dr. David Willis . . . . .	Brian Duncan	213
Here and There . . . . .		228
In Vitro Propagation of Narcissus . . . . .	Takashi Hosoki and Tadashi Asahira	229
Updating an Old List . . . . .	Marie Bozievich	232
Starring the Poets of F. Herbert Chapman . . . . .	Meg Yerger	236
Judging Miniatures and Species . . . . .	Nancy Wilson	242
Landscaping with Daffodils . . . . .	Michael L. Heger	246
The Tazettas . . . . .	Bertie Ferris	249
Anticarcinogenic Compounds in Narcissus and Amaryllis . . . . .	L. S. Hannibal	250
Beginners Corner . . . . .		250
The Tazetta in Winter . . . . .	Dave Karnstedt	251
The Narcissus in Ancient Literature . . . . .	Arthur V. Gilman	252
Some Miniature Seedlings . . . . .	Mary Lou Gripshover	253

### THE COVER PHOTO

is of *N. scaberulus* 10 Y-Y, winner of the Miniature Gold Ribbon at the National Convention Show, exhibited by Robert Spotts of El Sobrante, California. (Gripshover photo)

## THE CALIFORNIA CONVENTION

FRANCES ARMSTRONG, *Covington, Virginia*

Photos by Mary Lou Gripshover

When my husband, LaRue, and I arrived in San Diego, California, for a weekend stay prior to the 1981 ADS Convention in nearby Newport Beach, we found it difficult to believe that we had come to see daffodils. The weather was balmy, the swimming pool our delight, and tropical flowers were in bloom everywhere. Memories of other conventions and other visits to daffodil gardens both here and abroad flooded our minds. In bitter cold, and sometimes rain and snow, we had tramped through daffodil fields wrapped in layers of clothing. To find daffodils here in summer weather seemed an impossible dream.

Our arrival at the beautifully landscaped Del Webb's Newporter Inn only heightened our apprehension. Marigolds were there, impatiens and petunias, things that bloom in the East long after spring bulbs are gone and forgotten. But we had failed to remember two things: the daffodil is an adaptable plant and California is indeed a fantastic land.

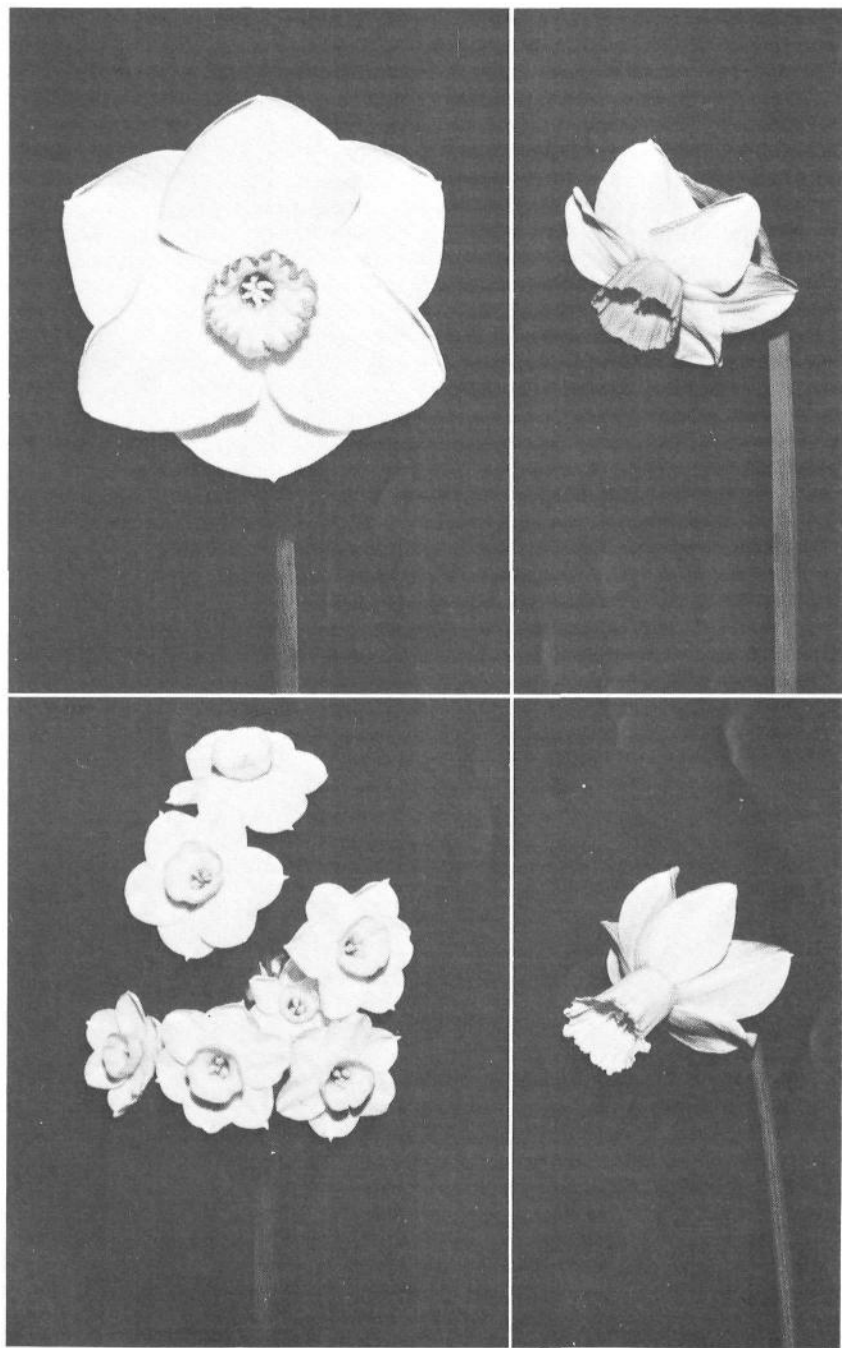
The National ADS Show on Thursday quickly dispelled our worries. Many daffodils were exhibited and many good ones. While a few entries had come from far away places such as Oregon, Delaware, Maryland, Indiana, Tennessee, and Ohio, most of the competitive exhibits were from California.

Our former president, Bill Roesse, won the Gold Ribbon with an immaculate bloom of one of his own originations, La Paloma, 3W-GYR, while the Miniature Gold Ribbon was awarded to Robert Spotts for an outstanding bloom of *N. scaberulus*. Jay Pengra, the very able chairman of the show, was awarded the coveted Carey E. Quinn Gold Medal and also the Silver Ribbon, just compensation for his hard work. Unfortunately, there were no entries in many of the National ADS Show Awards classes. Marilyn Howe, however, put up an interesting exhibit in winning the Carncairn Cup and Gerard Wayne received the Northern Ireland Award proving that Irish daffodils do exceedingly well in Southern California's warm climate. Nancy Wilson earned the Matthew Fowlds Medal with a very large and well colored Foundling, and Harold Koopowitz garnered the Olive W. Lee Memorial Trophy for a cyclamineus seedling as well as the Hybridizer's Award for twelve of his own cultivars. Many of our California members are hybridizing and it was quite evident in this show that they are breeding some unique daffodils, especially from the neglected upper divisions.

The Junior Section was filled with a fine variety of exhibits. Marta Wayne, carrying on the family tradition, won the award for the best standard daffodil in the Junior Section with a Carncairn seedling and took the ADS Miniature White Ribbon as well for three well matched blooms of Snipe entered in the regular classes. Another second generation exhibitor, Nathan Wilson, received two blue ribbons.



Phil Phillips and Jay Pengra admire the winning Carey E. Quinn Gold Medal collection.



Top: left, LaPaloma; right, Foundling. Bottom: left, *N. t. ochroleucus*; right, Koopowitz E576-1 (Binkie  $\times$  cyclamineus).

To those of us from less salubrious climates, the large number of tazettas and poetaz exhibited in this show were a joy to behold. Two stems of lovely *N. t. ochroleucus*, one of which had seven blossoms plus a bud, were a thrill to some of us previously unacquainted with it. Additional tazettas and poetaz were on view in pots and in an exhibition of hybrid seedlings brought over from England by Miss Barbara Fry of Rosewarne in Cornwall.

To round out the show there was an unusually large exhibition from our commercial growers: Grant E. Mitsch Novelty Daffodils, Murray Evans, and Melrose Gardens, all on our West Coast, and from Mrs. J. Abel Smith in England. A splendid educational exhibit on point scoring, forced daffodils, planting in pots, sources of bulbs, and classification completed a very interesting show.



Top: Part of the Murray Evans display. Bottom: Barbara Abel Smith with some of her daffodils.

Our hosts for the convention were the members of the Southern California Daffodil Society, a small group but a dedicated and energetic one. They left no stone unturned in preparing for our pleasure which began on Thursday evening with a sumptuous get-acquainted party in a lovely room adjoining the show room. The 120 of us in attendance had a fine time greeting old friends, meeting new ones, and taking another look at the show.

Friday was our symposium day. Four speakers discussed modern trends in daffodil hybridizing while illustrating with slides the results of their work.

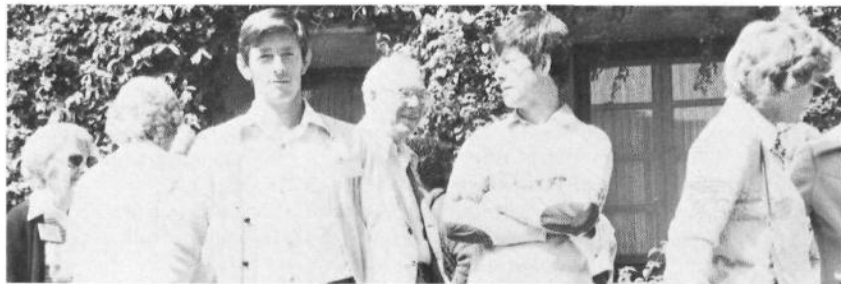
Dr. Harold Koopowitz, Director of the Arboretum at the Irvine Campus of the University of California, spoke of his goal of lengthening the season, already early November to May in his climate, by using the pollen of *N. serotinus* which he can get to bloom any month of the year. Another goal is breeding better tazettas and poetaz. A fortuitous side result from this endeavor has been Division 3 flowers with tazetta vigor for warm climates.

Graham Phillips of New Zealand took us on a tour of what is happening there with new cultivars and with breeding. The eighty slides exposed us to "some of the more virulent symptoms of Yellow Fever." There has been an explosion of work in New Zealand, not only in the first three divisions, but with cyclamineus and tazettas as well.

In Tasmania David Jackson, a third generation hybridizer, finds pleasure and peace in growing daffodils. As in Northern Ireland this small island of 500,000 people has produced an inordinate number of good hybrids, mostly standards. C. E. Radcliff produced and stabilized the first pinks, the first new color in daffodils not found in nature. David's father, William Jackson, Jr., produced the first pink doubles, Lawali, introduced in 1966, and Chimeon, introduced two years later. Tasmania now has nine active breeders.

In 1963 Dr. Tom Throckmorton started breeding in Iowa with two goals: to obtain Division 3 reverse bi-colors and to get more color into Division 3 flowers. Both goals have been achieved. His slides vividly showed the changes in color of his "toned" daffodils as they mature. "Toned flowers are fun to watch," he says, "as they change from day to day." Dr. T. and his wife, Jean, share in the joy of picking a bouquet of "something you did." "Breeding can be fun," he said, "and you just may get other things outside your immediate goal."

After lunch Miss Barbara Fry of the Rosewarne Experimental Horticulture Station, Cornwall, England, told us of breeding for the cut flower trade there. Many tazettas, especially Soleil d'Or, are grown on the Isle of Scilly which is frost free. In some years these bloom as early as October. The late Harry Tuggle of Martinsville, Virginia, discovered the poetaz, Matador, was fertile. At Rosewarne it has been crossed with Soleil d'Or with good results. Some of



Graham Phillips, Tom Throckmorton, and Robin Hill enjoy the tour.

these bulbs have been sent to Scilly, and Rosewarne is waiting to see what they will do there. Miss Fry also discussed other crosses tried at Rosewarne and showed us seedlings from these crosses. Bulbs are put into plastic netting with plastic clips in between and thus planted. Three years later they have increased within the nets. "Whatever we plant, we know we are going to lift," she says.

After some brief instructions by Phil Phillips of New Zealand on packing and exhibiting daffodils, a judges' refresher course was taught by Bill Reese, who showed new cultivars, and by Jack Romine who gave us a lesson in point scoring graphically and cleverly illustrated with large cut-outs.

Judging was also the concern of the remainder of the day's program. "Judging Miniatures and Species" was Nancy Wilson's topic while Dr. Koopowitz gave us points to consider in judging Divisions 5-12. Having listened to all these informative speakers, those of us who were there should not only be better judges but better exhibitors as well.

Following the Friday evening banquet President Marie Bozievich presided over the Annual Membership Meeting. She reported the Society to be vigorous, healthy and growing, having passed the 1600 mark in membership. The *Journal* has expanded to 64 pages and won an award from the National Council of Garden Clubs this year. Our test gardens have been greatly expanded and will be monitored and correlated by the chairman. A new committee is working on an award for a garden daffodil and the Handbook Committee is preparing a new handbook projected for 1981. We have two new round robins and additional members in several of the old ones.

The treasurer, Wells Knierim, reported the Society to be in good financial shape. Future profits from the conventions will be added to the research fund which now totals \$15,068.

At this time we were welcomed by the convention chairman, the very efficient and always serene Marilyn Howe.

Mrs. Jesse Cox, chairman of the nominating committee, presented her report which was unanimously adopted.

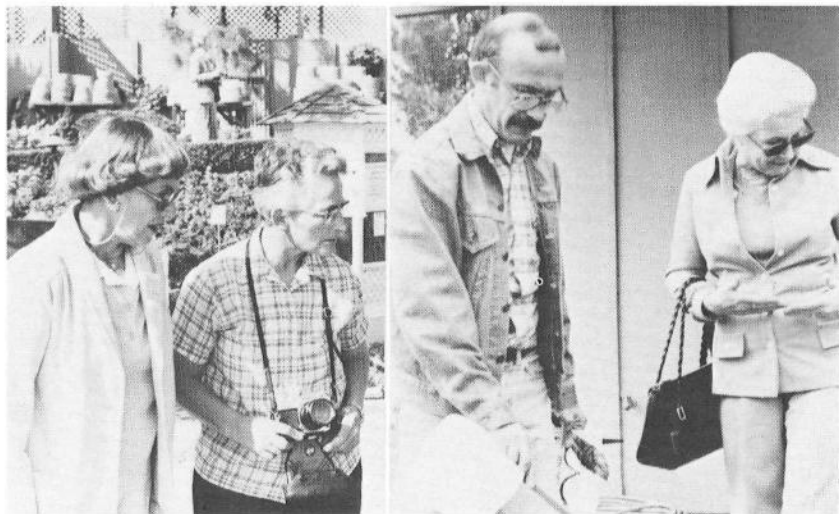
The meeting was closed with the awarding of the Society's medals and National Show Awards. For the second consecutive year both the Gold and Silver Medals of the American Daffodil Society were awarded and both to most richly deserving persons. Miss Barbara Fry was the recipient of the Gold Medal for work of a preeminent nature in the advance of the daffodil and the Silver Medal for service to the Society was awarded to our hard working and beloved Louise Hardison, first vice-president of ADS.

Our day long bus tour on Saturday took us first to Rogers Garden where we were excited by their colorful display of over 500 kinds of plants and every possible garden accessory all arranged in alluring garden settings. Their claim of being "America's most beautiful garden center" was not disputed by any of us.

We were greeted at the arboretum of the University of California at Irvine by our friend, Dr. Koopowitz. Here to our amazement we found daffodils happily growing in trenches to catch the sparse rainfall while we walked along the hills between the rows. What a switch for us easterners!

Many enticing plant collections were to be seen at the arboretum, no doubt the most outstanding being the collection of South African bulbous plants growing in a screen house. All have been grown from seed by Dr. Koopowitz and therefore are free of the diseases to which they are subject in their native land.





Left: Polly Anderson and Barbara Fry at Rogers Garden. Right: Harold Koopowitz and Helen Trueblood at the Arboretum.



Jack Romine and Marilynn Howe at the Arboretum.



Jean and Tom Throckmorton, Quentin Erlandson, Pat Lee, and Donald King pause for refreshments at the Sherman Gardens.

A pleasant drive south brought us to San Clemente and a delicious lunch at El Adobe Dining after which we visited the lovely old Mission San Juan Capistrano. (The famous swallows seemed to have turned into pigeons for our visit.)

The Sherman Library and Gardens in Corona del Mar was our final stop. Here we discovered an artfully constructed series of intimate gardens with an astounding variety of plants in bloom, from daffodils and camellias to zinnias and roses, from the familiar to the exotic, all immaculately maintained and neatly groomed. We could have lingered for many hours but a late afternoon Board of Directors meeting called us back to the Newporter Inn.

After the bountiful buffet dinner Saturday night our overseas members were recognized by our president. Eighteen of them were with us from Holland, England, Northern Ireland, Canada, New Zealand, and Australia. Our overseas membership is growing rapidly, and having some of our international friends with us adds much interest to our meetings.

An invitation to the 1982 convention to be held in Nashville, Tennessee, on April 1 and 2 was issued by Sally Stanford. It was also announced that the 1983 convention will be in Williamsburg, Virginia.

Following dinner Wells Knierim entertained us with slides of daffodils growing under natural conditions. His expert and artistic pictures of daffodils as they grow in gardens all over our country and in other lands, too, was a fitting finale to our glorious three days in the never-never land of Southern California. To the members of the Southern California Daffodil Society we give our grateful thanks.

## TAZETTA BREEDING AT ROSEWARNE

BARBARA FRY, *Cornwall, England*

The Isles of Scilly have a unique climate in Northern Europe. They are situated about 20 miles off the coast of Cornwall with an oceanic climate which is frost free. *Narcissus tazettas* are grown very successfully throughout the winter months for cut flower production, the main cultivar being Grand Soleil d'Or.

By 1964 the Scillonian growers were not producing very heavy crops of Soleil d'Or which are their mainstay of income during the winter months. There may have been several reasons for this but it was thought that the main problem was the many strains of virus present.

It was suggested that since at Rosewarne we had started a breeding program for early trumpet and cup daffodils suitable for cut flower production, we might also attempt a similar program for tazettas. They would need to be early flowering, preferably with yellow perianths and orange coronas.

Soleil d'Or is recorded as being fertile both as a seed and pollen parent and we thought it would be the best parent to use since it is also the best shape and color of its type.

We would have to do all the pollinating in a heated glasshouse, and bulbs of Soleil d'Or were obtained from Scilly to pollinate during the winter of 1965. We used the few yellow tazettas available at that time together with the pollens of many bright yellow-red long cups. We produced only three seeds from British Charm pollen and six seeds from Armada. These germinated and grew eventually into bulbs but still had not flowered when seven years old, so were discarded. We also had a few seeds from French Sol, a rather ragged pale yellow tazetta from France. Some of these germinated but did not thrive at Rosewarne, so these were sent to Scilly where two yellow-gold selections were kept.

In 1966 and 1967 we again pollinated large numbers of Soleil d'Or with a wide range of pollens from tazettas and red cups. We tried higher temperatures and supplementary lighting but still produced no seed.

By 1968 we had collected together a number of yellow perianth cultivars. These included Autumn Sol which we had from New Zealand many years ago. Since it breeds true from seed it is probably some obscure species. It has small florets of pale, rather muddy, sulphur color and gold straight sided cups. Its main value is that it flowers at Rosewarne from September or October through to December. We also acquired Newton, an early yellow tazetta growing mainly in Tresco at that time. We had some Paper White and a yellow tazetta from France which we have registered as French Sol. From Mr. Hannibal in California we acquired a few bulbs of *tazetta aureus*. We again included Soleil d'Or, which were housed over a period of eight weeks, and nearly 100 crosses were made but it was again a miserable failure as were all the red cups pollinated with tazettas.

However, we did have success using the other cultivars for the first time and viable seed was produced by intercrossing Autumn Sol, Newton, French Sol, and *aureus*. The seed was sown in open frames, lifted two years later and planted in beds in the open. Surprisingly a few flowers appeared in November, 1972, and continued until late January, 1973. We covered them with lights when it became frosty since we do not know how hardy they are. A number of selections were made over the next two years. Some of the best earlies came

from Autumn Sol and Newton crossed both ways. The brightest corona colors came from French Sol  $\times$  Autumn Sol and include two clones which open with bright orange red coronas which are much more colorful than Soleil d'Or but of quite a different shape. Seedlings with *aureus* as one parent flowered later in December - January and some had brilliant dark yellow perianths tending to reflex with rich gold shallow coronas. Some had over long pedicels while some are very free flowering. All these seedlings had ten to sixteen florets on the main stems and are highly scented.

We have sufficient bulbs from the best of these selected clones to plant on our sub-station in Scilly where we can test them under better conditions without protection. At Rosewarne this series generally flowers from early October to late January but in Scilly the earliest flowering clones tend to start a little later. This may be due to their drier sandy soil preventing early rooting. By November they continue to flower and grow more steadily with longer stems in Scilly where there is less variation in temperature.

We are growing a few bulbs of each at Rosewarne which we are prepared to cover if severe frost threatens but we have also planted bulbs of some clones in the open to test for frost hardiness. We are also growing a few virus tested bulbs of each in an aphid proof house.

From this series we should be able to select a succession of clones to flower before natural season Soleil d'Or in January in Scilly. At present the Soleil d'Or crop is forwarded to flower from late November by multiple burning over of the crop in the ground, using propane burners.

I started a correspondence with Harry Tuggle in 1969 shortly before his untimely death. We exchanged ideas and information on tazetta breeding, particularly using Matador which he had found to be fertile.

We eventually acquired his mixed seedling stocks of Matador  $\times$  Soleil d'Or, *jonquilla* and *Jezebel* mixed with *jonquilla* from which over the years I have made a number of interesting selections. The Matador  $\times$  Soleil d'Or seedlings flower through the winter and the best of them have bright yellow perianths with orange-red coronas and up to six florets. By 1971 I had a few bulbs of Matador flowering in a pot under glass which I pollinated with Autumn Sol, French Sol, Newton, and *tazetta aureus*. From these I made two selections from Autumn Sol, the most interesting of which has up to six large florets of white with bright gold coronas, a rather extraordinary color from such parents. The time of flowering has varied at Rosewarne from late October to February. However it is growing vigorously and we had sufficient bulbs to plant some in Scilly last year, where we can see better how it will perform.

During 1971 I included some *poeticus* to use both ways with the fertile yellow tazettas. I thought that there was a better chance of producing seed but that the flower colors might be poor by crossing whites with yellows, and this was generally so using the tazettas as seed parents. Seed set was better than usual and germination about 50%. Despite the fact that the tazettas were all autumn or winter flowering, most tended to flower in the spring. The best flowers came from using the *poeticus* as seed parents which flowered during March and came in various shapes and sizes with white perianths and yellow coronas with three or four florets per stem. While some red or orange rimmed cups might have been expected, in fact only one or two had a hint of gold in them.

Two different but rather attractive clones came from using *tazetta aureus* pollen on *Caedmon* and on *poeticus Ornatus Maximus*. Both have pale clear yellow rounded perianths with greenish yellow coronas and up to six florets each. One rather odd result from this batch of pollinations came from a yellow unnamed *tazetta* crossed with *poeticus Ornatus*. This flowers from November through the winter and often has as many as 18 small florets of white and yellow. This would probably flower more regularly in Scilly.

Later pollinations included other *poeticus* as seed parents, using various *tazettas* as pollen parents including *Gloriosus* for the first time. Some seed set and grew to flower; and the best of all came from the poets crossed with *Gloriosus*, most of which had three or four florets, but one from *Cantabile* has six or eight florets. All are white with yellow coronas in varying shapes on fairly tall stems and all follow the poet parent for time of flowering from mid-March into April.

In 1970 we again potted *Soleil d'Or* and pollinated them with both *tazettas* and red cups. In this year we produced a few seeds from red cup pollens. Some of these germinated but proved to be very weak growing and never flowered. Just one selection was made which might be useful from *Soleil d'Or* × *Porthilly* which is increasing well. This has two to four florets, 7 cms in diameter with pale yellow perianths and bright yellow coronas, flowering in late February. I made about 50 pollinations on Autumn Sol using cups and poets resulting in some seed from *Raeburn* which eventually produced flowers of very poor colors and shapes. I also had one seed from *Ballymarlow* pollen, the bulbs of which we have kept. It has three to four florets on tall stems with broad, smooth pale lemon perianths 6.5 cms in diameter and coronas of dark orange. Despite its Autumn Sol parentage it does not flower until early March. In 1975 I used its pollen on *Matador* resulting in three seeds, one of which grew. This flowered in March, 1980, with four florets on a tall stem with clear yellow perianths and dark orange-red coronas which were larger than the seedling parent. I repeated this cross in 1980 producing 30 seeds most of which have germinated. It seems rather extraordinary that the pollen is fertile from a *tazetta*—long cup cross, but even more odd is that in 1976 I collected 29 seeds from open pollinated flowers growing outdoors. From the arrangement of style and stamens these were probably selfed. Only four bulbs grew, but one flowered for the first time in December on an eight inch stem with three florets and only three leaves through more foliage has grown since. The florets were a little smaller than the parent but were otherwise very similar. In mid-February another bulb flowered with three florets which were larger and the corona even more brightly colored. Both flowers bear some resemblance to the seedling parent. In 1979 I collected a further 57 seeds open pollinated and about half have germinated and are growing well with five or six leaves each in a heated glasshouse.

Each year I pot some *Matador* with varying results for I do not always obtain seed. I have found that many of our own autumn/winter flowering seedlings are fertile and I have tried the pollen of many of these with interesting results. The flowering time is shifting to earlier flowers with some in autumn and are poetaz in appearance. Many are well shaped with brilliant orange or red coronas and perianths varying from deep cream through to bright yellow, usually with four to six florets on each stem. I also have a few bulbs resulting from crosses between *Matador* and red large cupped cultivars. A few flowered in 1980 and most of these first stems were single headed but a few were twin headed and about 7 cm in diameter.

For the last three or four years I have been working on white tazettas, hopefully to produce earlier flowers than those at present available for cut flower production in Scilly. It would be useful to fill the gap between Paper White in November - December and Scilly White in early February.

To breed tazettas and poetaz, difficult as they are, requires patience and perseverance. Repeating crosses over and over again results sometimes in success. The range of pure tazettas to use as parents is narrow but we have eventually bred some interesting flowers from them which are different in appearance and time of flowering. They can be very frustrating to work with compared with most other divisions in that even when they have apparently set seed, the pods will swell up and then abort. They can even reach the stage when seed is apparently ripe, only to find empty seed shells. When seed is produced, I find that germination is not very high, though it is better since we have been growing them under glass. Sometimes, bulbs will grow into seven or eight leaf plants and yet never flower. From our experience, Matador offers great opportunities in producing new poetaz cultivars.

MRS. J. ABEL SMITH

*Offers*

PINK DAFFODILS

Also other choice EXHIBITION and DECORATIVE varieties including NEW HYBRIDS raised at:—

Orchard House

Letty Green nr. Hertford, England

*Descriptive list free on application*

## BULLETIN BOARD

Where Can I Get . . . ?

**CULTIVAR:**

Lanena 1 W-P

Eastern Dawn 2 W-P

Goldeneye 3 W-Y

**DESIRED BY:**

Mrs. Orville Nichols, 11119 College Rd.

Olive Branch, Mississippi 38654

"Tag" Bourne, 1052 Shadyhill Drive

Columbus, Ohio 43221

Find it Here . . .

Offsets of the poets Felindre, Lady Serena, Milan, Perdita, and Stilton available in exchange for poets—or miniatures—I do not have. Send self-addressed, stamped envelope stating what correctly named poets or miniatures you would like to trade to Mrs. M. S. Yerger, P.O. Box 97, Princess Anne, MD 21853.

## MINIATURE SEEDLINGS

By action of the Board at the March 25, 1981, meeting, miniature seedlings are permitted to be entered in all classes for miniatures on the Approved List of Miniatures. They must be properly identified by the originator. This would now permit such seedlings to be exhibited in the Watrous collection. A word of caution: once the seedling has been named, it *can not* be shown in a miniature class *until* the Miniature Committee has approved it and the name has been published in the *Journal* on the Approved List.

## TEST GARDENS

Requests have been received to start five new test gardens. If you can supply three bulbs each of correctly named, clean stock, please send a list of your available cultivars to Test Garden Chairman Ruth Pardue, 2591 Henthorn Road, Columbus, Ohio 43221. Instructions about where to send which cultivars will be sent to you. Hopefully this way, duplications can be avoided.

## DAFFODILS TO SHOW AND GROW

In the list of hybridizers in *DTS&G*, please make a note that E. L. Agee is from the USA.

## COMING EVENTS

October 23-24, 1981	ADS Fall Board Meeting, Dallas, Texas
April 1-3, 1982	ADS Convention, Nashville, Tennessee
April, 1983	ADS Convention, Williamsburg, Virginia

## A COLONIAL GARDEN

The following are listed as authentic for restoring a colonial garden in *Colonial Gardens* (Rudy Favretti, Gordon De Wolf, Barre Publishers, Barre, Massachusetts, 1972).

*Narcissus jonquilla*: named in Gerard's Herball, 1596.

*Narcissus poeticus*: Old Pheasant's Eye, England, 1590.

*Narcissus tazetta*: Gerard's Herball, 1596; Also observed by Clusius, January, 1565, in Spain and Portugal and in February, 1566, at Gibraltar.

*Narcissus triandrus*: Clusius says a French herbalist named Nicolas le Quelt, who searched the Pyrenees and Spain every year, introduced it in 1599.

*Narcissus odoratus*: Clusius observed them in flower in April, 1595, in the garden of Theodore Cluyts, prefect of the Academic Garden at Leyden, Holland.

*Narcissus pseudonarcissus*: Parkinson, 1629, lists several doubles. Native in Belgium and Portugal, naturalized in Scandinavia at the period.

I am interested in comments about the above dating but I also am anxious to know sources who might donate any of the above to an educational project, namely the restoration of a colonial garden at Rockingham, General Washington's Headquarters in Rocky Hill, New Jersey. Donations are tax deductible and may be sent to Adra Fairman, 88 N. Stanworth Drive, Princeton, N.J. 08540.

**AMERICAN DAFFODIL SOCIETY, INC.**  
**INCOME AND EXPENSES — YEAR ENDED DECEMBER 31, 1980**

**INCOME:**

Dues Paid in 1980 .....			\$10,078.47
Life Memberships Paid in 1980 .....			900.00
Contributions (in memory of John and Betty Larus) .....			10,011.00
Sales of Books, Supplies, etc.:	Income	Expenses	
R.H.S. Yearbooks .....	\$ 701.25	\$ 595.88	
A.H.S. Handbooks .....	300.00		
Daffodils to Show and Grow .....	1,135.35	450.00	
Handbook for Judging .....	168.59		
Binders for Journals .....	6.80	554.19	
Old RHS and Out of Print Books .....	745.59	252.43	
A.D.S. Publications .....	351.53		
A.D.S. Membership Pins .....	390.00	313.00	
Data Bank Printouts and Binders .....	594.23	669.52	
Show Entry Cards .....	463.00	255.94	
Color Charts .....	125.00	168.86	
Daffodils in Ireland .....	115.00		
Medals, Ribbons and Trophies .....	37.80	553.59	
Registration Fees .....	39.00	28.00	
Misc. — Barr .....	8.00	—	
	\$5,181.14	\$3,841.41	
Advertising in Journal .....			1,339.73
Judges' Certificate Fees .....			780.00
Slide Rentals .....			52.00
Interest Received .....			228.00
Convention Surplus (Memphis) .....			3,295.48
Fall Board Meeting Surplus (Indianapolis) .....			3,102.81
Schools Surplus .....			917.78
			74.28
<b>TOTAL INCOME</b> .....			<b>\$30,779.55</b>
<b>EXPENSES:</b>			
Daffodil Journal-Printing, Envelopes and Mailing .....			\$9,009.14
Roster-July 1, 1980 .....			880.13
Office Expenses:			
Printing and Supplies .....	\$ 624.00		
Postage .....	600.00		
Executive Director .....	3,000.00		
Social Security Tax .....	183.88		4,407.88
Regional Vice-Presidents (Newsletters) .....			555.83
Secretary .....			91.68
Committees .....			200.98
Donation to Cancer Society (in memory of Mildred Simms) .....			500.00
Miscellaneous .....			126.57
<b>TOTAL EXPENSES</b> .....			<b>\$15,772.21</b>

**AMERICAN DAFFODIL SOCIETY, INC.**  
**BALANCE SHEET — DECEMBER 31, 1980**

**ASSETS:**

Cash in Bank-Bank of North Carolina .....		\$ 2,550.55
Savings Certificate, 6½%, expires 3-1-81, New Canaan Sav. Bk. ....		3,393.60
Savings Certificate, 7½%, expires 5-1-82, New Canaan Sav. Bk. ....		2,436.10
Savings Certificate, 6%, expires 5-17-81, Bk. of No. Carolina .....		2,612.50
Money mart Assets, Bache .....		7,920.11
Corporate Income Fund, Bache, expires 4-28-81 .....		15,400.50
Ford Motor Credit Corp., 8½% Bonds due 3-15-91 .....		10,000.00
Accrued Interest not due .....		247.90
Inventory of Publications:		
R.H.S. Yearbooks '79 (35) .....	\$140.30	
Old R.H.S. Yearbooks and Out of Print Books (91) .....	204.50	est.
A.H.S. Daffodil Handbooks (987) .....	98.70	
Handbook for Judging (580) .....	187.92	
Binders for Journals (100) .....	530.00	
Show Entry Cards (11,400) .....	145.92	
Daffodil Data Printouts (24) .....	240.00	
Daffodil Data Binders (74) .....	213.12	
Brief Guide to Growing Daffodils (1675) .....	376.88	
Daffodils in Ireland (33) .....	100.65	
A.D.S. Membership Pins (69) .....	308.43	
R.H.S. Color Charts (7) .....	80.15	2,590.47
Inventory of Medals and Trophies:		
Medal Dies .....	15.00	
Gold and Silver Medals .....	493.66	
Larry M. Mains Sterling Trays, min. replicas (6) .....	270.00	778.66
<b>TOTAL ASSETS</b> .....		<b>\$47,930.49</b>
<b>LIABILITIES:</b>		
Dues Paid in Advance (in whole or in part) .....		\$ 7,849.56
Life Memberships .....		11,400.00
John and Betty Larus Educational Research Fund .....		15,768.24
Net Worth .....		12,912.69
<b>TOTAL LIABILITIES</b> .....		<b>\$47,930.49</b>



#### AUDIT STATEMENT

The above income statement and balance sheet for the year 1980 were prepared using the cash receipts and disbursements records maintained by the Executive Director. The balances were verified with the bank statement and account statements of the financial institutions indicated. The inventory of publications is shown at cost except that no value is included for surplus ADS publications. In addition to the assets shown, the Society has a substantial library of books on daffodil culture, many of which are rare and valuable, and several colored slide collections. It also has a number of memorial silver trophies awarded at convention shows. The slides, books, and trophies were mostly contributed and no value is included.

Dues received in the current year, covering periods beyond the end of the year, were prorated and amounts covering such future periods are shown as a liability as are life memberships.

Receipts for dues and other income were verified with deposit slips and disbursements were checked with suppliers' invoices and cancelled checks signed by the Treasurer and the Executive Director.

Based on this review, it is my opinion that this report presents an accurate statement of the financial condition of the Society and that the records are being maintained in a sound and orderly manner.

WELLS KNIERIM

### REPORT OF THE COMMITTEE ON HEALTH AND CULTURE March 25, 1981

In the March, 1980, number of the *ADS Journal* I quoted from the revised USDA Leaflet #444 a recommendation that DYLOX R be used as a replacement for chlordane for the control of the Narcissus Bulb Fly. In doing so I was unaware that it might be difficult for the Society's members to find that chemical.

Recently one of our members wrote to report he had been unable to find DYLOX in his area. When I looked for it in the Gainesville region I had the same experience. I then wrote to Dr. Ralph E. Webb of the USDA who had written the leaflet, asking for help. A few days ago I received his reply. He suggested I get in touch with the supplier in my region for more information. I did so and am now able to list the free phone number of each regional city where the DYLOX manufacturer, the Mobay Chemical Corporation, has an office. I suggest that interested persons phone the appropriate number for more information as to a local source of the chemical.

Additional information on this subject has come from our former president, Dr. William Bender, who has learned that DYLOX is sold in cartons of ten units, each unit being five pounds in weight. Total cost of the ten units is \$220.00. In other words it is apparently put up for the big commercial grower and is not intended for the home gardener.

The Mobay phone numbers are:

Portland, Oregon	800-547-9671
Fresno, California	800-374-2196
Omaha, Nebraska	800-228-2247
Dallas, Texas	800-527-9685
Kalamazoo, Michigan	800-253-3282
Memphis, Tennessee	800-238-6370
Hopeville, Georgia	800-241-8326
Cherry Hill, New Jersey	800-257-8286

WILLIS H. WHEELER, *Chairman*

## HYBRIDIZERS AND THEIR INTERESTS

An enthusiastic group of hybridizers met for breakfast at the California convention, and among other things, decided that a list of hybridizers and their primary field of interest should be published. Should you find that you share someone's interest, perhaps a mutually beneficial correspondence resulting in shared ideas, pollen, and bulbs could be begun. If your name is not on the list, please send your name and area of interest to Dr. William Bender, 533 S. 7th Street, Chambersburg, PA 17201, Chairman of the Breeding and Selection Committee.

### NAME AND ADDRESS

Bill and Laura Lee Ticknor  
Tyner, North Carolina 27980

F. R. Coles, 29 Glenburnie Rd.  
Mitcham 3132, Australia

Nancy Wilson, 571 Woodmont Ave.  
Berkeley, CA 94708

Nathan Wilson, 571 Woodmont Ave.  
Berkeley, CA 94708

Graham J. Phillips  
R.D. 1, Hamilton, New Zealand

Robin Hill, Kaimatarau Road  
No. 3 RD Palmerston North  
North Island, New Zealand

David Jackson  
P.O. Box 77, Geeveston, Tasmania  
7116

Barbara Fry  
Rosewarne Experimental Station  
Camborne, Cornwall, England

Helen K. Link  
Box 84, Brooklyn, Indiana 46111

Phil Phillips  
Box 177, Otorohanga, New Zealand

Gerard H. Wayne  
9509 Gloaming Dr.  
Beverly Hills, CA 90210

Ken Dorwin, 1124 Dulzura St.  
Santa Barbara, CA 93108

Bill Roese, 903 Amberley Place  
Santa Maria, CA 93454

Jay Pengra, 954 St. Katherine Dr.  
Flintridge, CA 91011

### SPECIAL INTEREST

Miniatures, "red" trumpet, "red"  
daffodil

Early yellow trumpets, Division 6  
and 8

Miniatures

Doubles, a clean neat split, tazetta  
split, miniature splits, cyclamineus,  
very small doubles.

Tazettas, pink/yellows, "earlies" in  
all divisions, 1 W-P and 1 W-R

Good contrasting 1 W-Y and 2 W-Y,  
Pinks of good clear color, as well as  
being consistent.

3 Y-Y, 3 W-P, improving 1 W-P,  
1 W-Y

Early flowering tazettas and poetaz.  
Early flowering cut flower cups and  
trumpets. Disease resistance in new  
seedlings, particularly commercial cut  
flower types. Early flowering doubles.  
Pink cupped miniature triandrus

Improving everything except flowers  
that change color.

6 W-P, 6 P-W (!), 6 P-P (!!)

1 W-GWW of exceptional vigor and  
show qualities that are *mid* or early  
mid-season—no later.

Pinks, tazettas

Early blooming, colorfast flowers  
that grow well in my particular  
region.

Standards & miniatures that perform  
well in our area.

- Barbara Abel Smith, Orchard House Interested in raising 3 Y-W, 3 W-P.  
Letty Green, NR Hertford, SG14-2N2  
England
- Roberta C. Watrous  
5031 Reno Rd., N.W.  
Washington, D.C. 20008  
Miniatures, especially using  
*cyclamineus* and *jonquilla*
- W. Lemmers, Kanaalstraat 266,  
Lisse, Holland  
miniatures, especially bulbocodiums
- Marilynn Howe, 11831 Juniette,  
Culver City, CA 90230  
Miniatures, Div. 1, 2, 3
- Bill Pannill, P.O. Box 5151  
Martinsville, VA 24112  
General
- Tom D. Throckmorton  
1420 Woodland Ave.,  
DesMoines, Iowa 50309  
Toned daffodils and highly colored  
Division 3's
- Jack Romine  
2065 Walnut Blvd.,  
Walnut Creek, CA 94596  
Bulbocodium hybrids, miniatures,  
tazettas, general
- Polly Anderson, 4810 Palm Dr.,  
La Canada, CA 91011  
Fall blooming tazettas, tazettas  
crossed with standards, orange  
perianth suffusions, reverse  
yellow/pinks, pinks in all classes,  
split coronas  
*Jonquilla* and miniatures
- George E. Morrill, 16302 Apperson  
Blvd., Oregon City, OR 97045  
General
- Otis Etheredge, 600 Penn Creek Rd.,  
Saluda, SC 29138  
General
- Mrs. Merton Yerger, P.O. Box 97  
Princess Anne, MD 21853  
Poets and miniature poets
- Mary Lou Gripshover  
1206 Natchez Rd., Rt. 3  
Franklin, TN 37064  
Miniatures, pinks, whites, crosses  
with species when species happen to  
bloom.
- Mike Temple-Smith, 72 Riawena Rd.  
Montagu Bay, Tasmania 7018  
Australia  
Novice; 1 Y-R, 1 W-R, 4, 11, 5, 6,  
7, 8
- Mrs. Margaret Dorling, Amey's Track  
Via Foster, 3960, Victoria, Australia  
General
- Bonnie Bowers, R. 1, Box 41K  
Volcano, CA 95689  
General
- Kay Haines Beach, Box 13246  
Edwardsville, KS 66113  
General
- Richard Ezell  
1341 Lincoln Way East  
Chambersburg, PA 17201  
Neat doubles, expanding the color  
range of doubles, 4 Y-Y, rot-resistant  
whites, 3 W-P, miniatures  
3 Y-W, standards
- W. A. Bender  
533 S. 7th St.,  
Chambersburg, PA 17201
- Mrs. Ben M. Robertson,  
P.O. Box 123, Taylors, SC 29687  
General

## CITATION FOR THE SILVER MEDAL

One particular member of the American Daffodil Society stands out for her service in promoting interest in daffodils over a period of many years. As a teacher in the Judging Schools, she has taught us to discern the merits of the blooms we judge and to examine each entry with fairness and appreciation. She has inspired many of us to be critical in selecting the varieties which we ourselves grow and to exhibit whenever the chance arises.

The American Daffodil Society has never had a more avid exhibitor and competitor. She knows and loves all her flowers, presenting each to its best advantage. She has successfully carried blooms to exhibit throughout the United States. We always look forward to her blooms at the National Shows.

She is the spirit of the Middle Tennessee Daffodil Society and has brought this organization to its present state of activity. Over the years she has been instrumental in planning for three National Conventions in Nashville. Her garden is always open to daffodil enthusiasts.

An international goodwill ambassador for daffodils, she is known, loved, and respected throughout the daffodil-growing world.

The ADS takes pleasure in awarding the Silver Medal to Louise Hardison.

## CITATION FOR THE GOLD MEDAL

The Gold Medal of the American Daffodil Society is presented in recognition of creative work of a preeminent nature in the understanding and advancement of daffodils.

The American Daffodil Society has decided to bestow this award this evening to a remarkable person, who has devoted over a quarter of a century to our favorite flower.

During this time the person has been instrumental in producing a new range of flowers and had a strong influence on other hybridizers around the world. Hard earned knowledge has been freely and unstintingly shared and this will benefit all hobbyists in the long run. The flowers created by this breeder are not, however, very familiar to the average daffodil hobbyist but instead are destined to brighten the homes and bring joy to the heart of the everyday citizen.

The Gold Medal of the American Daffodil Society is not bestowed casually or lightly. Frequently many years elapse between its being given. It gives me much pleasure to announce that the American Daffodil Society wishes to recognize and reward services given to the horticultural world in general and to daffodils in particular by Miss Barbara Fry.

## WALTER E. THOMPSON

Resolved that the Board of Directors of the American Daffodil Society, Inc., here assembled regrets to receive word of the sudden death of its beloved past president and loyal former board member, Walter E. Thompson, and hereby extends to Mrs. Walter E. Thompson its deepest sympathy and sense of loss.

—From the Board of Directors Meeting, March 28, 1981

## FROM A LETTER TO DR. DAVID WILLIS

BRIAN S. DUNCAN, *Omagh, Northern Ireland*

*(from the Newsletter of the Northern Ireland Daffodil Group, January, 1981)*

A request to extend my "Aims on Breeding" article to cover background information, etc., has caused much self-searching to trace the origin of my interest in daffodils. We never do know where a step will lead and my difficulty is in pin-pointing that first step which set me on the daffodil trail.

A simple 'why' can be a most difficult question and when once put to me with regard to my daffodil breeding activities I confess I was lost for a satisfactory answer. My head was a whirl of incoherent and confused reasons. That anyone should even ask such a fundamental question was almost inconceivable and unthinkable. In answer I was only able to say "Just because I likes 'em" and quoted the old gardener's saying:

*"Different people has different h'opinions,  
Some likes carrots and some likes h'onions."*

The question lingers, however, and brings me back to consideration of that first step, the influences, the interest, the personal contacts and exposures to daffodils which might have paved the way to a most absorbing and rewarding pastime.

Though I would not rule out heredity and environment as factors, I suspect that being born the fifth of six sons of a County Antrim dairy farmer may be more important. There was no hope of a farm being provided for a fifth son and in any case my interests, as a boy, put bird watching, airplane spotting and modelling, football, hockey, cricket, and even pressing wild flowers before milking, mucking out, and making hay. As a result I went to an Agricultural College, after leaving school, and I took a mild interest in agricultural botany and plant recognition. I was fascinated to learn that man could improve plants by cross breeding. I learnt a little about the famous Ulster varieties of potatoes raised by John Clarke of Ballycastle, the Stormont varieties of oats raised by the Ministry of Agriculture Plant Breeding Research Station. The people who performed these miracles were regarded with awe - they were boffins of an unknown mysterious world to which I could never hope to aspire.

Early exposure to daffodils was limited to Van Sion (though I didn't then know it by name) which I only just remember being uprooted from an out-farm and being replanted by the hundred in straight lines and circles around our new farm house, which was completed about 1939. I also have a fairly vivid memory, from about the same time, of finding an 'odd' daffodil in the orchard which my mother told me was a Pheasant's Eye. For twenty years after seeing the Pheasant's Eye I do not have a single recollection of particularly noticing a daffodil of any kind.

The next step which aroused these dormant and barely recognizable grains of interest was undoubtedly my marriage in 1959. I had to find a house; that house was surrounded by almost half an acre of compacted till and builder's rubble. Pride of home ownership demanded action in that garden so it was plowed and planted in broccoli whilst I sought information and ideas about layout and plants. My ideas were limited to roses and daffodils-every garden had roses and daffodils! Friends who had any knowledge of gardening were pressed into discussion on the topic and snippets of information on daffodils

are vaguely recalled. An office colleague, Mr. William Wilson, told me about having bought Beersheba when it was 1.00 pound per bulb and I think he may have mentioned the name of a certain Guy Wilson but the name did not really register except as sort of confusion with a famous creamery manager from Fintona named Wilson Guy who wrote as Mat Mulcahey for the *Tyrone Constitution*.

Mr. Alan Smith, a former college contemporary who had studied horticulture, produced a landscape plan for our new garden with all sorts of unknown botanical names which stirred my curiosity. I had to put faces to those names and as a result developed an interest in trees and shrubs and other garden plants.

In the autumn of 1960 I bought a collection of daffodils to fit into pockets in the already planted shrub borders. In my innocence and ignorance I thought that Unsurpassable was all that its name implied, Beersheba was the peerless white and that Fortune and Mrs. R. O. Backhouse were steps into the future for color.

These and similar 'wonders' recorded on film were proudly presented to Alan Smith as evidence of my newfound horticultural skill and judgement of selection. Alas, deflation followed. With due regard for my pride, Alan patiently listened to my exaltations and then he diplomatically, but emphatically let me know that perhaps my flowers might not be quite the world-beaters I had imagined. Still incredulous, I wanted to know just how any daffodils could possibly be better. He then told me about Guy Wilson and his daffodils. He told me about working with Guy Wilson in his student days, about helping to set up daffodil displays at the London Daffodil Shows and about the wonderful new daffodil creations from Broughshane.

Alan Smith illustrated the points of improvement sought by hybridists by criticizing aspects of my flowers - form, proportion, substance, texture, symmetry, depth of color, stem, neck and poise. I began to wonder what kind of monstrosities I had dared to present for admiration. I could not immediately be disloyal to my flowers and I lamely replied that I still thought they were nice and that they were good enough for me. I did, however, accept the list of names and addresses of the specialist daffodil growers which Alan Smith gave me - but without serious intent. It was no good! The damage was done! He had destroyed my enjoyment and pride in my flowers. Each and every one was subject to critical examination - they all had many of the faults which had been detailed.

On reporting this story to our clergyman friend, the late Rev. A. E. C. Rowan, he told me about seeing magnificent daffodils at an Omagh Horticultural Society spring meeting. These daffodils were grown by Major General and Mrs. D. G. Moore, Mountfield Lodge, Omagh - only eight miles away. This seemed to corroborate Alan Smith's remarks. Evidence was building up and there were links in the chain as on subsequent visits to Mountfield it was found that the bulbs had mostly been obtained from Guy Wilson.

The matter could not rest, I just had to see some of these 'miracle' flowers. The catalogues arrived and in the autumn of 1962 one bulb of each of twelve varieties at 2/6 each were purchased from G. L. Wilson Ltd. When they flowered I understood; William Wilson, Alan Smith, and Rev. Rowan were right. Not only was there improved color, size, and substance, but I became aware of beauty of form, texture, balance, and proportion - aesthetic qualities not previously appreciated. I was now hooked! I must see more of

these better daffodils and learn more about them. I persuaded the local Horticultural Society to introduce an element of competition into the daffodil display evening in May, 1963, and to invite Mr. Tom Bloomer as judge and speaker/demonstrator.

That show and demonstration of 6th May, 1963, and the opportunity to meet and talk to Mr. Tom Bloomer provided the 'coup de grace' and confirmed me as an incurable member of the 'yellow fever' fraternity. To my great surprise and delight, flowers from my twelve bulbs had won eight of the twelve single bloom classes and my Cantatrice was Best Bloom in show. Other winning varieties were Kingscourt, Galway, Polindra, Rosario, Golden Ducat, Charity May, and Actaea. Despite these successes my few flowers were overshadowed by the magnificent selection of the latest and most beautiful daffodils, including some with really pink cups, which Mr. Bloomer brought for his demonstration on grooming and staging for exhibition. Many were seedlings of his own raising and he also demonstrated the technicalities of hybridization. Here, at last, was a chance to meet a man who had actually bred new varieties of plants.

I am sure I must have peppered poor Tom with a myriad of the most ridiculous questions that evening. He must have recognized some spark of interest and enthusiasm which he fanned and kindled with patient helpful advice, encouragement, and a gift of some of his demonstration daffodils. Tom was so modest and made it all seem so easy that suddenly I realized that daffodil breeding was something which I could possibly undertake myself, albeit in a very small way.

My first cross was made a few days later when a flower of Kilworth opened - the last and only remaining bud on my 'big twelve' plants. Pollen from a pink flower (Interim or a seedling) in Tom's gift lot was applied to the stigma of Kilworth with such great determination, clumsiness, and nervous anticipation that a successful mating seemed highly improbable!

The basic aim of that first cross was simply to find if I could manage the mechanical intricacies of applying pollen and persuading the flower to produce seed. Only three or four seeds resulted which were planted and germinated in a small clay pot. The baby bulblets had a tough job surviving the next couple of years as they suffered the hardships of neglect and ignorant care in their confined and often arid quarters. Tom Bloomer had told me that with such parents they were unlikely to amount to much which may account their existence had not been in vain, they had been living proof that even I could produce daffodil seedlings. Fifteen years and many thousands of seedlings later that may not seem important, but to me it was breaking the sound barrier. The seemingly impossible was now possible. I could become a plant hybridist - a daffodil raiser. An old fascination and a new interest could be combined.

Interest developed with this realization, and R.H.S. *Daffodil Yearbooks*, catalogues and any other available daffodil literature were begged, bought, or borrowed from a wide variety of sources. Pedigrees, cultivation methods and show reports were studied in detail. With awe, I read about and became familiar with the names and achievements of the great daffodil raisers of the past. Incidentally, the first *R.H.S. Yearbook* (1963) which I purchased contained the obituaries of both Mr. G. L. Wilson and Mr. J. L. Richardson. It is a source of disappointment that I never had an opportunity to meet them personally.

The following spring, 1964, was one of reconnaissance; first visits were made to Prospect House, to Tom Bloomer, W. J. Dunlop, and even to the London Daffodil Show. I had the audacity to enter flowers in the Novice Section that year and great was the amusement at home as I cut, stapled, and joined two shoe boxes and prepared a cotton woollined travelling bed for my two flowers - Ceylon and Trousseau which were the only ones open on 6th April. Though the Ceylon did gain a fourth prize the object of entering was primarily to get an Exhibitor's Pass to get into the show early to enjoy and experience the hurly-burly of show preparations and to have time to study the flowers.

By the end of the 1964 flowering season I had seen many of the best flowers available at that time. Mr. Lea's Canisp which was the Best Bloom in London; Mrs. Richardson's Rose Royale and Olympic Gold seen in Waterford, were flowers of such perfection and beauty that further improvement seemed both unlikely and unnecessary. Nevertheless I was determined to have a go. I could not afford to buy Rose Royale at 35.00 pounds per bulb (as it was at that time) so I would have to raise my own. Mrs. Richardson very generously gave me some flowers to bring home including blooms of Rose Royale, Rosedew, Debutante, Salmon Trout and Rose Caprice. Obviously the idea of breeding pinks had excited my imagination because the previous autumn I had bought single bulbs of all the cheaper pinks from Mrs. Richardson and Mr. Dunlop. Imagine my great excitement and gratitude as I drove home dreaming of crosses to be made with those gift flowers which were laden with pollen of a breeding potential which my pocket could not possibly provide. In that spring of 1964, my first 'serious' crosses were made and seventeen out of twenty-two crosses involved pink parents.

The visits of 1964 became annual pilgrimages during that long five-year wait until the first seedlings flowered. More crosses were made each year and the stock of bulbs for exhibition and breeding was gradually up-graded by purchases from the professional growers and gifts from amateurs Tom Bloomer and W. J. Bankhead.

The competition at the Northern Ireland and London shows became increasingly enjoyable as I got to know fellow competitors and learned to appreciate the standards required for any chance of success. After some modest success at Northern Ireland shows I managed to win the Novice Twelve Bloom class in London in 1968. When, two years later I had several first prizes in Amateur Single Bloom classes I felt I was making some progress. I was gaining some confidence for selection of seedlings if and when the time came - I determined from the start that I would be ruthless in selection as all the books advised. In this respect I'm afraid I have failed - I keep too many seedlings in the hope that they will improve in future years. A very few do improve, most do not.

Looking back on those earlier years it is interesting to note how my aims and ambitions changed and developed. From the first basic achievement of carrying out the cross pollination and germinating the seed came the desire to see the first seedlings flower. The need to develop some expertise for assessment of seedlings then became important followed by a desire to check that assessment on the show bench against the best named varieties. Almost unconsciously the sights were raised as targets were achieved. There were many thrills at each stage-the excitement and anticipation of watching the very first flower buds about to open; the disappointment with the throwbacks and the elation as a promising one unfolds. Then the first local show bench success for a seedling, this is the stamp of approval by an expert judge-a heady experience indeed!



My first such experience was at the 1971 Ballymena Show when a pink seedling from that Rose Royale pollen of 1964 won both the single and three bloom classes for pinks. The seedling was later named Premiere because of this first success, because it is the first pink to open each season, and because it was to be the first of my seedlings to be registered. Premiere is not a world beater but it has had several more successes, including a win in the pink class at the 1978 London Competition. It is valued for its earliness and has received favorable comment in London Show reports, attracting attention because of its neat perky form and bright green eye.

When Lilac Charm, my little pink cyclamineus hybrid with distinct lilac tones in its long and beautifully flanged trumpet, won its class at the 1973 London Daffodil Show another ambition was achieved-to win a class in London with a seedling of my own raising. Lilac Charm repeated this success in London in 1974 and 1975 to complete a 'hattrick' and show it was no fluke. Yet I feel I can claim no especial credit for Lilac Charm despite the general admiration and acclaim it has received. Its 'cyclamineus' ancestry is in some doubt and though the cross was made in the hope of getting strong pinks and possibly bluish tints I certainly did not expect such a delightful surprise. The characteristics of *N. cyclamineus* are so 'clearly evident' that I suspect the intervention of a highly imaginative bee somewhere in its pedigree. It is this chance of a break and the diversity and variation amongst seedlings which is so gripping and absorbing. I was lucky to find these two promising flowers so early which were a great encouragement to continue.

Additional pleasing show successes and milestones were achieved when D. 190 (Mount Angel 3W-YJR) was selected as Best Unregistered Seedling and Best Division 3 flower at the 1975 Omagh Show; when Delta Wings (6W-P) won the Best Bloom award at Omagh in 1977 and when my group of seedlings won the major twelve bloom class against open competition at Omagh in 1978.

The ultimate ambitions of any serious daffodil hybridist still dangle like the proverbial carrot before a donkey-they are to win Best Bloom at London with a seedling and to win the Engleheart Cup for twelve seedlings raised by the exhibitor. To achieve the first of these would be like winning a lottery-you cannot really plan to win but you must have your name in the hat. The Engleheart Cup is different and infinitely more difficult - dedication and perseverance linked with hard work and enthusiasm will be required if this one is to be achieved. So far as I know the cup has not been won by any breeder of less than twenty years experience. Also, it has always remained in the hands of the landed and wealthy where financial and labor resources restricted neither the choice of breeding stock nor the time available for the work involved.

With this knowledge and in full realization of the enormity of the task it is perhaps foolhardy and presumptuous to harbor even slight hope of ever winning the Trophy, but proceed I will, though I disapprove of the traditional color balance which seems to demand at least three Y-R flowers (inevitably rather similar) in the twelve. I think the widest possible range of types, consistent with a well balanced exhibit, should be shown. However, crosses towards meeting the unwritten obligation have been more recently included in my breeding program and some promising flowers are emerging. I was encouraged by the standard of my twelve seedlings at Omagh 1978 which were much better than my twelve which came third in the Engleheart class ten days earlier. I think the gap is narrowing but there is still much ground to make up. This ensures that the thrill and anticipation of examining each year's new seedlings will not diminish.

Daffodil shows are great fun, as the results of the breeder's skill or good fortune are brought together for comparison and appraisal. In addition to the judges' opinions, remarks of admiration or criticism by fellow enthusiasts are helpful in determining the fate of particular seedlings. Important as shows may be as sources of entertainment, as outlets for competitive urges, as public displays of the best in daffodils, and as a means of keeping up to date with developments, they are not an end in themselves. Without the shows and the boost to ego which winning and favorable comment give, there would be little incentive to hybridize, beyond the purely commercial. So far as I know a fortune has not yet been made by a daffodil breeder so the commercial incentive is not strong. Shows, therefore, through the amateur fun they provide, are the spur to encourage improvement in the *Narcissus* genus - or so I try to convince myself when beset by a conscience which questions some aspects of the morality, the motivation, the egotism, and the selfishness involved in competitive exhibition. This justification begs the further question - is the improvement of the *Narcissus* genus important, necessary, or even desirable? I am happy to remember that John Kendall raised King Alfred about 80-90 years ago. It was a sensation then and has since provided employment for thousands, pleasure for millions, and brightened the flower sellers' barrows in the streets of London for half a century. During all this time, by the hand of hybridists, it was being used as a stepping stone to the beauty and perfection we see today in a host of varieties of different forms and colors, e.g. Midas Touch, Newcastle, White Star, Golden Joy, Amber Castle, Loch Hope, Torridon, Don Carlos, Irish Rover, Ringleader, Broomhill, Achduart, Doctor Hugh, Purbeck, Beauvallon, and Gay Challenger.

All the above flowers, each of which would grace any exhibitor's collection and add beauty to any garden have King Alfred three, four, five, or six generations back in their pedigree. All my little show successes fade into insignificance against this record, but the example is one which provides the greatest justification for daffodil hybridizing. King Alfred has long since been eclipsed as an exhibition, garden, and commercial flower, but, so long as daffodils are grown the influence of John Kendall's King Alfred will remain. The case of King Alfred and other daffodils which have been superseded, even during my own short experience, tempt me to quote the lines of Herrick, though extending the thoughts to the life-span of varieties rather than the blooms:

*"Fair Daffodils, we weep to see  
you haste away so soon, . . ."*

and

*"We have short time to stay as you,  
We have as short a spring, . . ."*

Even the very best new daffodil introductions can only have a relatively short run of popularity. Progress seems to be slow yet few varieties survive as top exhibition flowers for twenty years, and only a minute fraction of these ever achieve wider acclaim as commercial bulbs or cut flowers.

In daffodil breeding as in most things, the achievements of the past and present are but the stepping-stones to the future. This and the further realization that this year's perfection is likely to be the mediocrity of the next decade are sobering thoughts which brings the significance of daffodil breeding into perspective. Those of us involved should enjoy our seedlings while we can-and if they are good enough perhaps they may be permitted to influence the future.

The perfect daffodil has not yet been raised; there is scope for improvement in every sub-division and color combination. I find it difficult to visualize a standard of perfection beyond that which my eyes have seen. I think it is easier to think in terms of combinations of the best qualities of the best flowers available. Sometimes this means simply intercrossing the two best flowers of the type or sometimes going back to one which has a particularly desirable characteristic. One of the characteristics which requires more attention is the general one of consistency of performance - so many varieties produce only a small proportion of show quality blooms. I often make notes of imaginary crosses in the winter evenings. Alas, the temporary loss of these notes, a poor memory, the rush of other springtime activities and the fact that the chosen parents may not be in flower at the same time all seem to combine to thwart such well-intentioned plans.

What are the flowers of my mind's-eye to be like? I will deal briefly with my aims for future improvement and development in the usual classification order, though there may be some overlapping of subdivisions.

### DIVISION 1 — TRUMPET DAFFODILS

The yellow trumpets have progressed little since Kingscourt appeared in 1938 despite thousands of seedlings being flowered and numerous varieties being registered. This indicates that a new approach is necessary. Apart from King's Ransom (poor in other respects) and Midas Touch, no deep golden yellow trumpet has a sufficiently wide based 'ace of spades' perianth segment as found in Empress of Ireland—a white trumpet. It may take two generations or more but I think major improvements may come from crossing Empress of Ireland with deep golden trumpets such as Arctic Gold, King's Ransom, or Midas Touch. I have a nice 1 Y-Y seedling from Empress of Ireland × Joybell to be named Verdant which may prove useful in skipping a generation. I have hopes that such crosses may help increase virus resistance in yellow trumpets and provide useful breeding material for better bi-color trumpets. I am aware that to suggest crossing yellow with white amounts almost to sacrilege but progress has been so slight that I think the gamble is worthwhile. My yellow trumpet vision has the form and size of Empress of Ireland combined with the deep gold and shining smooth texture of Arctic Gold or Midas Touch.

How about a consistent bi-color trumpet of similar form to Empress of Ireland, White Star, or a good Newcastle, with a perianth of poeticus white and a trumpet of maximus gold? Such must be the ideal, but I confess to a feeling of inadequacy when considering crosses towards this ideal. I have flowered several hundred seedlings from numerous crosses but muddy or stained perianths mar those with good trumpet color; pale trumpets always seem to attach themselves to those with good white perianths.

White Empress, which is the purest white trumpet I know, sometimes yields bi-colors even when crossed with another white. It may have possibilities if crossed with the American-raised Descanso and Wahkeena which have good white perianths and smooth texture. One or two of Mr. Bloomer's new seedlings may prove to be better than Newcastle, but the perianths are not pure white—they will be crossed with the abovenamed Americans. Though I will continue to dabble in this sub-division, I feel results are more likely to come from someone like Malcolm Bradbury, a young man from Essex, who is making a specialty of this sub-division—may he produce that pure white/unfading deep gold bi-color of my dreams.

With Tom Bloomer's White Star in the field, it is difficult to imagine further improvement—it has purity of color, smoothness of texture, elegance of form,

consistency, great dignity and size combined with vigor of growth, length of stem, and a show bench record unequalled for a flower of its age. Nevertheless, there is room for variation in similar quality and I look forward to a white trumpet amalgam comprising the glistening whiteness of White Empress, the breadth of petal of Empress of Ireland, and the poise of Panache combined with those White Star qualities already listed. I would like to have three or four variations on this theme. Trumpets of the slender form and green eye of Silent Valley or with the generous flange of White Empress or the finely toothed edge of White Majesty should satisfy most tastes. I have made crosses towards these ends and only patience and time will indicate the success or otherwise of my efforts. In such a high-class field anything new will have to be really exceptional as regards flower quality, though added stem length and resistance to basal rot would be worthy improvements.

The reversed bi-color trumpets are a pretty uncouth lot in a very early stage of development. They are all still a long way off the ideal of a deep golden perianth and a pure white trumpet and the form of even the best is poor. Grant Mitsch's American-raised Honeybird is about the best I have seen, but it is an 'on-off' sort of flower of imprecise contrast. I think progress is likely to come from the progeny of the Division 2 Daydream. I have some seedlings from it which show nice depth of color and contrast whereas Honeybird has yielded little to excite interest. Carncairn's Gin and Lime is receiving acclaim and should be a worthy parent as should many more recent Mitsch varieties and seedlings with which I am unacquainted. Some of Mrs. Richardson's near trumpet Camelot × Daydream seedlings such as Avalon, Amber Castle, and Cairngorm crossed back to Daydream might produce good flowers from Divisions 1 and 2.

Pink trumpets are few and mostly raised in America, New Zealand, and Australia. Rima from Mitsch is probably best known, the color is good, cup length is not in doubt, but the general form and consistency leave much to be desired. Richardson's Rosedew [Div. 2] was quite nice but had a muddy perianth, impure coppery shades, and was susceptible to virus. This is a field wide open for someone wishing to concentrate on a particular type. I saw some promising new ones at Mitsch's in Oregon but perianths were still not pure white. Rima is an obvious parent and it might be interesting to try it with Lilac Charm which has a full length trumpet. From my winter-planned crosses which never got done, I see the suggestions of Empress of Ireland and Preamble × Rima and Rose Royale which still seem like fair ideas to produce first generation breeding material. I crossed Rima × Rosedew in 1970 and it did not yield one flower worthy of selection for further trial—rightly or wrongly I blamed Rosedew which had a yellow trumpet grandfather, which may further explain its tendency to stripe. A few Antipodean pink trumpets have been obtained and I hope to make greater efforts in this class in the future—the ideal may be a long way off but improvement should be possible with well-planned crosses.

Red trumpets on yellow perianths are now with us though generally in inferior quality. John Lea's Glenfarclas, of doubtful measurement but trumpet appearance, is the nearest thing to a show quality flower in this color. I have now crossed it with some of the Backhouse varieties—Deseado, Dalinda, etc.—and await the results. The Australian raised Trumpet Call has been obtained for breeding purposes but I think best results might be obtained by crossing Midas Touch or Golden Jewel (which are reputed to have Ceylon in their pedigree through Camelot) with Glenfarclas, Loch Owskeich, and little Jettfire, the American red-nosed cyclamineus. I have repeatedly crossed Loch

Owskeich with deep gold trumpet varieties and applied pollen of Jetfire and Satellite to similar varieties but no seed resulted. The rough cold weather of the early season may account for the infertility and it may be necessary to store early pollen for application to later flowering varieties. A big breakthrough is due in the yellow/red trumpets and I expect it to come from John Lea in England or Bill Pannill in the USA.

There is another trumpet possibility which would seem to be far in the future, i.e. white perianth and red trumpet. My neglected winter proposals towards this end propose both Preamble and Newcastle being crossed with Norval, Irish Rover, Loch Owskeich, and Irish Light as a source of possible further breeding material. On further reflection the 1 Y-R's mentioned in the paragraph above should also be used. Mr. Bruce James showed a Preamble seedling with a distinct orange flush in London several years ago which might have breeding potential, though progeny of Preamble is seldom seen in public. Certainly I think a flower of Preamble form with pure white perianth and unfading orange/red trumpet could be an attractive novelty well worth pursuing. Rather than take the line of breeding suggested above I might be tempted to take the pink approach. Deeper, redder pinks are available with longer cups than the orange/reds and the perianths may also be whiter.

Variations on the theme of orange/red trumpets on either yellow or white perianths would be the rimmed kinds as we have in Divisions 2 and 3. If we can add green eyes then the color range is just about complete apart from an all orange or all red flower.

There is so much more scope for outstanding color breaks and development in the trumpet sub-divisions compared with Divisions 2 and 3. I hope to make more crosses on the lines suggested in the hope of making some progress. Two, three, or more generations may be required to achieve acceptable standards in these trumpets of the future. I would like to be around to witness the arrival of some such flowers whether raised by my own hand or by another.

## DIVISION 2 – LARGE-CUPPED DAFFODILS

Galway and Ormeau had a long reign as leaders in the all yellow class. Suddenly with the emergence of Camelot and Golden Aura, and now their progeny, we have a bevy of real beauties but as yet no clear leader. Golden Joy, Golden Jewel, Golden Aura, and Amber Castle have been crossed with such flowers as Joybell, Daydream, Arkle, and Barnsdale Wood in the hope of producing something of a more distinctive style in at least equal quality. I fancy a deep golden full sized flower after the style of Joybell with its beautifully shaped petals and trumpet roll. Daydream might give a really top quality self lemon flower. Pollen of Arkle and Barnsdale Wood might yield a trumpet of Golden Joy quality and a step towards a red trumpet respectively. Such are my aims; this sub-division should be rewarding in the production of perfect seedlings for exhibition.

John Lea's success in perfecting the 2 Y-R flowers is well known and daunting to any would-be follower. However, Y-R seedlings are essential for any Englishheart aspirants so they must be included in my breeding program. I have planned my crosses to give a variety of well proportioned cup shapes and perianth shapes. Hopefully these variations will be combined with intensity of color and sunproof qualities.

For narrow tubular or cylindrical cups, I have used Irish Light, Rathowen Flame, Torridon, and Loch Hope. For a typical cup shape, Shining Light and

Gettysburg are included in the program, and Barnsdale Wood and Bunclody will hopefully give well proportioned bowl shaped crowns. The Division 3 flowers Ulster Bank, Sabine Hay, Altruist, Achduart, and Montego should oblige with button or saucer shaped crowns. These crosses should also give Division 3 flowers, perhaps some with red-flushed petals. Having neglected the yellow/reds in earlier years, I have much leeway to make up.

There is room for something new in the rimmed Y/R class and I have been using Mr. Bloomer's April Magnet and Mr. deNavarro's Gettysburg in my crosses. Both have better perianth colors than Ringmaster or Balalaika, and Gettysburg has the deepest red rim I have ever seen in this class.

Looking through my records I find very few crosses have been made to yield 2 W-Y flowers—only Aldergrove, Tudor Minstrel, Dunmurry, Irish Minstrel, and May Queen appear, and I have no really worthwhile seedlings from any of them. More promising seedlings have appeared by accident from Joybell × Empress of Ireland and Easter Moon × Knowehead. I have great faith in the progeny of Joybell as future parents for a variety of types. Seedling D.490 from Easter Moon × Knowehead shows promise—it has a deep green eye, distinct style, and should be a useful breeder. I hope to intercross seedlings from above crosses with the American raised Chapeau (Evans) which I rate about the best I've seen of this type.

The children of Kilworth × Arbar were lauded and eulogized when they hit the London shows. They are still about the best around but their faults are as many as their merits. It is easy to list the improvements one would wish to make—greater consistency, whiter petals, earlier flowering, cleaner, better bulb quality, resistance to sun scorch. It is not so easy to suggest a reliable line to take to achieve these improvements, but I think this is one case where a continuation of line or inbreeding will only exacerbate and perpetuate the problems. I have not done much with this type, but one or two promising flowers have come from pollen of Don Carlos and Norval on to some of the older Division 3 flowers such as Mahmoud, Merlin, and Omagh. I await with interest the results of crosses involving Royal Coachman, Ohio, Ulster Star, Irish Rover, and Doctor Hugh. In future it might pay to almost start again by crossing Easter Moon progeny with some of the best white/reds—perhaps Don Carlos or Brahms. Progress will be slow but I aim to try. Easter Moon is such a prolific parent of quality flowers that I even plan to cross it with some of the best yellow/reds and several other unlikely mates—such sacrilege!

Nearly all the 2 W-R flowers have bowl shaped crowns and the variations listed for the yellow/reds are equally desirable here but much more difficult to attain. Apart from Bunrana and Glorietta, which are pale in color, there is little narrow cupped material to use for breeding—back to Easter Moon again!

From the beginning I have had a particular liking for the pink crowned flowers and a high proportion of my crosses involve pinks. Rose Royale, Dailmanach, and Fair Prospect perhaps set the overall standard by which future flowers should be judged. Other flowers have particularly desirable qualities such as purer white perianths, purer, redder or violet-tinted pink, unfading colors, and longer stems. Again I think a change of direction is needed to get away from constantly inbreeding like with like. Some of the American flowers are really white and red/pink and though they may lack the smoothness and breadth of petal of our best, I hope they will transmit their good qualities without detriment to form. The influence of Easter Moon is already evident through John Lea's Dailmanach and by crossing it with Violetta I have some interesting pale lilac-toned flowers. Some Australian and New Zealand pinks have also been added to the 'stud' for further mixing of the genes.

My newly named Fragrant Rose is an interesting break. Not only has it very deep color in a reddish copper narrow pink cup which seems resistant to sun but it has a most delightful fragrance which reminds me of the rose Super Star (Tropicana in the USA). I cannot be sure of its parentage because of gross accidental mixing of seed in 1967, but the only possibility would seem to be Roseworthy seedling  $\times$  Merlin. Such a cross would seem daft and I have no idea why the cross was made but if Fragrant Rose is the result then similar crosses to get fragrance and small cupped pinks are worth trying. To date Jewel Song has figured in all my pink small cupped efforts and on checking I find that it was crossed with Fragrant Rose in 1973 before the latter was christened. Only four plants resulted and if they flowered this year they passed unnoticed. Fragrant Rose was crossed with two Merlin seedlings last year, primarily towards intensifying fragrance but a good pink small cup would be an acceptable bonus or substitute.

There is great scope for improving the rimmed pinks—Rainbow, Drumboe, Infatuation, and Coral Ribbon are all attractive in their different ways but they are not the ultimate. Mr. deNavarro's Tomphubil and his seedling No. 108 figure most prominently in my hopes for improvements; the latter has an amazing raspberry red rim. My own Pismo Beach is a new style rimmed variety which should prove useful for crossing with shorter cupped varieties such as the American-raised Audubon.

Still on pinks, I confess to having made some crosses with Polonaise which may yield split corona pinks with better perianths and deeper color. It certainly does give seedlings which can be seen a field length away and which can be relied upon to attract attention.

The yellow/pinks are now receiving more attention—the suggestion of such a color combination invokes very definite and opposing reactions. Mitsch's Milestone was the first to be commercially available; simultaneously or shortly afterwards seedlings were appearing in New Zealand, Ballymena, Omagh, and on Mitsch's doorstep with the Murray Evans versions. It is difficult to visualize how far one wants to develop this color combination. Does a Maximus gold perianth with a cup color like Violetta stretch the imagination beyond the bounds of good taste? On the other hand a pink cup like Rose Royale on a lemon perianth like Daydream would seem to be most appealing. I have made quite a few crosses involving Milestone, my own Brindisi, Undertone, and Pink Mink as well as some of the Tom Bloomer and Murray Evans seedlings. Probably Rima and Rosedew should be used because of the yellow in their background.

I think, perhaps, some of the smoothest and best show flowers I have raised are in the white Division 2 class. All are in very early stages of development and have been raised from Easter Moon crossed with Empress of Ireland, Knowehead, Stainless, White Star, and Silent Valley. Good as some of these seedlings seem to be, only time will tell if they can match or better such top quality varieties as Canisp, Broomhill, Ben Hee, Misty Glen, and Glenside. From some of the above crosses, especially Easter Moon  $\times$  Silent Valley, I had hoped to add deeper, more pronounced green eyes. Unfortunately when the desired green eye appears, it seems to be accompanied by a greenish cast which spoils the purity of whiteness in the perianth. Though this spoils white varieties, it makes me wonder if it might be used to develop a green flower—if crossed with the greenest of the sulphur shades.

### DIVISION 3 — SMALL CUPPED DAFFODILS

Advocat and D. 345 (to be registered as Mint Julep) are my only worthwhile all yellow Division 3 flowers. Both were raised accidentally from Woodland Prince pollen when the aim was really for deeper colored 3 W-Y flowers. More recently some of Dr. Throckmorton's toned daffodils and Mr. W. A. Noton's Citronita have been obtained as additional breeding stock. I hope Mr. John Blanchard's Ferndale can also be added in the near future as it has probably the deepest color of any in this class.

John Lea's Achduart, D.B. Milne's Altruist and Sabine Hay have recently appeared to provide unlimited potential for improvement and development in a class for so long dominated by the unreliable Chungking and Doubtful. Crossing this trio with Montego and my own Ulster Bank should give some promising results, including some so-called 'all red' seedlings to which sunproof qualities must be added in future. Intercrossing the Y/R's of Division 2 and 3 should give seedlings in both divisions—an example of several cases where dual or triple purpose crosses can be made.

What is the best white/yellow small cup? Show records will indicate Aircastle as the leader, but it is often more yellow than its winning neighbor in the 3 Y-Y class. Woodland Prince has about the best color but a tendency to be asymmetric. Syracuse is perfect in form but lacking in color and poise. By crossing these two and Crepello, some nice seedlings have been obtained but smoothness and good form seem to be accompanied by weak color and vice versa. The ideal of pure white and deep gold is as elusive here as in Divisions 1 and 2.

Since the early 1960's, Rockall has been almost unchallenged as leader of its class. Coming from that prolific Kilworth  $\times$  Arbar cross, it was such a complete contrast in style from its predecessors Matapan and Mahmoud that it was once aptly described as a galloping interloper in the 3 W-R division. My preference is for a rounder, broader petalled flower, and it was with this in mind that I went back to Mahmoud and Enniskillen and crossed them with Don Carlos which resulted in three flowers of some promise, namely Doctor Hugh, Red Rooster, and Dunskey. Merlin  $\times$  Avenger has also given a seedling of interest—D. 109—which is an extremely durable and consistent flower of Rockall coloring but much rounder form. Further crosses have been made involving Rockall, and several quite promising seedlings have been selected for further trial. In the meantime I regard Doctor Hugh and Red Rooster as fairly reasonable improvements in purity of whiteness, breadth of petal, and attractiveness.

Merlin still sets the standard by which all rimmed varieties must be judged. Other good ones provide variations in form, but few have such pure white perianths or such clearly defined rim color. Merlin is therefore the obvious parent but the selection of pollen may as well be left to the bees. To cross deliberately for increased size, which is a doubtfully desirable aim, is likely to result in a loss of whiteness. From one open pollinated pod of Merlin yielding three seeds I got Mount Angel, a large pure white 3 W-YYR which already has a good show record; Ringway 3 W-YYR of very distinct triangular form with an extremely sharply defined deep red rim, and Narya 3 Y-YYR, a small jewel-smooth flower. I have a high regard for Merlin as a breeder and crosses should not be confined to its own class—remember it is the most probable parent of Fragrant Rose 2 W-GPP. So it might be worth crossing with pinks. Good quality rims are relatively easy to raise; attention needs to be paid to bulb quality and sun resistance in selection of those for naming. Some of Sir



Frank Harrison's have lovely green eyes and delicate orange rims combined with good bulbs and growth habits—unfortunately most are very late flowering, but for their other qualities they should be used for breeding. My aims in this class are not clearly defined in my own mind, but they are so attractive that I keep making crosses in the hope of adding further variety and refinement to an already varied and refined lot. There is, however, room for much improvement in Division 2 versions of rimmed varieties, and this improvement is likely to come from the 3's.

Verona is a lovely flower and has had about as long a run at the top as Rockall in its class, but it is not very white. My aim here is to breed earlier flowers with really deep green eyes and of poeticus whiteness. I have used Verona, Monksilver, Cool Crystal, and Dallas as well as some of my own seedlings but it is difficult to imagine earlier flowers from such parentage—and alternatives are not obvious. Division 2 Stainless and Easter Moon are possible, but two generations may be required—perhaps Trouville, an almost white 2 W-Y from Verona × Stainless will provide the key to earlier flowers in this class. Whatever the flowering season an amalgam of the best qualities of the quartet of 3 W-W's mentioned would be a welcomed find in my seedling beds.

#### DIVISION 4 — DOUBLE DAFFODILS

So much had been done with doubles at Waterford that there seemed little point in pursuing further except in so far as new colors were concerned. Accordingly my efforts were devoted to trying to raise pink doubles. I purchased a Richardson seedling R. 3509 (Falaise × Debutante) in which I thought I saw a hint of pink. The flower proved fertile and was crossed with the highly colored Polonaise which I thought might aid doubling because of its deeply fluted and wide mouthed large cup. From this cross I was very lucky to get Pink Pageant and Pink Paradise, both of which are fertile. There is a further little double seedling from this cross which has distinct lilac tones—perhaps even more definite than Lilac Charm. I have made many 'pink double' crosses using these and some of Murray Evans varieties and seedlings which are more red/pink and white but not so well formed. I await the results of these crosses with keen anticipation. Depth and clarity of color, purity of whiteness, and that lilac tone are pursuits for the future.

Another color break worth pursuing in doubles is all orange or all red. I think the Rev. Broadhurst once showed a flushed orange seedling in London and my own Smokey Bear from Papua × Vagabond has a distinct orange flush in the outer major petals and petaloids. It is fertile and has been crossed with Sabine Hay and Altruist in the hope of intensifying the color.

Though Acropolis's flower quality is hard to fault the bulb is poor—Monterrico × Doctor Hugh is my hope for improvement. Gay Song sometimes produces seed and it should open the way to earlier, more vigorous and purer white doubles. This is work for the future.

In the Y/R doubles, David Lloyd's Beauvallon is so good that it seems to have skipped a generation. Alas, it is susceptible to various viruses. Hopefully the stock can be revived to health; if not, then a new 'mold' will have to be formed by crossing Tahiti, Hawaii, and Tonga where possible with deep colored 2 Y-R flowers such as Barnsdale Wood.

## DIVISIONS 5-9

In these divisions my interests have been confined to 6 and 9, the *cyclamineus* and the *poeticus*.

In Division 6 my interest was stimulated by the accidental arrival of Lilac Charm and Lavender Lass. These and Mrs. Reade's Foundling have been intercrossed and used with several other likely and unlikely varieties in attempting to increase the range and variety of pink cyclamineus hybrids. Some of the resultant seedlings are interesting, most are pink cupped, some with rims and there are two or three pure whites from Stainless  $\times$  Foundling. Richhill  $\times$  Foundling yielded some indeterminate colored flowers for future breeding of Y/R, W/R, W/P, or Y/P cyclamineus types—one has an orange rim.

I even wonder about raising a double cyclamineus following the appearance of a little yellow seedling with reflexed perianth and waisted  $3/4$  length cup filled with smaller petaloids similar to old Van Sion. It was strangely attractive and was marked for further trial. It has given me the idea of crossing that lilac toned double with Lilac Charm and possibly other cyclamineus  $\times$  double crosses—which may result in classification difficulties. Developments in Division 6 should be exciting in the next ten to twenty years.

Though I have made a few crosses in Division 9, the old classification requirement whereby both parents had to be of the same division seriously restricted progress. Even yet "distinguishing characteristics predominant" precludes any really dramatic development. The purists may shun the idea but I feel there may be room for some progress by crossing some of the fragrant green eyed rimmed varieties from Division 3 with accepted poets. Earlier poets are also required so perhaps Actaea should be brought back for breeding purposes—it would also add vigor and size. Sir Frank Harrison's Fairmile, Fairgreen, and Lancaster; Murray Evans's Minx and Minikin; as well as Merlin and Silent Cheer could all be useful parents which might produce lovely seedlings which would give the classification purists some difficulty.

## CONCLUSION

These remarks outline my basic thoughts and future aims in daffodil breeding. I fully realize that only a very small fraction of these aims can possibly be attempted, let alone achieved. The range is far too wide for any one person, never mind a part time hobbyist like myself. Nevertheless crosses have been made with many of these developments in mind and with a bit of luck something good enough to maintain interest should emerge. Greater success might be achieved by specializing in developing certain types but I'm afraid I do not have the patience or dedication to pursue a certain line through several generations.

Regardless of the success or otherwise of my hybridizing efforts, I think it is important to avoid taking it all too seriously. Daffodil growing, exhibition, and breeding should give pleasure and enjoyment to those involved and the public who happen to see the displays and new developments. It would undoubtedly be tremendously satisfying to raise a flower which might have the impact of old King Alfred, but like many raisers I expect I will have to be content with more modest and ephemeral successes.

Though I may never see many of the daffodils of my fancy in my own seedling beds, the near misses will perhaps provide a few stepping stones and help pave the way to their eventual appearance. In any case the fun is in

trying, and the fellowship of the daffodil fraternity throughout the world makes all the work worthwhile.

I end with an anonymous quotation which applies equally to life and to daffodil breeding:

"All the flowers of tomorrow are in the seeds of today."

So let it be! We must wait and see.

(The preceding article was a letter to David Willis whose seven years of research resulted in his dissertation "The History of Daffodil Breeding in Ireland" and the Doctor of Philosophy degree from the New University of Ulster.)

### **PEONIES, Queen of Flowers**

Spectacular beauty, fragrant endurance unlimited, practically a permanent perennial. Excellent for use in landscape as an accent plant during blooming season, foliage decorative until hard frosts. Peonies — a permanent investment — will bloom for years.

*Join the American Peony Society*

*Dues \$7.50, paid annually. Bulletin published quarterly.*

*Send for list of publications.*



**AMERICAN PEONY SOCIETY**

250 INTERLACHEN RD., HOPKINS, MINN. 55343

*Does Your Garden Color End Too Soon?*

### **Join the NATIONAL CHRYSANTHEMUM SOCIETY**

and enjoy colorful blooms until frost.

Your membership includes 5 issues of The CHRYSANTHEMUM. Also free BEGINNER'S HANDBOOK.

Annual dues \$7.50      Write to:

**B. L. MARKHAM**

2612 Beverly Blvd. SW  
ROANOKE, VA 24015

### **HEMEROCALLIS (Daylilies)**

Enjoy this wonderful flower when your daffodil season is finished. Its long bloom season will greatly expand your garden enjoyment.

Constant improvements in color, size, form and habits insure rapid growth of interest in this fine plant.

Four colorful journals a year filled with informative data on varieties, culture, performance and progress. Many Round Robins open to participation.

**ONLY \$12.50 PER YEAR**

**Join THE AMERICAN HEMEROCALLIS SOCIETY**

Joan D. Senior, *Secretary* DeQueen, Arkansas 71832



## HERE AND THERE

News of the daffodil and the people who grow them continues to reach us from all around the world in the form of newsletters and yearbooks published by various local and national societies. Regional newsletters include news of shows, judges refreshers, bulb sales, and meetings. If your region has activities planned, do try to attend. The fellowship of those who share the love of the daffodil is always enjoyable! (And the meetings aren't bad either!)

Vol. 12, No. 22 of the *Avant Gardener* summarized Jane Moore's article on the 1980 Symposium which was in the December *Journal*.

Looking for a particular plant? The "Source Guide 1981" is available from the *Avant Gardener*, P. O. Box 489, New York, New York 10028, for \$2.00 postpaid.

From Illinois comes word of the death of Mrs. L. F. Murphy, the founder and a charter member of the Southern Illinois Daffodil Society.

Mrs. Glenn (Betty) Millar, genial chairman of the Memphis convention, was installed as Director of the Deep South Region of National Council of State Garden Clubs in March.

The *South Bend Tribune* of April 12, 1981, had a full page spread, complete with colored photos, about John Reed and his daffodils; while the *New York Times* included an article on Helen Link's daffodils.

One of the added pleasures about attending conventions is the side trips you can enjoy in other parts of the country. On Sunday following the convention, Gene Bauer picked up several of us at the Newporter Inn and we journeyed to her home in the San Bernardino Mountains. Though her season was just beginning, and it was a cool, foggy day, there were enough daffodils in bloom for us to appreciate what magnificence she has added to the grandeur of the mountains.



Rustom Pasha growing on Gene Bauer's mountainside.

# IN VITRO PROPAGATION OF NARCISSUS

TAKASHI HOSOKI AND TADASHI ASAHIRA  
Kyoto University, Kyoto, Japan

**Abstract.** *Tazetta narcissus* 'Geranium' and large-cupped 'Fortune' were propagated from tissue cultures. Cultures of young flower stalks of 'Geranium' produced many adventitious buds on a culture medium supplemented with 5 mg/liter 6-benzylamino purine (BA) plus 1 mg/liter naphthaleneacetic acid. (NAA). Ovaries, leaves, and disks also produced adventitious buds although the number of buds was smaller. When the elongating shoots were transferred to a culture medium supplemented with 0.1 mg/liter NAA alone, they formed bulbs with roots. These plantlets were successfully established in vermiculite in pots 4 months after explanting.

This paper describes an efficient technique for propagating narcissus from flower stalk tissue *in vitro*. Differences in the response of various organs to growth regulator stimulation of shoot formation are discussed.

Bulbs with 7 mm flower stalks were sterilized with a solution of sodium hypochlorite containing 1% active chlorine, rinsed twice with sterile water and dissected into flower stalks, ovaries, disks, and leaves. Flower stalks and ovaries were cut into 1 mm thick sections and disks, about 27 mm<sup>3</sup> cubes (Fig. 1). The leaves were used without sectioning. The explants were placed base-down onto 20 ml of the solid medium in test-tubes (20 × 200 mm).

The basal medium consisted of Murashige and Skoog (5) major elements, Ringe and Nitsch (6) minor elements and organic addenda, 2% sucrose (except sucrose study) and 0.7% agar. PH was adjusted to 5.6 with NaOH. NAA and BA were used as growth regulators.

Cultures were maintained at 27° ± 2° C under 4 klx for 16 hr from Cool White fluorescent lamps. Ten tube replicates were made for all experiments.

For 'Geranium' culture, flower stalk produced a few adventitious buds on the basal medium (Table 1) (Fig. 2). The addition of BA significantly increased the number of adventitious buds. NAA promoted callus formation, but suppressed bud formation. Combination treatments of NAA and BA suppressed callus formation and promoted bud formation with maximum number 21 at 1 mg/liter NAA + 5 mg/liter BA. Within 20 days after explanting, aggregates of epidermal and subepidermal cells projected out of the peripheral tissue (Fig. 3). By the 30th day, an apical meristem had appeared on the projected portion.

In leaf culture adventitious buds were formed only on the base of the leaf. In this case, BA supplement was indispensable for bud formation. Seabrook et al. (7) also reported that leaf base of immature narcissus leaves produced adventitious buds in BA and NAA supplemented MS medium. High potential for adventitious bud formation in young flower stalk and leaf base may be result of distribution of intercalary meristems in these tissues (2,4).

In disk culture, most of the explants turned brown without forming callus or buds. However, a few buds and callus formed at high concentration of NAA (5 mg/liter) with BA. Since endogenous hormone levels are low in non-meristematic disk tissue, high level of exogenous auxin would be required for bud formation.

For 'Fortune', adventitious bud formation was similar to that of 'Geranium' (Table 2). However, number of buds obtained was generally small and callus formation at cut surface was abundant.

Bulbing of the newly formed shoots is advantageous in obtaining survival and establishment of plantlets when transferring them from test tubes to pots.

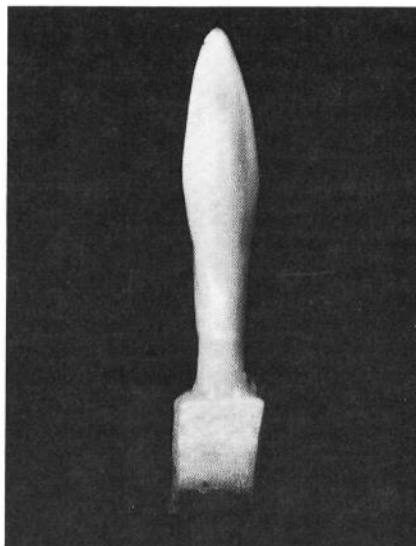


Fig. 1. Floral organ of narcissus used for culture.

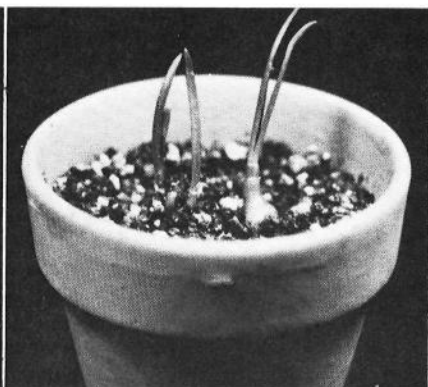
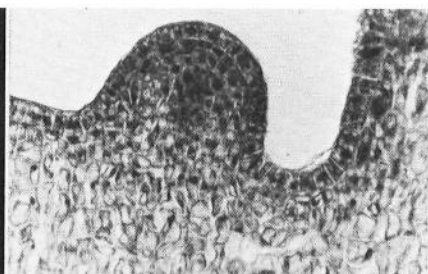
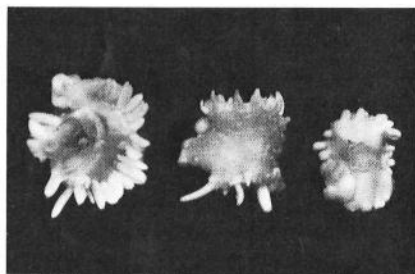


Fig. 4. Plantlets of Geranium obtained from flower stalk culture (4 months after culture).



Left: Fig. 2. Adventitious bud formation from young flower stalks of Geranium (1 month after culture). Right: Fig. 3. Cross section of flower stalk of Geranium showing cell aggregates which project out of the peripheral tissue (20 days after culture).

Heath and Hollies (3) reported that high concentration of sugar promoted bulb formation of onions. NAA also promoted bulbing of adventitious buds in *in vitro* stem culture of *Dioscorea batatas* (1). When adventitious buds of 'Geranium' and 'Fortune' reached 5-10 mm in height, they were separated into clumps with a few buds and cultured for 2 months on the following media: 2, 4 and 8% of sucrose without growth regulators, 2% sucrose with 1 mg/liter NAA or 1 mg/liter BA. Any culture medium except the 1 mg/liter BA supplement promoted bulb formation (Table 3). Roots were induced only with 1 mg/liter NAA. Since NAA supplement promoted root as well as bulb formation, subculture of the buds in 0.1 mg/liter NAA medium for 2 months is recommended for establishing plantlets in pots (Fig. 4).

Assuming an average of 20 bulbs per flower stalk section, about 140 bulbs could be obtained from one mother bulb of 'Geranium'. Poor bud production of 'Fortune' was probably due to abundant callus formation at cut surface which suppressed bud induction.

LITERATURE CITED

- Asahira, T. and S. Yazawa. 1970. Study on bulb formation of *Dioscorea batatas* by *in vitro* stem culture. p. 2. In S. Baba (ed.) Second symp. for plant tissue culture. Kyoto Univ. Coop. Press, Kyoto.
- Cutter, E. 1971. Plant anatomy: experiment and interpretation (Part II). Edward Arnold, Great Britain.
- Heath, O. V. S. and M. A. Hollies. 1965. Studies in the physiology of the onion plant. VI. A sensitive morphological test for bulbing and its use in detecting bulb development in sterile culture. *J. Expt. Bot.* 16:128-144.
- Hosoki, T. 1975. Propagation of tropical plants by tissue culture. PhD Thesis, Univ. of Hawaii.
- Murashige, T. and F. Skoog. 1962. A revised medium for rapid growth and bioassays with tobacco tissue culture. *Physiol. Plant.* 15:473-487.
- Ringe, F. and J. P. Nitsch. 1968. Conditions leading to flower formation on excised *Begonia* fragments cultured *in vitro*. *Plant Cell & Physiol.* 9:639-652.
- Seabrook, J. E. A., B. G. Cumming, and L. O. Dionne. 1976. The *in vitro* introduction of adventitious shoot and root apices on *Narcissus* (daffodil and narcissus) cultivar tissue. *Can. J. Bot.* 54:814-819.

Table 1. Effect of NAA and BA on adventitious bud formation from flower stalk, ovary, disk, and leaf of 'Geranium' narcissus (2 months after culture).

Concn (mg/liter)		Avg no. buds/explant ( $\pm$ SD)			
NAA	BA	Flower stalk	Ovary	Disk	Leaf
0	0	3.0 $\pm$ 1.2	0	0	0
	1	12.0 $\pm$ 3.1	0	0	1.0 $\pm$ 0.1
	5	11.0 $\pm$ 2.7	0	0	0.5 $\pm$ 0.3
0.2	0	0	0	0	0
	1	4.5 $\pm$ 1.8	3.9 $\pm$ 1.1	0	1.0 $\pm$ 0.2
	5	14.0 $\pm$ 4.1	1.9 $\pm$ 0.5	0	2.3 $\pm$ 0.7
1.0	0	0	0	0	0
	1	10.0 $\pm$ 2.2	1.7 $\pm$ 1.6	0	1.5 $\pm$ 0.5
	5	21.0 $\pm$ 4.4	3.1 $\pm$ 1.2	0	0.5 $\pm$ 0.2
5.0	0	0	0	0	0
	1	3.0 $\pm$ 1.3	0.7 $\pm$ 0.2	0.7 $\pm$ 0.3	1.0 $\pm$ 0.3
	5	4.0 $\pm$ 0.7	1.7 $\pm$ 0.4	0.3 $\pm$ 0.2	3.0 $\pm$ 1.1

Table 2. Effect of NAA and BA on adventitious bud formation from flower stalk, ovary, and disk of 'Fortune' narcissus (3 months after culture).

Concn (mg/liter)		Avg no. of buds/explant ( $\pm$ SD)		
NAA	BA	Flower stalk	Ovary	Disk
0	0	0	0	0
	1	3.0 $\pm$ 1.3	0	0
	5	3.5 $\pm$ 2.0	0	0
1	0	0	0	0
	1	4.4 $\pm$ 1.4	0.2 $\pm$ 0.1	0
	5	5.4 $\pm$ 1.8	1.0 $\pm$ 0.2	0
5	0	0	0	0
	1	1.2 $\pm$ 0.2	1.2 $\pm$ 0.3	0
	5	2.4 $\pm$ 0.3	1.8 $\pm$ 0.5	3.0 $\pm$ 1.1

Table 3. Effects of sucrose concentrations and growth regulators on bulb and root formation of 'Geranium' narcissus (2 months after culture).

Sucrose (%)	Growth regulators (mg/liter)	Bulb formation	Avg no. of roots ( $\pm$ SD)
2	—	+	0
4	—	+	0
8	—	+	0
2	NAA (1)	+	1.5 $\pm$ 0.4
2	BA (1)	—	0

(The preceding article is reprinted with permission from *HortScience*, 15(5): 602-603. 1980.)

## UPDATING AN OLD LIST

MARIE BOZIEVICH, *Bethesda, Maryland*

Daffodil growers often ask for recommendations of cultivars which will "win in shows." Sometimes there is a request to stay in a particular price range. With this in mind, perhaps it is time to up-date a list written for the *Journal* of December, 1975.

First I must caution that these are the ones that do well for me in my climate and garden conditions. There are many other cultivars not mentioned which would be included in someone else's list. The best recommendation is to attend shows and write down the names of the winners or to study the show reports in the *Journal*.

All of the daffodils on the following list have been in my garden for at least three years, some of them under number before they were named, and all have been very consistent. The ones which are my favorites have been starred. I have been growing and showing some of these for fifteen or twenty years. Aircastle has won the most blue ribbons and there are others—Rameses, Daydream, Prologue, Tranquil Morn, and Doubtful which I could not do without. (1980 prices.)

Under \$5.	\$5. - \$10.	\$11. - \$20.	Over \$20.
<u>1 Y-Y</u>			
Aurum *Arctic Gold Carrickbeg King's Stag	Elmley Castle Golden Prince Scoreline *Strathkanaird	*Golden Vale Golden Sovereign Shanes Castle	Gold Convention Meldrum Prosperity
<u>1 Y-W or WWY</u>			
*Honeybird Lunar Sea	*Chiloquin Dawnlight Rich Reward	Big John *Gin and Lime	*Epitome Sweet Prince Teal
<u>1 W-Y</u>			
Cool Contrast *Descanso Downpatrick *Prologue	Form Master Ivy League Jet Set	Apostle *Monticello	Elegant Lady
<u>1 W-P</u>			
Rima	*Brookdale Rosedale	Chaste	Eiko
<u>1 W-W</u>			
*Celilo Empress of Ireland Ulster Queen Vigil	Birthright Queenscourt White Empress White Majesty	*April Love Ballylough *Mountain Dew Rhine Wine	*Silent Valley White Satin White Star
<u>2 Y-Y</u>			
Camelot Emily Oneonta Strines	*Demand Euphony *Golden Aura *Top Notch	Goldmine	Bryanston Golden Jewel Golden Joy Golden Ranger



2 Y-P

Bookmark *Milestone Pastel Gem	Amber Castle Highlite Widgeon	Windsong
--------------------------------------	-------------------------------------	----------

2 Y-R or O or YOR

Bunclody Crater *Loch Stac Loch Owskeich Pinza Shining Light	Armley Wood Drumrunie *Falstaff Loch Naver *Irish Light	Barnsdale Wood Chianti Fuego *Loch Hope Resplendent	Glen Clova Loch Lundie Torrison
---	---	---	---------------------------------------

2 O-R

Rio Rouge Tawny Lad	Fire Flash	*Fiery Flame Exalted	Creag Dubh
------------------------	------------	-------------------------	------------

2 Y-YYO or R

Front Royal Ringmaster	Shieldaig
---------------------------	-----------

2 Y-W or WWY

Charter Bethany *Daydream Rushlight	Cloud Nine Ptarmigan Suede	Cairngorm Dotteral Drumnabreeze Grand Prospect	*Impressario *Pryda
--	----------------------------------	---	------------------------

2 W-Y

Chapeau Festivity Glamorous Old Satin Jolly Roger	Ceres Flash Affair Soubrette Tudor Love Yellowtail	*Irish Mist Lemon Sherbet Limpkin Modulux *Pure Joy
---	--	---

2 W-O

Arapaho Orion Crown Royalist	*Irish Rover Orange Beacon Orange Sherbet	Hilford Lara	*Loch Brora
------------------------------------	---	-----------------	-------------

2 W-R

Flaminaire Don Carlos Eribol *Rameses	Borrobol Sheik	Rubh Mor	Loch Turnaig Ulster Star
--	-------------------	----------	-----------------------------

2 W-YYO or R

Lysander Royal Coachman Sirius	Northern Sceptre City Lights Dreamboat *Ringleader	Verve Whoa
--------------------------------------	---	---------------

2 W-P

Canby Jewel Song Gainsborough Lisanore Passionale Tullycore	Conval Fount *Kildavin My Word Peacock Rose Royale	Cool Flame Chiquita *Declare Fair Prospect Recital Sedate	*Balvenie *Dailmanach *Gracious Lady Pink Easter Pitta *Vahu
--	---	--	---

2 W-YYP or WWP

Coral Light	*Highland Wedding	Rainbow	Volare
Coral Ribbon	Delectable	Heartthrob	Raspberry Ring
*Dulcie Joan			

2 W-W

Ben Hee	Arpege	*Creme de Menthe	Ashmore
Churchfield	*Broomhill	Glenside	Cold Overton
Danes Balk	*Canisp	*Homestead	Croila
Easter Moon	*Crenelet	Inverpolly	*Shadow
Pitchroy	Tullygirvan	*Misty Glen	
*Yosemite	Tutankhamun	Wakefield	

3 Y-Y

Beige Beauty	Skookum	Johnnie Walker	*Lalique
Lemonade		*New Penny	Citronita
			Earthlight

3 Y-O or R

Altruist 3 O-R	Dimity	*Achduart	Sabine Hay 3 O-R
*Doubtful	*Trelay	*Brett	Ulster Bank
Sun Magic		Tom Jones	

3 Y-YYO or R

Irish Coffee		*Whirlaway	On Edge
Perimeter			Painted Desert
*Sunapee			*Spring Tonic

3 W-Y or WWY

*Aircastle	*Silken Sails	Oykel	Limey Circle
*Clumber	Delightful	Queen Size	
Impala	Golden Eye		
Torrish	*Jamestown		
*Tranquil Morn	Lollipop		
Woodland Prince	Park Springs		

3W-P or O rim

*Audubon	Blithe Spirit	Loch Assynt	Badanloch
Kimmeridge	*Lancaster	Langford Grove	*First Formal
Olathe		Lusky Mills	
		*Purbeck	
		*Rim Ride	

3W-R rim

*Merlin	*Dress Circle	Birdsong	*Star Trek
Greenfinch	Faraway	Four Ways	
Kingfisher	Omaha	Pakatoa	

3 Y-W

None	None	Moonfire	Wedding Band
		Silk Stocking	Lyrebird

3W-R or O

Crimpelene	Ben Rinnes	Dalhauine	Cairn Toul
Irish Splendour	Irish Ranger	Irvington	Cul Beag
Palmyra	Leonora		Dr. Hugh
Privateer			
Rockall			
Woodland Star			

<u>3 W-W</u> Achnasheen *April Clouds *Cool Crystal Snowcrest Verona	*Angel Polar Imp	Delos	Benvoy Irish Linen Monksilver *Sea Dream White Tie
<u>4 W-W or W-Y</u> Candida	Egg Nog	Gay Song Gay Symphony Unique	*Lingerie Eriskay
<u>4 W-O or W-R</u> *Acropolis Monterrico	*Achentoul Centerpiece Gay Challenger	Snowfire Tamoretta	
<u>4 W-P</u> (Available cultivars are not of show standard) none	non	*Elphin Kinbrace	*Cotton Candy *Delnashaugh Tropic Isle Samantha Pink Pageant
<u>4 Y-Y</u> Fiji Papua	—	Moonflight	Elixir Sun Ball
<u>4 Y-O or Y-R</u> *Tahiti *Tonga	— —	Discovery Affable	*Grebe *Beauvallon
<u>5 W-W or W-Y</u> Lapwing Tuesday's Child	*Arish Mell *Saberwing	*Longspur Petrel	Sydling
<u>5 Y-Y or Y-R</u> Harmony Bells Puppet *Ruth Haller	—	Jovial	—
<u>6 Y-Y</u> Charity May *Willet	El Camino Golden Wings Jingle	*Rival	—
<u>6 Y-W</u> None	none	none	Wheatear Swallow
<u>6 W-W or W-Y</u> Greenlet *Perky Titania	Ibis Tracey	*Trena Surfside	—
<u>6 W-P</u> None	none	Foundling Little Princess	Cotinga Delta Wings Lilac Charm

6 Y - O or R

Shimmer	Andalusia *Jetfire	—	—
---------	-----------------------	---	---

7 Y-Y

Circuit Quail Sweetness	Bobwhite Buffawn Wellworth	—	—
-------------------------------	----------------------------------	---	---

7 Y-O or R

Stratosphere *Susan Pearson Suzy	Pukawa	Happy Hour *Indian Maid (O-R)	—
--	--------	-------------------------------------	---

7 Y-W

Mockingbird Oryx Pipit	High note New Day	*Canary *Intrigue Hillstar	—
------------------------------	----------------------	----------------------------------	---

7 W-W, Y, P

Curlew *Eland Pretty Miss Quick Step	Bell Song	*Wendover	—
---	-----------	-----------	---

8

Green Goddess Golden Dawn	*Highfield Beauty	*Hoopoe	*Falconet
------------------------------	-------------------	---------	-----------

9

Cantabile Poet's Way *Quetzal Tweedsmouth	*Angel Eyes Emerald	Bon Bon Suspense Tart	—
--	------------------------	-----------------------------	---

11 W-W, Y or P

Cassata Chablis + Lemon Ice	*Phantom	+ Colblanc	—
-----------------------------------	----------	------------	---

11 Y-Y, O, or R

Oecumene	+ Brandares + Girona	+ Tiritomba	—
----------	-------------------------	-------------	---

(+ These recommendations came from Bill Ticknor.)

## STARRING THE POETS OF F. HERBERT CHAPMAN

MEG YERGER, *Princess Anne, Maryland*

The poets of F. Herbert Chapman were "center stage" at daffodil shows during the first third of the twentieth century. At least thirty-six poets raised and named by him were exhibited at Royal Horticultural Society shows in London and Midland Daffodil Society shows in Birmingham.

In the terminology of the theatrical world this man from Rye, Sussex, England, might have been called an "angel" for the shows because he helped financially in a small way. As a member of Midland Daffodil Society, and for

several years a vice-president, he supported the shows in Birmingham with generous donations and subscriptions. As a member of the Floral Committee he helped judge all narcissus submitted and made suitable awards. Beginning in 1910 he gave a silver Herbert Chapman Poeticus Trophy for the seedling section to be won outright for a group of six distinct cultivars of poeticus not in commerce more than four years, including at least one cultivar not yet in commerce. Later the wording was changed to read three cultivars of true poeticus not in commerce, possibly in hope of encouraging exhibitors to enter. After 1916 the trophy was discontinued.

In 1912 and 1913 his firm, Herbert Chapman, Ltd., contributed generously to a special prize fund for winning exhibits in Royal Horticultural Society daffodil shows, in addition to and apart from the regular RHS official prizes. In 1914 and 1915 he personally contributed to the RHS money prize fund and his firm gave support to the RHS, as they had done in 1913, by taking full page advertisements in the *Daffodil Yearbooks*. The one for 1914 was outstanding in that it had a "paste-on" color plate. As a member of the RHS Narcissus and Tulip Committee he assisted in selecting blooms for First Class Certificates and Awards of Merit from those submitted in categories such as "Show," "Garden," "Pots," "Cutting," or "Rockery."

Behind the scenes, Chapman may have tried his hand at "script-writing." He was an advocate of what were known at the time as the parvi-coronati and the poets. As a member of the RHS Committee he may have been responsible for including, in the 1916 schedule, new classes intended to encourage hybridizing and exhibition of smaller flowered cultivars of daffodils from divisions now known as trumpet, long-cupped, short-cupped, and poeticus. The judges were instructed not to give points for undersized blooms of normally large-flowered cultivars. A Silver Banksian Medal was offered in the open class and in the seedling classes both a Silver Flora Medal and a Silver Banksian Medal were offered. Very likely other men on the Committee, including Engleheart, P.D. Williams, and A.M. Wilson who had similar leanings toward "poetlike" flowers, supported the introduction of such classes.

The same four men were on the board or Floral Committee of The Midland Daffodil Society and they used the same idea with the same divisions of daffodils for their 1917 schedule with the wording "Bantam Seedling Class. Six varieties raised by the exhibitor. No perianth to exceed three inches in diameter."

As for reviews of the show—Chapman wrote them, too. He did show reports for the RHS and Midland Daffodil Society and wrote articles for yearbooks, annual reports, and garden magazines usually using the pseudonym "Ornatus." Appropriate as the name was, the use of it bespoke a modesty and reticence about the man. His imagery and clarity in writing did a great deal to build an audience interested in daffodils for both house and garden. He wrote:

I like to see a big vase of fine trumpets placed at a corner of a majestic staircase or in the hall of a large house, but for my own little table or mantelpiece I enjoy more the beauty of the "poets" with their graceful, dainty form and warm coloring, which I never tire of enjoying and gloating over.

Self-effacing as he might have been as a writer, he was firm and outspoken where daffodils were concerned. He had so much experience, an "eye" for quality, and such a phenomenal memory of cultivars that frequent requests

for articles on specific topics resulted from his fame. He was gracious in writing something but seldom stuck to the subject on which he was asked to write. For instance, in 1938 he was invited to do an article about the newer daffodils and the vagaries of that season. Before getting around to that he reminisced about old daffodil personalities with quite a tale about Engleheart being a law unto himself. If he was not satisfied with his display, or not doing much business at a show, he took his trade exhibit down and carted the flowers home the evening of the first day. Next day visitors were confronted with a bleak blank space to the committee's discomfiture. He described Mrs. Backhouse's uncertainty as to whether she would or would not set up her exhibit, Mr. Dawson's manner of showing displeasure at the judging by posting a "not competing" sign the next time, Peter Barr wearing a Tam O'Shanter, Robert Sydenham taking everyone to dinner, and so on. True, these sidelights make more interesting reading forty years later than a list of new names and talk about the drought, but to write so shows a capricious streak in a quiet man.

F. Herbert Chapman was born in 1870 and in his early twenties became interested in choice bulbous plants such as iris, freesias, and others, eventually developing a nursery known as Rotherstone Gardens at Rye near the Rother River in Sussex, England. Before beginning to cross-fertilize daffodils in 1904 he had grown daffodils commercially for about twenty years. The *Book of The Daffodil*, published in 1903 by the Rev. S. Eugene Bourne, and Mr. Robert Sydenham's brochure on seedling raising started him on that project. From then on the hybridizing of daffodils was the very core of his life. Never having married, his daffodils, particularly the poets, became his family.

He bought breeding stock from Engleheart and particularly liked to use Kestrel, bred by P.D. Williams. He preferred to make crosses in the middle of the day, in sunny weather if possible, avoiding times when frosts were imminent, and advised planting the seeds as soon as ripe, finding that such methods gave almost ninety-nine percent germination. His seedlings multiplied with, in his words, "a bewildering rate." His system of numbering seedlings was to attribute the letter "A" to crosses made in 1904, the letter "B" to crosses made in 1905, and so on. The number to the right of the letter indicated, by code, the parentage. The letter to the left of the letter indicated the selected seedling. Many of his seedlings he considered to be so good he intended not to release them into commerce but to keep them for breeding stock to ensure superiority of future cultivars. He saw in them a potential for producing top form and substance. Right away he began to keep a regular studbook to help in selection of parents and was glad to share the details on hybridizing with anyone who asked it. In his own words he derived "great pleasure in lending a helping hand to fellow enthusiasts who desired it."

Either luck or extremely keen perception of which crosses would be good ones brought him prizes for seedlings at the Birmingham show of 1909, only five years after making the first cross. The next year he had named poets of his own raising to enter—Caramel, Ode, and Elegy (Horace  $\times$  Almira). Elegy was so pretty that W.B. Cranfield, who was a heavy buyer of new seedlings, bought the entire stock of it after it won an Award of Merit at Birmingham. According to Matthew Zandbergen, "kennel names" were given to the seedlings in exhibiting blooms a year or more prior to the actual date of registration as printed in *Classified Lists*. Dr. John Wister noted such discrepancies and in many instances ascertained the correct date of

introduction by correspondence with the originator. Quite often the date attributed to them in the *Classified List* was up to three years earlier or three years later than the date they were first exhibited.

By 1916, he added fourteen more named poets to the supporting casts in the RHS and Birmingham Shows. This group of fourteen included Allan-a-Dale, Ballad, Bloodstain, Bunthorne, Cadenza, Cantata, Gavotte, Hohenlinden, Quatrain, Rapture, Distich (which was used by Brodie in breeding), Ditty (Socrates  $\times$  Acme), Marseillaise, and Sarabande. The last four were eventually given Awards of Merit. At the same time poets-under-number were shown in winning exhibits both in seedling classes and general collections with the same number sometimes appearing in more than one entry.

Probably some of those plants were victims of World War I. The War Agricultural Committee put restrictions on the amount of land that could be used for crops other than food which made for a cutback in daffodil production. This caused a financial hardship to men like Chapman whose livelihood came from bulbs. However, he did continue to make poet crosses and some were named and exhibited between 1921 and 1924, such as Rondeau, Farandole, Minuet, Spinet, and Grand Opera. Minuet (Kingsley  $\times$  Socrates) became the darling of hybridizers and is possibly the only Chapman poet knowingly grown today. Spinet had an astonishing corona described as a citron colored eye divided into three segments by crimson lacing. Grand Opera (Kestrel  $\times$  small-cupped seedling) was described by the Rev. Joseph Jacob in a list of outstanding flowers of 1923 as being three and five-eighths inches in diameter with an eye of red. It is pictured on page 195 of Calvert's *Daffodil Growing for Pleasure and Profit*.

During this time Mr. Chapman moved from his long-time home, Guldeford Lodge, to The Knoll, also in Rye. Possibly the move was made in an effort to cut back on expenses. He still had Rotherside Gardens as his nursery but may have needed other means of supplementing his income. According to Mr. Herbert Barr, Chapman "fell upon poor days" and he knew him as a wine-merchant but whether that vocation came at this date or later is uncertain.

At about the time of World War I the stocks of many bulb growers were depleted by eelworm. Probably Chapman's business did not suffer from this however. By his own statement he did not come into much contact with daffodil men other than for shows, meetings, and daffodil dinners. He worked alone and there is no indication that he was thrown socially with the other daffodil "greats" in spite of the fact that many of them specifically mentioned in their writings the high regard they had for his work and ability as a judge. It is more likely that the blow dealt to his business was from the over-importing of bulbs from Holland and the result of the United States embargo of 1925 on the purchase of British bulbs.

In 1925, the leading role in the daffodil world went to Mr. Chapman. The Royal Horticultural Society awarded him the Peter Barr Memorial Cup for outstanding work in connection with daffodils. His flowers were still in the act. Most of his show entries were his own seedlings or blooms of his raising in the short-cupped and poeticus divisions and still getting their share of awards—and applause! This must have been a source of pride and gratification to a man who favored those smaller flowers.

In 1927, many of his seedlings were included in the general collection of thirty-six blooms and in the Bourne Cup collection, as well as in short-cupped and poeticus classes. His system of numbering indicated that some of the

seedlings were from crosses made as early as 1904 and as late as 1921. One poet seedling, A 1, in the Bourne Cup Class appears to have been one he kept behind the scenes for twenty-three years except for entering it in a forty-eight cultivar collection at the 1913 RHS Show. Guy Wilson commented that it was "a handsome and striking example of what Chapman called his Super Poet Strain; a very tall big Poet with snow-white perianth and bold darkly rimmed eye." Probably many of the fine poets and small-cupped cultivars descended from poet seedling A-1, which was from a cross made the very first year Chapman began hybridizing daffodils. An article he wrote for the *National Horticultural Magazine* for April, 1927, indicates he had more poet seedlings coming along of similar breeding.

At the 1928 Show in Birmingham, Chapman's commercial stand was the best he had ever put up, according to Guy Wilson, and the flowers were "in the pink of condition and grandly grown, with many fine things." Quite probably he had decided to show the rest of his seedlings and sell off his stock so displayed his flowers with that in mind rather than entering them in competition.

The supporting cast in that show included new poets that were applauded eagerly. A.F. Calvert of Carnsulan Nurseries bought the poets Adieu (Acme x a poet), Chloride (Distich x Black Prince), Flare (Bloodstain x Ecstasy), Sodium (Acme x poeticus), and Vellum. J. R. Pearson and Sons got Bard of Rotherside and Vaudeville. J. L. Richardson took Inca. Solomon went to deGraaff Brothers of Holland. Cranfield added Border Minstrel to his stock and Mr. M. G. Collins bought a seedling which he later registered as Arthur Collins. Mr. Chapman registered Elba and Recessional (Socrates x Lullaby) himself. Possibly he thought of the Isle of Elba as a place of exile to which he himself might as well go now that he had parted with so many of his poet family. Surely he had in mind the end of twenty-five years with the flowers he loved when he selected the name Recessional.

Probably the stars of all of Chapman's poet productions were Grand Opera and Minuet.

The stock of Grand Opera was sold to P.D. Williams—appropriately because it was Williams's poet Kestrel that had been the seed parent, producing seedlings that were sort of a giant race of poets of great vigor and size. Mr. Chapman wrote about his flower himself:

I confess to a special love for the poeticus and small cups, and I may claim, I think, to have made a marked advance with these. This has been realized with the flower I exhibited as Grand Opera in 1923. It marked a great step forward and was considered by most people to be the finest poet to be exhibited up to then.

In 1927, J. Lionel Richardson included Grand Opera on a list of the best representative collection of twenty-four cultivars of narcissus at that time. He described it as a very large poeticus with flat, pure white perianth, and a large eye with a remarkably broad margin of deep red.

In the United States there may still be some forgotten plantings of Grand Opera in existence. Jan deGraaff of Oregon Bulb Farms listed it in his catalogue. He recalls that the Chapman bulbs were of good quality.

Mr. deGraaff also listed Minuet. So did Mrs. Pratt of "Little England" in Virginia where it was eventually naturalized in a "stream of daffodils" planted to make one think, when the flowers were in bloom, that a stream flowed through a meadow. It was described by Mr. Heath of Daffodil Mart, also in Virginia, as finely rounded, very overlapping velvet petals: small scarlet edged yellow cup. Mr. Edwin Powell of Hermitage Gardens near Chevy Chase,



Maryland, listed it in his catalogue as late as 1938 and used it as seed parent for Catawba 9 and Niantic 9 of his raising. B. Y. Morrison had an established colony of it in his own garden in 1933. In 1936 it was reported by Mr. C. E. Radcliff as being exhibited in the poet section of shows in Australia.

By that time Minuet was becoming scarce in England; but in Tasmania William Jackson, who had imported it from Mr. Chapman at least as early as 1929, was using it as a parent. According to him he had only seen one daffodil of his own raising whose bloom he considered perfect and that was a cross using pollen from Minuet.

David Jackson, Mr. William Jackson's grandson, found in his grandfather's records that he first used Minuet as a pollen parent in 1929 and last used it as a parent in 1940. There were several seedlings grown for evaluation and, as was his grandfather's practice, they were named, but not registered, when selected such as:

- 1933 — Gosta Berling — Minuet 9 × Banjo Patterson 9
- 1934 — Findaws — Minuet 9 × Dactyl 9
- 1937 — Gallia — Minuet 9 × Morocco
- 1938 — Saraband — Minuet 9 × Morocco

Other notes indicated certain varieties with poet-like characteristics that were used in breeding with Minuet. Mr. Jackson's favorite daydream was of "a seedling with a large flat poeticus white perianth and an equally large emerald cup." Some of the crosses he made with Minuet in the effort to make that dream come true used:

- 1931 — Harpagon — a short cupped Barrii with white perianth bred by P. D. Williams
- 1932 — Silver Salver — a short cupped pure white Leedsii bred by Brodie
- 1933 — Morocco — a short cupped Barrii with white perianth bred by Brodie
- 1935 — Dactyl — a poet bred by Engleheart
- 1949 — Dava — a long-cupped Leedsii with white perianth bred by Brodie

It must be that when the seedlings had been grown on and evaluated none of them attained a standard that made them worthy of naming. At any rate none exist in the records.

However, in the show reports only the names of the exhibitors were given—not the cultivars. There was strong competition among several Tasmanian growers in the poet seedling classes. David Jackson thinks Minuet was undoubtedly used for breeding by many of them as they all freely exchanged bulbs. For instance it was exhibited by his uncle, a Dr. Drake, in the Hobart Show in 1934 where it won Champion Poet. David expressed surprise that the breeding of poets has died out in Tasmania as it was so very strong prior to the Second World War.

Minuet's importance to breeders and growers from Australia and the United States surely is responsible for the fact the cultivar can still be seen in shows today. It is truly a tribute to Chapman's genius as a hybridizer that this is so.

By 1938, Mr. Chapman had moved to West Meade, Peasmarsh, Sussex, a more humble home than any he had lived in before. But he had room for at least some of his daffodil family. In an article he wrote that year he referred to his own garden as "a small one today" and mentioned that a larger proportion than ever of his seedlings flowered at four years than ever before.

He marked a number of them with the idea of growing them on and, if possible, increasing them.

This was not destined to be because of the shadow of barrage balloons, and proximity to the Straits of Dover and the English Channel which put him on the wartime attack route by air and by sea. His health began to fail and he was increasingly in straitened circumstances. He managed to continue to attend spring RHS meetings, shows, and daffodil dinners, and was always included on the discussion panel at the daffodil dinner following the RHS show, at least through 1940. The RHS shows were held without fail in London, sometimes in the midst of bombings, right through the war but there were fewer exhibitors and flowers. If Chapman was able, surely he would have been there but there is no record.

The decrease in popularity of the poets had begun in 1935 when for five years the dates of the show were too early for the poet cultivars. Mr. Chapman regretted that there was "a falling off of interest in poets and that people were not taking the pains with poeticus and showing them so finely as used to be done some years before." Just as in Australia and United States, the breeding of poets very nearly died out by the end of the war and the curtain fell on the end of an era.

F. Herbert Chapman died in 1945.

#### SOURCES OF INFORMATION

Twenty Annual Reports of Midland Daffodil Society between 1910 and 1939

RHS *Daffodil Yearbooks* 1913-15; 1933-40

RHS *Daffodil and Tulip Yearbook* 1946

Various articles written by Mr. Herbert Chapman

---

## JUDGING MINIATURES AND SPECIES

NANCY WILSON, *Berkeley, California*

A couple of years ago I visited my friend Sid DuBose in Stockton. In his lath house he had a box of some 500 *triandrus* species in all stages of bud and bloom. They were cream, yellow, white; single flowered and multiple flowered; some looked up and some looked down. They had short stems and long, wide perianths and narrow perianths. Some perianths were thin and some twisted. Their coronas were short, long, fat, and thin, smooth rimmed and serrated. Each scape was an individual.

In an article in the *ADS Journal*, Dr. Bender asked why his *N. asturiensis* was disqualified from competition because of its large flower. He felt the larger the flower the better, the signs of good culture and care.

A judge gives a rare miniature a blue ribbon because she has never seen the flower before. Another gives a ribbon because the flower is very hard to cultivate and the grower has succeeded. One judge was overheard to say, "Oh, look at that little *scaberulus*. I can hardly see it, it certainly is the best miniature here today."

What name pleases you most? April Tears or Lintie?

How can we judge miniatures and species with so much variation and personal opinion? What do we need to consider to be fair judges? Some of the following information was gleaned out of *ADS Journals*; you may recognize it as your own. Some of it is my own opinion, and some of it is just common

sense. I hope that you will be helped to become fairer and more democratic miniature judges when I am through.

Judging these flowers is no small matter. The present regulations apply and do not apply at the same time. How can the judge carry in his or her mind an image of the most perfect species when the species go off cloning across the countryside? How can we provide judges with the images of cultivars as they are hybridized around the world? What are the standards of perfection? Are they going to change? What is going to happen to the round, overlapping perianth if the earth suddenly receives a visit from a distant star and star shaped flowers become the desirable goal for breeding?

Wild populations, natural selection, and breeding all contribute to a flower. Roberta Watrous states, "the names of wild plants refer to populations 'that are more alike than they are different,' although considerable diversity may be expected and positive identification may not always be made from a cut bloom alone, as leaf and bulb characteristics differ." An example of this is *N. rupicola* and *N. juncifolius*. *N. rupicola* has grey-green indented leaves and a six-lobed corona; *N. juncifolius* has round, dark green leaves and often has more than one flower, but the flowers of both species are very similar.

Fr. Buchholz states, "We should all oppose adamantly the effort to classify all daffodils only by appearance. The species and wild hybrids have the genetic banks and sources from which all others come and these must be treasured so that the original sources are not lost. For example, some scientific expeditions to South America are now collecting all wild potatoes and cultivating them as a genetic bank, so that they do not become extinct; many valuable traits may still lie hidden and unexploited in them. The same attitude must hold about the sources of all cultivated plants. I suppose the old cultivars, also, being nearer the sources, may have traits that further breeding programs will reveal and that may have been lost in later varieties."

How does this relate to judging species and miniatures? How do we protect this genetic bank and become democratic judges?

The ADS has wisely formed a Miniature Committee. Although changes do not come easily when referred to Committee, a Committee does provide a backdrop against which new ideas can be added and old ideas can be considered for their merit.

If we know the measurement of a cultivar as it grows in the hybridizer's garden we will have a standard for that flower. If we add a good colored slide library to this information we will have a visual picture. This picture will help us to know if the flower before us is indeed the right one. An example of this is Marionette. The Marionette grown in California is a large flower. Is this the real Marionette? Philomath is another example. Does my Philomath grow like yours? Does yours grow like Grant Mitsch's?

What is the ADS definition of a miniature narcissus? A miniature narcissus is one which has been approved by a majority of members of the ADS Committee on Miniatures. The Approved List of Miniatures of the ADS is the authority for describing a narcissus as a miniature. These descriptions are not specific measurements but descriptions representative of various soils and climate zones in all sections of the country. Additions and deletions are printed in the December issue of the *ADS Journal*. All additions and deletions are published for the general membership to consider before becoming final.

In judging miniatures the Judge needs to consider the parentage of the cultivar as well as judging the cultivar for the division to which it is assigned. Judges need to familiarize themselves with the different species and how the divisions are based on them. Whenever possible look at lineages when judging. As species and cultivars are crossed over many generations the

flowers will only be true to themselves and must be perfect in their own terms. Bulbs settle down after a few years and so the hybridizer may assign a flower to one division and it may consistently be representative of another division as it matures. An example of a change in form is seen in the *poeticus* species and hybrids. The species have pointed perianths and the hybrids have round, overlapping perianths.

The purpose of judging is to raise the standards for flowers and to educate the general public and interest them in growing these beautiful flowers. Another purpose should be to perpetuate the gene bank. Unlike the judge who just 'loves *scaberulus*,' we as judges must look for quality. Make your decisions based on knowledge acquired by experience in growing, attending shows, and keeping current on the literature. Internalize your judging ethics. Be kind and courteous. Remember that the exhibitor of the flawed flower in front of you may be standing behind you. Be constructive in your criticism of his prized specimen. A show is held for public education and to elevate standards in growing and hybridizing. Help the exhibitors by writing your comments in such a way that the grower will be eager to go home and try again.

I will briefly go over specific points that are applicable to miniatures under the ADS scale of points for judging.

Condition: Specimens for show need to be in top condition. Condition covers mechanical injuries and factors that are not inherent in the flower. Judges who are assigned to the miniature classes can make their work easier by taking a little botanical lens to scrutinize the tiny flaws. A tear in a miniature deserves the same penalization as a standard. Look to see if the cups are burned by the sun. A popular flower is Sundial. Sundial sunburns very easily. In *jonquilla*, *triandrus* and *tazetta* species and hybrids there may be several flowers to a stem. As these flowers open their pedicels and long perianth tubes may expand rapidly and break the sheath. They may also get caught up in it and become deformed.

Student Judges often ask how to tell maturity in a multiheaded specimen. The most perfect scape has all of the florets equally open and of the same size, the next best has some flowers fully opened and some in bud. Old brown flowers are not in good condition.

Form is the genetic inheritance. In order to judge miniatures well the judge must be familiar with the characteristics of the individual cultivar or species. The corona should be round. Notches, serrations and ruffles may be present as in the example of *N. rupicola* with its six-lobed corona. The perianth should be smooth, not ribbed. Many perianths in small flowers are ribbed. It is a way of the little flower getting in more surface area. It may be beneficial to the plant but not to the show bench. The perianth of Minnow ends in large mucros. This is characteristic of the flower and cannot be faulted. However, deviations in form need to be in good balance, of equal size and evenly distributed. A small daffodil can have good axis balance. This is often the final factor in deciding a winner. Axis balance can be improved with a gentle twist of the stem or pedicel by the exhibitor.

The *Handbook for Exhibiting and Judging Daffodils* states grace is an important factor and should be considered under form. What is grace? Grace is an aesthetic value. It is synonymous with charm. A graceful plant would be beautiful with free flowing curves, easy and natural contours, and a basic elegance. Grace is a subjective quality. Are bulbocodiums graceful? *B. obesus* has a very large corona on a stiff small round stem. It looks out of proportion and would not be considered graceful if compared with *N. bulbocodium*

*nivalis* which has a corona in good proportion to its perianth segments and stem length. Artistically it would be graceful.

Miniatures usually have good substance when mature. Their small nature seems to encourage the bulb to put its nutrients where they will do the most good. The larger cultivars, as Frosty Morn, have a thinner substance.

Texture is the smoothness or roughness of the tissue. It is hard to see roughness on a small petal without a lens, but sheen and vitality do show up and give the flower an aura of health and beauty.

Color varies due to climate, culture, and nutrition. The miniatures grown in Northern California are very intense in color due to the soil and copious winter rains. In Southern California the colors fade out quickly due to the dryness and sun. The clarity of color is important. Green streaking should be penalized, but the green glow of Sundial and Xit enhance their appearance. There is only one reverse bicolor miniature, Gipsy Queen, and only one reversed species *N. triandrus pulchellus*. A fully reversed flower would score more than an immature one.

Is smaller better? This is a controversy. As a judge I would rather see a perfectly grown specimen, perfect for its form and description. This is a factor that comes with study and knowledge and excludes prejudice. If a flower has good proportion and balance it is graceful by definition. Segovia when grown well has good form; W. P. Milner is charming in the garden in groups, but has *too large a head for its stem on the show bench*. To know these factors helps us to determine whether the size of the specimen in front of us is appropriate.

Stems show us evidence of health. A small stem can show disease and must be eliminated from competition. Stems should be exhibited as near to the way they grow as possible. If stems are cut off for judging so that all the flowers are the same height we are aiming toward a breed of daffodils that all look alike.

ADS awards for miniatures are to honor outstanding, distinctive blooms. The Miniature Gold Ribbon is for the best miniature daffodil in the horticultural section. Only miniatures on the ADS approved list [and seedling candidates] can be entered as miniatures in an ADS show. Polls and symposiums have shown that miniatures with jonquil blood win the most Gold Ribbons and those with cyclamineus parentage are second. The Lavender Ribbon is for a collection of five cultivars and/or species of miniature daffodils. In the 1973 symposium on miniatures, Mrs. Anthony noted that varied collections catch the eyes of the judge. Color and balance are important factors when the flowers are equally good. If all other things are equal, the judge should look at how the collection presents itself. The flowers can be different but should complement each other. The Miniature White Ribbon for a vase of three stems of one cultivar or species is usually staged in a triangle. Ideally each scape should have the same number of florets, all the same size.

More and more miniature seedlings are being shown. The judge must be aware that a miniature candidate can be entered in the division the originator chooses. Merit and uniqueness are values to be considered.

Species and miniature daffodils are beautiful flowers. They comprise varied and unique forms that need to be recognized and preserved. What do we know of the future? We have not figured out all of the past. Humans have a sense of art and beauty. One of our goals has to be to appreciate and protect the essential components of species in nature for what end we do not know.

(The above article was presented as part of the Judges Refresher Course in California.)

## LANDSCAPING WITH DAFFODILS

MICHAEL L. HEGER, *Waconia, Minnesota*  
(from the 1981 Yearbook of the *Daffodil Society of Minnesota*)

The word "landscaping" like the word "love" has become a rather ambiguous term that means different things to different people. Therefore, one person's perception of what landscaping is may differ radically from that of another and the final products will not achieve the same purpose. Merely putting in a foundation planting in front of a house is not landscaping. Nor is surrounding a lot with a fence and planting an unrelated collection of ornamental plants landscaping.

For the purpose of this article, let us think of landscaping as the art of creating a plan to make use of your land in the most attractive way. The final plan should depend on the site's natural advantages and its orientation to the sun and wind, your personal gardening interests and other activities, the amount of time and money you have to spend on the garden and even the area surrounding your site. You may even find it necessary to reshape the land somewhat to achieve your desires and probably will want to add some architectural features in order to display the plant material to best advantage.

You may wonder how all this talk of landscaping relates to your desire to grow and enjoy daffodils. If you want to achieve true artistic effect and beauty with daffodils you must, in the process of developing the landscape plan, decide how you can best display them in your situation. Growing daffodils in rows, though practical from a commercial or hybridizer's point of view, is not landscaping. It is not a natural looking phenomenon and does not relate well to other plantings. Remember that even though our homes are not naturalistic structures, we should strive to make the surroundings appear so.

There are a number of ways daffodils can be used in the landscape and whether you use one or several of them will be mainly determined by your personal gardening interests and your site. Always strive to display these plants for maximum beauty and enjoyment. There is certainly nothing wrong with using several different approaches to landscaping with daffodils as long as all the elements fit together well in the overall plan.

Probably the most common way in which daffodils are used in the home setting is the mixed flower border. If such a border is properly designed, it will be a harmonious season-long thing of beauty where all the elements supplement each other and work together. Daffodils can certainly be one of the key elements for spring color. The most successful flower borders have some sort of background which the flowers are seen against and that shows off their colors. This background also provides the flowers with some protection from bad weather. The material may be any of a number of things including evergreens, shrubs or a fence but usually it should be dark in color as most flowers lose some of their effectiveness against a light background.

The daffodils are best planted in the middle of the border interspersed with other perennials like bleeding heart, hostas, peonies, daylilies and phlox that will hide the dying foliage of the daffodils after they bloom. Pockets of annuals planted over the clumps after bloom could be used to achieve the same purpose. The number of bulbs planted in each group will vary somewhat with the overall scale of the garden but, in most cases, somewhere between six and twelve seems to work out well. The yellow and white cultivars are probably easiest to place in relation to other flower colors but other stronger colors can certainly be used when an accent or contrast is desired. Mulching these

clumps in spring as they begin to grow will prevent the flowers from being spattered with mud during rain storms. Some daffodil cultivars that lend themselves nicely to use in the flower border include: Arctic Gold, Cantatrice, Rashee, Ormeau, Ceylon, Court Martial, Vulcan, Festivity, Wahkeena, Daviot, Passionale, Salome, Accent, Easter Moon, Daydream, Glendermott, Aircastle, Glenwherry, Merlin, Cheerfulness, Charity May, Kinglet, Dickcissel and Actaea.

Another means of display, particularly valuable to gardeners developing large collections of daffodils, is planting the bulbs in exhibition beds. The same general rules concerning backgrounds for mixed flower borders apply here. In some cases, it may be possible, by the use of shrubs, to create planting bays within the beds so that only a limited number of the total clumps are seen at one time. The bare appearance of these beds after the bloom season can be handled in one of two ways. The bulbs may be grown in combination with a perennial ground cover such as *Asarum europaeum*, *Phlox stolonifera* or *Potentilla tridentata*. At bloom time, the lush green foliage of the ground cover provides a background for the flowers and helps keep them clean. Then, after bloom, as the daffodil foliage dies the ground cover masks the unattractive appearance. In some situations, gardeners will use annual flowers in place of the perennial ground cover. The annuals are planted into the bed after bloom has finished and will hide the dying foliage as they grow. Their flowers can then be enjoyed in that bed for the balance of the growing season. Just which one of these two methods a gardener uses depends on personal taste as well as how often and with how much ease he intends to divide the clumps. Daffodils planted in exhibition beds are best grouped in clumps of at least three to five bulbs of each variety. Any of the good garden cultivars like those suggested for the flower border are appropriate in this situation and even daffodils being grown for show flowers can be planted in these beds. It is important when planting bulbs in exhibition beds to pay attention to bloom height so that the taller daffodils do not hide the shorter ones.

Gardeners with an avid interest in rock gardening have a different group of daffodils to work with. There are a number of miniature daffodils that make quite a show tucked into the rockery but would be lost to sight in the scale of most other garden uses. In fact, some of these daffodils will only live in cultivation with the special soil types and growing conditions often created in a rock garden. The rocks used as structural elements act as warmers and protectors in the early days of spring and the rock mulch, often used to cover the soil, protects the delicate little flowers from being marred with soil.

Unless the rock garden looks natural the daffodils and other plants will not create a very pleasing effect. The gardener with natural slopes on his site can create a rock garden relatively easily. If not so lucky, a spot can generally be located where a slope and rock garden in scale with the existing contours can be tastefully built. Miniature daffodils used in such situations are best seen in uneven groupings drifting down the slope duplicating how one might find them in the wild. Some possible daffodils for the rock garden are: *Narcissus bulbocodium* and its varieties, *N. cyclamineus*, *N. juncifolius*, *N. asturiensis*, *N. rupicola*, *N. triandrus* and its varieties, April Tears, Hawera, Pixie, Pixie's Sister, Flyaway, Segovia, Mite, Little Beauty, Chit Chat, Tete-a-tete, Bobbysoxer, Xit, W. P. Milner, and Snipe.

There are a number of other ways that daffodils can be utilized in the landscape. This may involve inserting informal groups of bulbs in small open areas between shrubs or in foundation plantings. Each grouping should be a

separate variety. A few daffodils tucked on the backside of a small pond can be stunning especially when floral reflections are seen on the water. Planting a few clumps of daffodils along the entry way into your home or along garden paths can make a walk through the landscape an enlightening experience especially if fragrant cultivars are used. Daffodils can also be grown in containers. This type of culture is especially valuable for spring color on or around patios and other architectural features. Again, this is a fine opportunity to use fragrant daffodils. Remember, however, that this type of culture requires special winter protection of the containers.

One final way of using daffodils in landscape situations is often referred to as naturalizing. I do not feel this is an accurate term for a truly naturalized planting is entirely on its own. It is free of man's cultural aid and is able to survive under complete neglect and even perpetuate itself. Very few so called naturalized plantings created by man meet these qualifications. The sites where one finds true naturalized plantings are not normally available to most gardeners. They include such areas as forest edges or openings, meadows and barren, rocky hillsides. Therefore, let us use a more appropriate term and call this concept "planting for natural effect."

The sites available for this type of planting may be along a woodland path, among native trees, an odd out-of-the-way corner of the garden or even in areas of rough grass (but not in quack grass or other strong growing rhizomatous grasses). This type of planting is not compatible with the home lawn since the grass cannot be cut until mid-July after the daffodil foliage has died down. It becomes quickly apparent that most homeowners just do not have these types of sites or enough space to do a really effective natural planting. Therefore, if you are limited in these respects, concentrate on the other means of landscaping with daffodils and leave this one to larger property owners and public institutions.

If you feel that you have the proper location and adequate space, then keep the following tips in mind. Each grouping that you plant should consist of a single variety. Groupings of mixed varieties are very spotty and just do not carry enough visual impact. The number of bulbs to use in a group depends on the amount of space available but a minimum of 100 bulbs is a good starting point for creating good garden effect. Lots of 1000 bulbs each are quite stunning if the space is available. It is always better to have one large group instead of several smaller ones.

The shape of the planting should be irregular in outline and may be dictated by natural contours and features of the land. Some gardeners simply take handfuls of bulbs, throw them on the ground and then plant the bulbs where they have fallen. This system does work reasonably well but if you have ever studied a naturalized planting, you know that there is a certain irregular arrangement of the plants that is dictated by natural reproduction of the species. The densest plantings and most closely spaced bulbs are around the mother bulb usually near the center of the grouping. The farther away from the mother planting the greater the space between the bulbs. The most dramatic natural effects are achieved by simulating this pattern being careful not to become too regular and predictable with bulb spacings.

It should also be pointed out that in this type of culture deep planting of the bulb is advisable. This prevents the clumps from increasing too rapidly and deteriorating in their flowering capability. For most normal size bulbs, a depth of six to eight inches is ideal.



The best daffodils to use for natural plantings are the small flowered types since their size and form are closest to wild species daffodils. The most appropriate classes to use would be short-cupped (Division 3); triandrus (Division 5); cyclamineus (Division 6); jonquillas (Division 7); poeticus (Division 9); and species, wild forms and wild hybrids (Division 10). A selection of varieties might include the following: Thalia, Tresamble, Peeping Tom, Forfar, Beryl, February Gold, Sweetness, Geranium, Actaea, *Narcissus* × *biflorus*, *N. poeticus recurvus*, and *N. jonquilla*.

No matter which one or what combination of the uses of daffodils in the landscape you decide to undertake, your success in growing them will depend on several factors. Good quality bulbs are the first essential ingredient. If buying bulbs via mail order, make sure you are dealing with a reputable dealer. If hand picking your stock, select bulbs that are hard and firm, of even color and without any bruises or cuts.

The other important considerations to bear in mind are good drainage, proper soil preparation, correct planting depth and spacing, early planting, proper fertilization and watering practices and mulching. The one factor that you cannot manipulate is the weather so hope for the best. Enjoy your daffodils and have fun experimenting with various plant combinations.

---

## THE TAZETTAS

(from the newsletter of the Southwest Region, March, 1981)

Thirty-five years ago I planted Paper White, Minor Monarque, Soleil d'Or, Scilly White and White Pearl. These were from my mother's garden which she had grown for thirty years. They have been a joyful pleasure all these many years. It was a tradition with her and me to use bouquets of Paper White tazetta (*tazetta papyraceous*) and Minor Monarque at Thanksgiving and Christmas. Their heavenly fragrance and white blossoms added to the spirit of these seasons. Rarely do they fail to bloom for these occasions.

They have never been more beautiful than this season. Indian summer lingered through January rapidly bringing spring-like days. The buds of Scilly White, Soleil d'Or and White Pearl were just ready to open when a mid-February winter blast of 18 degrees arrived. These beauties can take quite a freeze but do not tolerate sudden changes in temperature. The weather fluctuation in a given place at a given season can telescope or extend bloom periods. A gardener cannot control this factor. The telescoping of these daffodils was sad. In sheltered locations a few managed to survive and bloom for ten days. Fortunately all tazettas do not bloom at the same time. If all continues as predicted, March will be spectacular as Silver Chimes, Laurens Koster, Geranium, Scarlet Gem and Golden Dawn will burst forth in all their glory. These flowers are the only daffodils that bloom in my garden from November to early April. I encourage you to grow all of these varieties of Division 8 that you can find in trade or from friends. The old varieties will never leave your garden. What a blessing.

Looks as if it will be one to remember—just like 1980. I wonder if it is too much to ask for rain, no late freeze, not too much heat, no backaches, and lots of energy and enthusiasm for all of you.

BERTIE FERRIS, Dallas, Texas

# ANTICARCINOGENETIC COMPOUNDS IN NARCISSUS AND AMARYLLIS

L. S. HANNIBAL, *Fair Oaks, California*

Recently while reading the *Botany of China, a Report of the Botanical Society of the American Delegation to the Peoples Republic, May 20-June 18, 1978* (Anitra Thorhang, Editor, c/o United States-China Relations Program, Stanford University, 1978) I noted that at Nanking University in the laboratory of secondary plant substances they were working with *Narcissus tazetta* var. *chinensis*. Extracts from these bulbs contain two alkaloids known as pseudolycovin and pretazetetine. The former is effective in combatting leukemia in mice. The latter is a reverse transcription inhibitor and an anti-tumor agent for the treatment of brain, stomach, and liver tumors. The peak of the alkaloid content occurs in the bulbs during the dormant season. Both compounds have been noted to affect cell elongation in the *Avena* coleoptile test, as well as upsetting mitosis and protein synthesis when used at strengths of 2 mg. per liter.

It has been known for many years that the African natives used the juice or compresses of crushed *Crinum* to cure tropical sores and cankers. Correspondence with the USDA in November of 1979 indicated that the National Cancer Institute has undertaken a study of various *Crinum* extracts and found the *Crinum amoenum* from India more effective than the African species. When they submitted a sample to the writer for species identification, he suggested that they try the Cape of Good Hope *Amaryllis belladonna* and sent ten pounds of bulbs. The result was an order for 800 bulbs during the spring of 1980 with the report that the crude extract has shown a high level of activity against mouse P388 lymphocytic leukemia, one of the best tumor systems in the cancer screening program.

It is not known if the N.C.I. has investigated *Narcissus* to date, but tests indicate that the *Amaryllidaceae* all contain a related series of alkaloids having potential medical uses.

## BEGINNERS CORNER

Coming up with a fresh topic for this column is not always easy! However I'd like to share part of a letter from my dear friend and mentor, Mary Elizabeth Blue, with you. She writes, "I just finished reading Brian Duncan's letter in the Northern Ireland *Newsletter* and enjoyed it no end. I couldn't help thinking back to the time when I scrambled this way and that to learn more about daffodils. I couldn't find a soul who would tell me one thing. I was so frustrated!! Then I joined the American Daffodil Society and received a cordial letter from Helen Link—ask and I would receive! How important a Regional Director is can never be explained. Everyone is shy about asking and no one wants to appear ignorant or be a nuisance . . ." And of course she's quite right. We all had questions when we first developed an interest in daffodils. So, Beginners (and those shy ones among you who may not be Beginners),

let's have your questions! I promise to find someone to answer it, whether it's on growing, showing, personalities past and present, or whatever. Just send your questions to the editor—and if you can't find this column in a future issue, we'll know there were no questions!

By the time this arrives in your mail, people in some areas of the country will have begun digging. Here in Tennessee, I'm told that many people plant back immediately rather than waiting until fall. I have also discovered (out of necessity) that daffodils can be moved as green plants and treated as perennials. I moved my "temporary bed" last year, and this spring I found I'd missed some bulbs which were coming up in what was to be lawn area. Now my husband is a fast man with a lawn mower, so I knew those daffodils had to be moved if they were to be saved! So they were dug and planted on the hill among the trees where they grew and flowered. Now if I can just keep Paul and his lawn mower away from them . . .

---

## THE TAZETTA IN WINTER

(from *Tete-a-Tete*, newsletter of the Daffodil Society of Minnesota)

Since September, I have been working with a client near Houston, Texas. It's been several years since I was last in Gulf coast Texas in Winter, but I don't remember seeing daffodils like I have this year!

I have read that tazetta daffodils will do well in the southern United States, but I had never really seen evidence of that outside the collections of a few ADS members.

Paperwhites (*tazetta papyraceous*) grow everywhere down here and were in full bloom in December! There is a southern tradition which involves use of Paperwhite daffodils as Christmas decorations. How lovely their fragrant, white blossoms must be contrasted with evergreen boughs and holly! For those without their own supply, I saw them stocked by the local florists.

I also saw quite a bit of Grand Soleil d'Or growing in gardens and available as cut flowers in florist shops. I have never seen it with such an orange cup before. Because of the cool nights and pleasantly warm days, these daffodils will last for weeks in the garden.

Of greater interest to me were the several different tazetta hybrids that I discovered growing in the area (40 miles east-southeast of Houston). I didn't recognize any of them, but found one type to have been especially appealing, primarily for its heady fragrance. Having much the appearance of a particularly robust form of Paperwhite, the flowers were a clean white, rather narrow-petaled and with lemon-yellow cups that faded as the flowers aged — particularly in water, indoors. Larger stems bore more than two dozen flowers and buds and would last for several days in the house. The plants began blooming in late January providing quite a show massed in garden plantings in the older sections of town. Frequently, I saw clumps of this cultivar along the roadside, in parks and around long-disappeared houses. I plan to get several bulbs of this cultivar to try in Minnesota.

Over the holidays, I bought two dozen of the last Paperwhites Bachman's had in stock. When I returned to Texas, I planted them among the shrubbery in front of my apartment. Last week, after two weeks of substantial rain, the shoots are three inches tall and envelop fat buds. Near the end of February, I'll start my daffodil season all over again!

—DAVE KARNSTEDT, W. St. Paul, Minnesota

# THE NARCISSUS IN ANCIENT LITERATURE

ARTHUR V. GILMAN, *Goshen, Connecticut*

What we attempt when we garden is the formation of an ideal landscape, a setting for our personal idyll. The poets of Greece and Rome succeeded in forming an ideal landscape, and called it a 'pastoral' or 'bucolic' setting. It is a place removed from the city and is defined by three elements: music (panpipes), animals (sheep and goats), and plants. Of plants that make up the pastoral, most are uncultivated—ivy, oaks, hazel, and the generic 'flowers.' When a poet seeks detail, he usually mentions violets and hyacinths and leaves it at that. But in a famous pastoral romance, *Daphnis and Chloe*, the author Longus writes, describing a garden: "The roses, hyacinths, and lilies were cultivated by hand; the violets, narcissus, and pimpinell were the earth's gift." (1) This, along with other descriptions of gardens, which were more like orchards than ornamental settings, leads one to conclude that unlike other flowers, and specifically unlike the rose, narcissus were not in cultivation in the classical world. Even so, there are some fascinating references in ancient literature to our flower.

The 'locus classicus,' or poem most central to the understanding of the idea, is in Book 3 of Ovid's *Metamorphoses*. This long Latin poem, published in 8 B.C., is a clever and witty collection of tales about various mythologic characters who were changed into different bodies. It is psychologically exact in that the characters' new bodies fit their old personalities.

Ovid gives a poetically stunning story of the youth Narcissus, who was a very handsome eighteen year old. "But there was in his slender form such severe pride that none possessed him." He was a hunter, and one day stopped from the chase to take a drink from a pool. While he was leaning over the pool, Narcissus fell in love with his own reflection. True to an old prediction that said he would live long unless he knew himself, Narcissus died from a broken heart when he at last realized his love was in vain. "Then too after he had been received in Hades, he kept watching himself in the River Styx. His water-nymph sisters lamented and sheared their hair for their brother's sake; and the wood-nymphs lamented. The nymph Echo redoubled their wails. And now they were preparing the bear and the pyre and the torches for the funeral - Nowhere was the body! In place of the body they found a yellow flower, with white petals all around."

Some have suggested that the narcissus is a physically fitting transformation, with its nodding face, for someone gazing into a pool. From the poem itself, though, it is clear that the Latin word for yellow (*croceus*, literally the word for crocus or saffron) here means reddish, and plays on an earlier theme in the poem, that Narcissus's chest was reddish in color where he repeatedly struck it in anguish, while the rest of his body was beautifully white.

Another Roman poet, the excellent Virgil, mentions the narcissus only a few times, but always with great power and poetic effect.

The Goddess and Apollo abandoned the fields,

The barren grass and empty stalks spring up.

Instead of the sweet violet and the purple narcissus,

The thistle and the thornbush spring up with their terrible spines.

Purple narcissus? Perhaps a *N. poeticus* with a very red cup? Or would 'royal' be a better translation?

To the Greeks, however, the narcissus was a white flower, apparently *N. tazetta*. "Now the calyx of the rose and the narcissus was as one, as to the

outline, it was the bowl of the plant. As for color of the much-divided petals round the calyx, the rose was like blood above and milk below, whereas the narcissus was wholly the color of the lower part of the rose." (2) Later on the same author, Achilles Tatius, compares the color of the narcissus to the white of the eye.

The tragedian Sophocles mentions the flower but once, in a very obscure passage, and gives it the epithet 'kallibotrus' which means 'beautiful cluster.' And in one of the most beautiful passages of all ancient literature is given a description that must be of the loved Paperwhite.

The Homeric *Hymn to Demeter*:

[Persephone] was picking flowers up in the soft meadow, roses and crocuses and lovely violets; and irises and hyacinths and a narcissus which grew, a lure to the blushing girl. Gaia had put it there, by Zeus's wish, to indulge Polydektes, a shining and wonderful thing. It was a holy thing to see, for immortal gods and mortal men; from the root a hundred flowers grew and it smelled a very sweet smell. All heaven above and all the earth laughed for joy, and the salt swell of the sea.

For those interested in identifying this flower more exactly, consider the locale to be Sicily.

The word itself is Greek and means the flower, but the root is the same as in 'narcotic' and means sleep or trance, perhaps because of the poisonous nature of the bulb. The flower is seldom mentioned in this sense, although the reference in Sophocles may possibly connect the flower with the underworld goddesses, and the flower in the passage above, the lure, draws Persephone to a sad fate in the underworld.

But don't fear for your life! Our flower has better powers. In a short poem in a light vein, titled *Potions for a Lady's Face*, Ovid gives a recipe for a night cream that includes barley, ground up deer's antlers and "twelve narcissus bulbs without skin, which a strong hand crushes on clean marble." In the morning, "your face will shine brighter than your own mirror."

1. Moses Haddas, *Three Greek Romances*, New York: Bobbs Merrill, Inc., 1953.
2. S. Gaselee, *Leucippe and Clitophon*, Loeb Classical Library. Cambridge, Massachusetts: Harvard University Press, 1915.

---

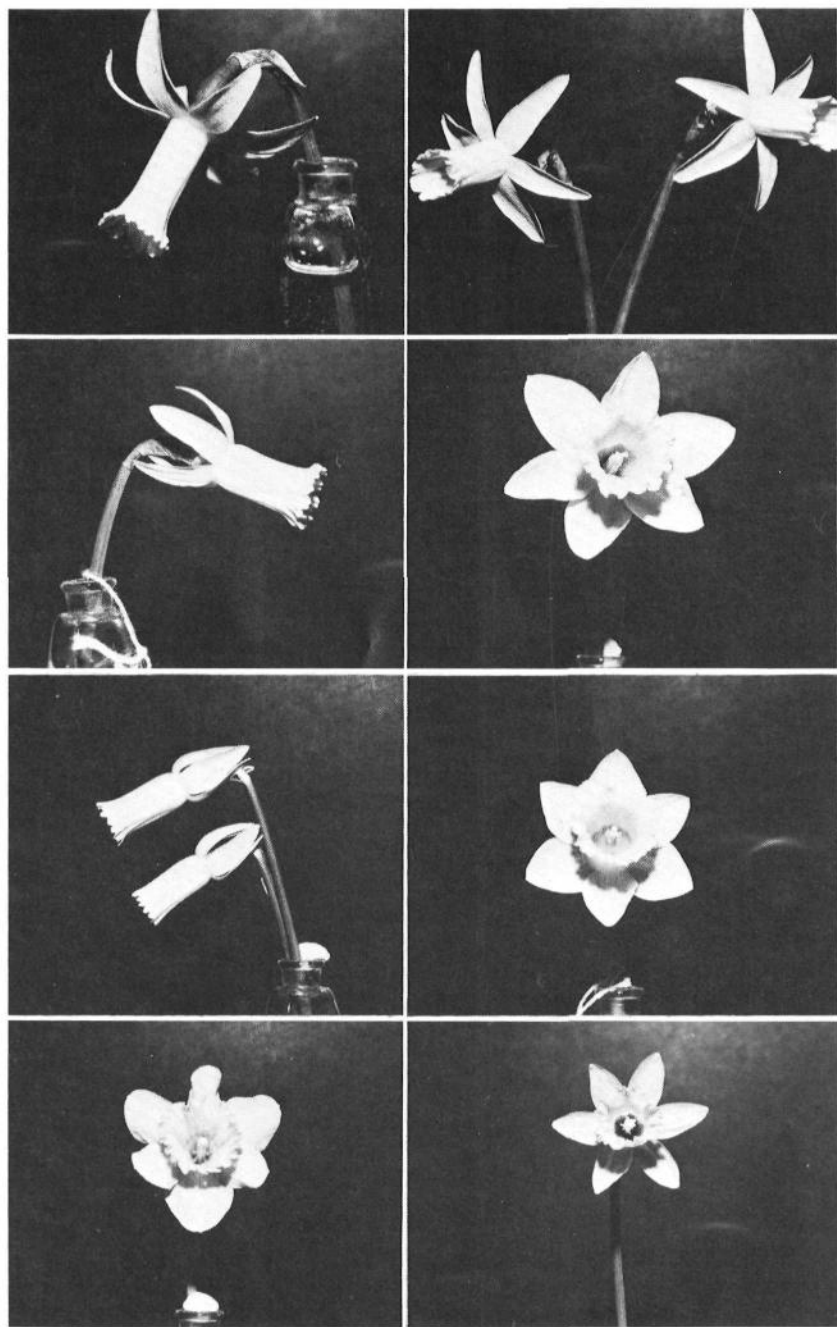
## SOME MINIATURE SEEDLINGS

MARY LOU GRIPSHOVER, *Franklin, Tennessee*

Knowing full well that an editor should edit and let the writing to others, I decided to write this article for two reasons. First, Peggy Macneale, our Miniatures Committee Chairman, asked me to do it; and second, since the group of hybridizers decided in California that one of us should write an article for each issue of the *Journal*, it seemed reasonable that I should go first, since the deadline was fast approaching.

This is not a "how-to" article, nor is it an article on terrific new seedlings. Rather I'm just going to discuss some crosses I've made and the results I've had, and hopefully it will encourage some of you to try growing your own miniature seedlings.

My first crosses were made in 1968—but no seed germinated. Several from 1969 made it to blooming size, but only one, Canrmoon × *jonquilla*, is anywhere near miniature size. The whitish flower is small, but it has a long



Top left, 73-1-5 (Bagatelle × *cyclamineus*); right, 73-1-1. Second row, left, 73-1-3; right, 73-3-2 (Topolino × Lilliput). Third row, left, 73-6 (Small Talk × *cyclamineus*); right, 73-11-18 (Wee Bee × Lilliput). Bottom left, 73-13-2 (Bagatelle × Mustard Seed); right, 75-3 (Kibitzer × Candlepower).

stem that usually carries two florets. It's a poor grower and the buds often blast and it will probably be discarded. It is the only cross of a standard with a species that I've bloomed that has been small. Most have been standard size for Division 5 or 7.

The first true miniatures bloomed in 1977 from a cross of Bagatelle × *cyclamineus* (73-1) made in 1973. Currently there are eight different cultivars from that cross which show varying degrees of reflexing in the petals. All are yellow. They also vary in rate of increase and floriferousness, as 73-1-1 had six blooms this year, while 73-1-4, -5, and -8 had only one bloom each. They bloom very early, ahead of Bagatelle.

A few days earlier to bloom are two crosses which appear similar. One is Bagatelle × *asturiensis* (73-14) and the other is recorded as Bagatelle × Quince (73-16)—which it obviously isn't. Since the crosses are so similar, it makes me wonder if they aren't both Bagatelle open pollinated. The blooms look much like a sturdier *asturiensis*, which is fine with me since I can't keep *asturiensis*. They are increasing, with more than half the bulbs having three or more blooms this year.

Topolino × Lilliput (73-3), after eight years, gave a mini trumpet with a whitish perianth.

Small Talk × *cyclamineus* (73-6) first bloomed as a seven-year-old in 1980. This year it gave three blooms which look like a taller, stronger *cyclamineus*. Since I can't keep *cyclamineus* either, I hope this will prove to be a good grower.

Wee Bee × Lilliput (73-11) gave a series of flowers intermediate between the parents. Most are varying shades of yellow trumpets, but one, 73-11-18, is a bicolor with good form and much the best perianth I've seen on a mini 1 W-Y. It is a slow increaser, as there is still only one bulb. The series begins blooming here almost two weeks later than Wee Bee, along with Lilliput.

Bagatelle × Mustard Seed (73-13) has given two flowers which measure in Division 2. If the weather is right, 73-13-2 has a deeper yellow—almost orange—edge to the cup. This is the only cross I have with Mustard Seed. I had a bulb of *minor* × Mustard Seed, but have since lost it.

Lilliput × *minor* (73-15) is another cross that took eight years to bloom, but this year did give some flowers with whitish perianths.

Colibri op (73-31) this year for the first time gave one starry lemon bloom whose only redeeming feature was that it measured Division 2.

Once upon a time, as the fairy tales begin, I had Candlepower. Fortunately I used its pollen on several blooms in 1975. This year several blooms from Kibitzer × Candlepower (75-3) bloomed, and one was a small whitish trumpet, and the other was a small yellow trumpet. Both blooms were smaller than Wee Bee, Little Gem, Bagatelle, etc.

The problem with breeding miniatures is finding suitable material with which to work. If you can grow and bloom the species, by all means use them. Many hybrids on the Approved List of Miniatures are sterile and crosses between mini's and standards often give blooms too big to class as miniatures. With the long blooming season of miniatures, it may be necessary to store pollen of early bloomers for later use. Baby Moon sets open pollinated seed. Why not save pollen from an early bloomer and use it on Baby Moon—or try the pollen from a smallish poet on it. But with the placement of Baby Moon's stigma, I'd suggest de-anthering in this case.

Do try a few crosses of your own. It's fun—and nothing quite matches that feeling of anticipation when you see the first bud on one of your very own seedlings.

MR & MRS P R MOORE JR  
96 SANDY BAY DR  
POQUOSON, VA

23662

---

### SERVICES AND SUPPLIES

#### Slide Sets:

- |  |                                    |
|--|------------------------------------|
| 1. Show Winners                          | 5. Miniatures                      |
| 2. Symposium Favorites                   | 6. Daffodils in Britain            |
| 3. Novelties and Newer Varieties         | 7. Species and Wild Forms          |
| 4. Daffodil Primer (Garden Club Special) | 8. Classification and Color Coding |

Slide rental \$5.00 per set. Confirm dates well in advance. Address all correspondence concerning slides to:

Mrs. Hubert Bourne, 1052 Shadyhill Drive, Columbus, Ohio 43221

---

Membership application forms. No charge.

#### ITEMS FOR SALE

Daffodil Pin (tie back, pin back, or ring back).....	\$ 7.50
Handbook for Exhibiting and Judging Daffodils, 1974.....	2.25
The Daffodil Handbook, 1966.....Paper Cover, \$3.40; Cloth	4.90
Print-out of Daffodil Data Bank.....\$15.00; with binder	\$20.00
Set of at least 15 numbers of Daffodil Journal (no choice)....	5.00
Single copies of Daffodil Journal.....	1.50
Journal Binders, \$7.50 East of the Mississippi, \$8.50 Canada and West of the Mississippi, \$10.00 Overseas.....	
ADS Approved List of Miniatures, 1979.....two 15-cent stamps each.	
RHS Yearbooks on Daffodils (as copies become available) write for years on hand with prices.	
RHS Yearbook, Daffodils, 1980-81.....	5.00
Daffodils in Ireland.....	\$5.00
Show entry cards.....500 for \$11.00; 1000 for \$20.00	
RHS Color Chart.....	12.50

Make checks payable to American Daffodil Society, Inc. Prices include postage. Correspondence is invited concerning out-of-print publications on daffodils. Copies of these are sometimes available or names will be placed on want list.

AMERICAN DAFFODIL SOCIETY, Inc.

Tyner, N.C. 27980

Tel. (919) 221-8388