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DEADLINE FOR THE NEXT ISSUE IS APRIL 1, 1995

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Front Cover: Elise and Richard Havens LEJ 28/1. Photo by Kirby Fong.
Back Cover: Brookside Gardens, Wheaton, Maryland. Photo by Kirby Fong.

ADVERTISING RATES

Advertising rates for the *Journal* are as follows: full inside page, \$90.00; one-half page, \$50.00; one-quarter page, \$35.00. Prices for color advertisements available upon request. For additional information, write the Chairman of Publications, Mrs. Martha Kitchens.

KIRBY FONG



'Vienna Woods'
9 W-R

KIRBY FONG



'Williamsburg'
2 W-W

White Ribbon
at Fortuna
by Bob Spotts

GEORGE TARRY



'Foundling'
6 W-P

Garden Daffodils to Grow and Show

Bob Spotts, Oakley, California

Frequently we hear: "Tell me about garden daffodils, cultivars with sturdy stems and tall, bright flowers that grow well and last in the weather. Don't tell me about those show daffodils whose frail perfection is limited to bottles and test tubes." But, I wonder, why is there the presumption that good show daffodils and good garden daffodils must be distinct? Aren't there cultivars good for both the garden and the show? My answer is: "Certainly, there are many such cultivars." Ideal daffodils are ones you can enjoy in the garden for their color, stature, and strength, you can cut for a lasting bouquet in the house, or whose perfection of individual blooms you can share with the public in a daffodil show. Of the many daffodils I grow in my garden, a number excel on all these criteria. I'll recommend a number of these, trying to give you daffodils in bloom from early to late season.

Long cupped daffodils form the bulk of the gardener's collection.

Two tall trumpets immediately come to mind: 'Akala' 1 Y-Y and 'Midas Touch' 1 Y-Y. 'Akala' is formal, with a flat perianth and a straight, gently flaring trumpet without roll at the lip. 'Midas Touch' has refined garden character, with a pleasant flare to the trumpet. 'Madruga' 1 Y-Y and 'Jobi' 1 Y-Y are less imposing than those cultivars but fill my need for several yellow trumpets. For trumpet bicolors, 'Pops Legacy' 1 W-Y is the best. Not a tall plant, it holds its large blooms above the foliage and withstands the wind well. In my warm, dry climate, I have found white trumpets hard to keep, but the expensive 'Cataract' 1 W-W has been outstanding. The relatively new 'Hanley Swan' 1 W-W is early and promises to warrant inclusion in this list.

Long-cupped cultivars form the bulk of the gardener's collection. For color, 2 Y-R 'Resplendent' and 2 Y-R 'Sportsman' are essentials. 2 O-R 'Creag Dubh' is stunning with its large blooms flushed orange. 'Craig Stiehl' 2 Y-R has smaller blooms but is very dependable. Although registered 2 Y-R, the cup of 'Golden Amber' is golden orange. This cultivar has substance like cardboard and the bloom undergoes fascinating color change as it matures. It should be grown by every enthusiast. For 2 Y-Y, 'Gold Convention' is unmatched, with huge blooms frequently showing orange cups. 'Golden Joy' 2 Y-Y fulfills its name, smooth and long-lasting. The

newcomer 'Glissando' 2 Y-Y warrants high recommendation. 'Nob Hill' 2 YYW-Y is a fine grower with especially sturdy blooms lasting well in the sunny Spring. For reverse bicolors (the 2 Y-W and many similarly color-coded cousins), 'Hambledon', 'Sungem' and 'Desert Orchid' are my standouts. 'Hambledon' blooms are large and continue to grow for several days after opening. 'Sungem' holds its very precise blooms high. 'Desert Orchid' has exceptional whiteness of reverse and is a steady increaser. I should add that 'Carib Gypsy', a recent late season introduction, has also performed well. For 2 Y-P, 'Widgeon', an exceptionally healthy grower, is the choice. 'Widgeon' has long lasting blooms whose cup opens light pink and fades to white.

Short-cupped daffodils tend to be late season, and thus subject to early, sunny, hot spells.

In Division 2 cultivars with white perianths, 2 W-W is represented by three strong growers. 'Williamsburg' is my preference, followed by 'Silk Cut' and 'Homestead'. 'Williamsburg' seems perfectly adapted to my climate. Every bloom is a replicate and near perfect. 'Silk Cut' has increased rapidly and makes a nice garden showing. 'Homestead' has its detractors (who point to its longish neck and relative lack of petal overlap), but its tall, strong stems, large size and flatness of perianth make it the first white daffodil visitors notice in my garden. Pink-cupped daffodils are not my strong suit, but the late-season 'Fragrant Rose' is a good bloomer and increaser. 'Quasar' 2 W-PPR has been a healthy grower and in wet years its color is vivid. The new 'Penkivel' was a quick acclimator and has been a strong grower over its short, two-year history. I do better with rimmed pinks, and 'Dove Song' 2 W-WWP is one of the best.

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It is a fast increaser with long-lasting blooms of substance. Another knockout is the intermediate-sized 'Rimski'. Sometimes its cup is baby pink nearly to the base. In 2 W-O 'Conestoga' is a "must grow". It has every attribute the gardener could want: bright color, fast increase, show-perfect blooms. The intricate form of the blooms of my favorite 2 W-Y, 'Geometrics', make a fascinating close-up study, but the cup is pale, without intensity of color. I have no other strong recommendation for 2 W-Y.

Short-cupped daffodils tend to be late season, and thus subject to early sunny, hot spells which are frequent in my climate. Nevertheless, they present a large number of attractive color combinations. The majority of the cultivars have white perianth. Of those with colored perianth, 'Verwood' 3 Y-YYO is tall and healthy. 'Dateline' is a vigorous 3 Y-O. 'Molton Lava' 3 Y-YYR is aptly named. It's rim glows as though afire. Oldtimer 'Angel' 3 W-GWW is very late, but has enormous lasting blooms. 'Yum Yum' 3 W-WWY performs as an all-white flower in my garden. 'Evesham' 3 W-Y has thick substance, large blooms and rapid increase. It's worth the investment. 'Greenodd' 3 W-YYW is a tall, vigorous plant with a most attractive green throat that immediately catches the eye. 'Random Event' 3 W-YOY is a joy to grow. At first opening, it is a medium sized bloom. But it grows significantly over the following days. It's another cultivar that replicates its form in every bloom. A bouquet of cut blooms is a grand display. Old-time favorites 'Glenwherry' 3 W-R and 'Merlin' 3 W-YYR are still among the best. 3 W-GYO's 'Capisco' is early for small cups, and so well worth having. 'Minx' 3 W-GYR and 'Miniken' 3 W-GYR bloom at season's end. Their bright rims have been resistant to burn.

Few double daffodils fare well for me in Oakley, so my recommendations are limited. 'Androcles' 4 W-W opens consistently without blasting. It is a healthy plant with majestic

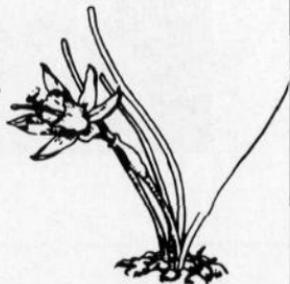
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List \$1



KIRBY FONG



'Fly Away'
6 Y-Y

KIRBY FONG



'Kokopelli'
7 Y-Y

Raised by
Bob Spotts

KIRBY FONG



The author, Bob
Spotts and Leone
Low with 'Kokopelli'
growing at Bonnie
Brae Gardens

blooms of show quality. It is not a fast increaser 'Smokey Bear' 4 Y-O and 'Crackington' 4 Y-O have been steady performers, but do not produce the exceptional quality of blooms in my garden that they do elsewhere. On the tazetta-blood side, 'Erlicheer' 4 W-W is unmatched as a garden plant. It naturalizes and produces early-season sprays of up to 20 florets with heady fragrance. 'Bridal Crown' 4 W-Y is late. Its blooms have two or three nicely formed florets. It is long-lasting in the garden. I let 'Erlicheer' and 'Bridal Crown' grow freely in front of the property line fences

Triandrus hybrids are my favorite daffodil division, but in my experience, their slow increase makes them doubtful choices for the garden-oriented grower.

In my warm climate, only 'Lapwing' 5 W-Y has shown sufficient size and lasting quality to merit a recommendation as a multi-purpose flower.

Many cyclamineus hybrids have resented my sandy soil and hot, baking summers. As garden plants, most cyclamineus hybrids are relatively small and can fit nicely in areas where daffodils from the first three divisions are too large. The hybrids can be separated into two categories. First, there are strongly reflexed, early-season cultivars. Grant Mitsch specialized in these. 'Rapture' 6 Y-Y is perfection for this type. It yields larger blooms in wetter climates than mine. Second, there are the late-season, faintly reflexed cultivars introduced by hybridizers in the British Isles. Most are descendents of 'Foundling' 6 W-P and are similar to it in size and coloring. 'Bilbo' 6 W-P is the strongest grower of these for me. For the garden, this later class of cyclamineus hybrids is a good source of quality median-sized border plants.

Jonquil hybrids are well-adapted to a warm climate and I grow many of them. Those recommended here usually have two or more florets. 'Stratosphere' 7 Y-O is the obvious choice for both garden and show. 'Indian Maid' 7 O-R is colorful and vigorous. Bill Roesé's unregistered 'Super Seven' 7 Y-Y is worth searching for; perhaps Bill can be talked into registering it! I selected my own 'Kokopelli' 7 Y-Y for its good growth in my garden here. 'Kokopelli' seems less vigorous in cold climates. Of the many reverse-bicolor jonquils, 'Oryx' 7 Y-W and 'Intrigue' 7 Y-W are outstanding, having long-lasting flowers and a reasonable rate of increase. 'Intrigue' seems untouched by basal rot. 'Dainty Miss' 7 W-GWW is smaller, but is a lovely flower.

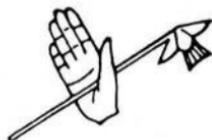
In evaluating my recommendations on tazettas and poetaz, remember that my climate is classic Mediterranean, in which they thrive. Hot, dry summers provide a baking; winter temperatures are not severe enough to freeze the ground. Highest recommendation is for 'Golden Dawn' 8 Y-O, which naturalizes and consistently produces sprays of several florets. It withstands moisture during the summer. Its sibling, 'Matador' 8 Y-GWO, has a totally different character. It produces tall blooms with two or three florets. The numerous offspring of 'Matador' are attractive. Of them, 'Castanets' 8 Y-O and 'Martinette' 7 Y-O (registered as a jonquil) are the most robust. 'Highfield Beauty' 8 Y-GYO is tall and healthy; its blooms have one, two, or three large florets, each resembling a short-cup daffodil. 'Avalanche' 8 W-Y is unmatched for its consistent sprays of up to 20 florets. Its blooms often last for two weeks or more. 'Polly's Pearl' 8 W-W has exceptional size and vigor. 'Bittern' 12 Y-O merits inclusion. A progeny of 'Matador', 'Bittern' seems mainly poetaz in character. It is a shorter plant, whose blooms are well suited to garden borders. It increases well.

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For me, poets bloom so late that their cups are usually quickly crisped by the hot sunshine of early spring. Meg Yerger has been hybridizing and selecting to produce poets that bloom much earlier.

This year, I actually had poet cultivars blooming from early season on.

If this was not a freak result of an abnormal winter, then poets will take a larger role in my garden. I recommend 'Vienna Woods' 9 W-R, 'Pantomime' 9 W-YYR, and 'Webster' 9 W-GYR as resistant to burn. 'Ireland's Eye' 9 W-GYR is registered as a poet, but has a short-cup appearance. I highly recommend it as a late-season bloom.

Split-cups have found acceptance as garden and arrangement subjects, but few have demonstrated the symmetry of individual blooms to gain acceptance as show blooms. 'Tripartite' 11 Y-Y is the most obvious exception. Its two or three florets are delicate in appearance but sturdy in practice. In the garden or show, it catches the eye and comment of visitors. It is the favorite of flower arrangers. It increases rapidly. Of cultivars with single blooms, I recommend 'Cum Laude' 11 W-Y. Its peachy cup merits reconsideration of color code. 'Cool Evening' 11 W-P has also grown well. A newcomer, 'Boslowick' 11 Y-O, is exceptionally smooth and attractive.

There they are, 76 garden-and-show cultivars from which to choose.

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Accounting for the Vexations of Selection

Reiner Kloth, Stoneville, MS

Guess if you can and choose if you dare.

—Corneille, *Heracles* IV. 4.

These words are whispered by the churlish muse of plant breeding while breeders discard seedlings. The first flowering of seedlings — the highlight of years of work — is marred by indecision and the remembrance of errors past. All breeders face this moment. A breeder of annual crop plants can only advance for further testing a few percent of the tens of thousands of plants grown from a cross. The breeder of dairy cattle must select a few young bulls to undergo the expensive and lengthy testing that determines the animals' genetic merits. Breeders can reject the worst plants or animals on sight, but the best are indistinguishable from the mediocre. Selection is always difficult.

Difficult and important subjects attract a literature, and selection is not an exception. In past issues of this journal, two opposing

“superior progeny from the last generation become the progenitors of the next generation, and, therefore, selecting progeny is equivalent to selecting parents.”

views on selection were presented. One opinion held that the selection of progeny from a cross is more important than the selection of parents. The other opinion championed the selection of parents as more important. But neither argument is particularly satisfying. This is due to their circularity: superior progeny from the last generation become the progenitors of the next generation, and, therefore, selecting progeny is equivalent to selecting parents. To understand selection better, the circular argument must be abandoned, and the way out is on a tangent struck to this circle.

The tangent is a line of reasoning which considers the underlying causes that make selection complicated and prone to misjudgment. The problems reside with the genes and how genes interact to form traits. Some examples of traits are hair color, the color of flower petals, baldness in men, height, the length of a flower stalk, the dimensions of the perianth, the amount of butter fat in cow's milk, the number of hairs on the leg of a fruit fly, and the yield of a crop plant.

Traits in this list can be placed in one of two broad categories. The most familiar is the qualitative trait, and is represented by the first three examples. Qualitative traits have only a few distinct forms that, by inspection, fall into two or three classes. Cattle have horns

"The majority of traits that are important to a breeder are qualitative."

or do not have horns. The color of the flower is white, pink, or red. Sometimes an experienced eye and some knowledge of the genetics of the trait is helpful; but, nonetheless, one individual is distinct from the other. (Qualitative traits were first studied by Mendel and are alternately known as Medelian traits.)

Quantitative traits, unlike qualitative traits, show only slight gradations, and differences are determined by measurement. Members of a group can not be placed into easily defined classes. Imagine convincing the first 100 people you meet at a mall to line-up by height. The persons at each end of the line are easy to classify (tall or short) because they are the extremes. However, any two adjacent individuals do not fit into the tall or short class. Most likely any differences between these two individuals will be distinguished through measurement. The majority of traits that are important to a breeder are quantitative. The last six examples (height, the length of a flower stalk, the dimensions of the perianth, the amount of butter fat in cow's milk, the number of hairs on the leg of a fruit fly, and the yield of a crop plant) in the list of traits are quantitative traits.

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The underlying difference between qualitative and quantitative traits is the number of genes involved in the expression of the trait. Qualitative traits rarely have more than one gene influencing them. Quantitative traits are affected by many genes. The numbers range from a couple (rare cases) to hundreds, even thousands, as calculated for yield in corn. Since a quantitative trait is the result of a large number of genes acting in concert, each gene has only a small effect on the trait. This makes the genes difficult to recognize. The inability to recognize the individual genes which contribute to the expression of a quantitative trait is the reason that selection is error prone and frustrating.

The inability to recognize an individual gene leads to complications in defining genes and examining the variation produced by those genes. Qualitative genes are recognized, and defined, by the biological effect they produce. Biological effects can be as striking as the texture of a pea's seed coat, or as subtle as the production of the oxygen-binding protein (hemaglobin) in our blood. The biological effect of a gene influencing a quantitative trait is not generally discernable. This has caused quantitative genetics



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to form a definition of a gene that is statistically based. This definition is precise and fits the needs of quantitative geneticists, but suffers from its dependence on an understanding of statistics. As an alternative, imagine the biological effect of a gene involved in the expression of a quantitative trait to be subtle, very much like the hemoglobin gene. There are mutants of hemoglobin that are not (immediately) fatal, but affect the ability of hemoglobin to bind oxygen. The amount of oxygen in the blood stream is a quantitative trait. Here, in a sense, is an example of a gene with a recognizable biological effect that participates in the expression of a quantitative trait.

“Qualitative traits rarely have more than one gene influencing them.

Quantitative traits are affected by many genes...even thousands.”

The same biological effect can take several forms, each produced by a different version of the gene. Imagine the Bach Brandenburg Concerto No. 2 performed by a Baroque orchestra and then by a Moog synthesizer. Though the music is the same, variation in the way it is performed gives a different effect. Texture of a pea's seed coat is controlled by one gene; but one form of the gene produces smooth seed and the other produces wrinkled seed. These two genes are called alleles because they are alternate forms of the same biological effect, and are found at the same position (locus) on a chromosome. (Alleles and genes can be used interchangeably with the caveat that allele refers to the genes at a particular locus.) There can be many alleles associated with a locus; the record holder is a gene in brussels sprouts that controls self-pollination and has over two hundred alleles.

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Alleles add an important amount of variation. An organism that is diploid has two copies of every chromosome, so a maximum of two alleles can be present at any locus. For a set of traits, the list of the alleles that are carried by an individual is the genotype. A qualitative trait with alleles A and a, has a possibility of three genotypes: AA, Aa, and aa. A quantitative trait has more loci, and, therefore, a correspondingly more complex genotype. Assume that the trait is controlled by genes at five loci, with each locus limited to two alleles. Like the qualitative trait, each locus has three possible combinations of alleles. However, five loci determine the trait, so that number of genotypes equals $3 \times 3 \times 3 \times 3 \times 3$ or 243. For a trait with 10 loci, each with two alleles, there are 59,049 possible genotypes.

"the tetraploid has 9,765,625 possible genotypes for that trait."

Though these numbers are staggering, they do not accurately present the common condition of daffodils. Daffodils of divisions 1, 2, 3, 4 and 9 are generally tetraploids.

(I leave the reader to prove that not all genotypes are present in equal frequency.)

Tetraploids have four copies of every chromosome, and therefore have four alleles present simultaneously. As before, consider a qualitative trait with two alleles. In a tetraploid, this qualitative trait has five genotypes: AAAA, AAAa, AAaa, Aaaa, and aaaa. A quantitative trait produced by the action of five loci also has five possible combinations of alleles at each locus, so the number of genotypes equals $5 \times 5 \times 5 \times 5 \times 5$ or 3125. If the trait is affected by 10 loci, with two alleles at each locus, the tetraploid has 9,765,625 possible genotypes for that trait.

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Selection tames these wild possibilities. The full range of genotypes for a trait is only found in wild populations where bats, insects, or the wind randomly mingle and distribute pollen. When a breeder selects two plants for pollination, the number of genotypes for a trait drops dramatically. Crossing plants with the genotypes AABbecDDEe and AaBBCCDDEe, would produce only 12 of the 243 genotypes that are possible with a trait controlled by five loci and two alleles per locus. Thus, selection reduces the number of genotypes in the population and thereby increases the frequency of desirable (or undesirable) genotypes.

“Thus, selection reduces the number of genotypes in the population and thereby increases the frequency of desirable (or undesirable) genotypes.”

Though selection increases the frequency of some genotypes over others, the best genotypes to use in hybridizing are not easily identified. There is no guarantee that the genotype AABbCCDDEe can be distinguished from AaBBCcDDEe; their physical appearance, or phenotype, might be the same. This unfortunate observation is the result of each locus, as well as the particular combination of alleles at a locus, having unequal effects on the trait. A practical example of this is the University of Illinois' long term selection experiment for high oil content in corn seed. For over 75 generations a population of corn plants has been selected for higher oil content in the seed. At the forty-fifth generation, a new population was derived from the high-oil plants, and selection for reduced oil content began. Lowering the oil content was surprisingly easy. Although the amount of oil in the seed had increased every cycle of selection, with the best plants in the population having an oil

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content far surpassing the average at the start of the experiment, there were still genes present which could reduce the amount of oil in the seed. Clearly, the best combinations of genes for high oil content were being selected in this population, but alleles which could reduce oil were not selected against.

This experiment in the selection of seed-oil content explains why progeny from the cross of two superior cultivars show a wide range of flower quality. The breeder has selected parents with flowers that represent a good combination of genes — as determined by their beauty, but the presence of inferior alleles is only revealed after the seedlings flower. Selecting on horticultural merits is not a problem when using seedlings for exhibition: the flowers are suitable or they are not. The unreliability of physical appearance as a predictor of genetic worth is exemplified by the siblings 'Golden Joy' and 'Golden Jewel' (2 Y-Y). Both cultivars produce excellent flowers for exhibition, but only 'Golden Jewel' has produced noteworthy progeny.

"The environment, which consists of the weather, several aspects of the soil, and cultural practices, induces adaptive changes in the organism."

There remains one more feature of quantitative traits that adds mayham to selection. This is the interaction with the environment. Everyone has observed this phenomenon. It is the poor performance of a cultivar in one region but not another, or, differences in flower quality from one year to the next. The environment, which consists of the weather, several aspects of the soil, and cultural practices, induces adaptive changes in the organism which are seen as small flowers, short stalks or poor growth. These changes are not permanent, but are the response

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of those genes involved in the expression of quantitative traits to high temperatures, insufficient water, too much fertilizer, or an airless, damp clay soil. The effect of the environment is difficult to assess, and experimental approaches to understanding the interaction between genes and environment have led to statistical methods which determine the most suitable variety for the broadest geographical region, but have not led to an understanding of how

"The inheritance of traits has always been complex, and breeders confused and frustrated."

environment affects the phenotype. This gap in our knowledge is regrettable because the interaction between the environment and genes effectively increases the total variation, making the detection of genetic variation harder. A superior plant can be overlooked.

Genetics began with the simple elegance of qualitative traits in a garden of peas, and now dear reader you may feel as if you were ousted from a garden paradise for the second time. I am more sanguine. The inheritance of traits has always been complex, and breeders confused and frustrated. Understanding the difference between quantitative and qualitative traits, and the ramifications of many genes with small effects has its own satisfactions. For me, one satisfaction is understanding a little more about the dichotomies of inheritance — why we are simultaneously similar to, and distinct from, our parents. The effort to understand quantitative genetics is made sweeter when this information helps to explain and understand the biological world, and maybe even breed a better daffodil.

Dr. Reiner Kloth is a geneticist with the Agricultural Research Service of the U.S. Department of Agriculture in Stoneville, Mississippi.

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Philatelist and Daffodil Enthusiast

Susan K. Barker, *Dublin, New Hampshire*



Northern New England
Daffodil Show Station
Dublin, NH 03444
May 6-7 1994



What do the two have in common? This year The Northern New England Daffodil Show on Saturday, May 7th and The United States Postal Service joined together to create a promotional hand cancellation to promote the show. That Saturday the local postmaster set up a mini station where an individual could purchase a stamped 19¢ post card or 29¢ envelope with the daffodil design cancellation. This promotional cancellation was a great help in increasing interest in the daffodil world. Along with the many philatelists from around the world who sent to the local postmaster for cancellations, there were many local people who came to the show to take part in the special postal service. This gave us the opportunity to encourage them to join in the pleasures of showing and growing daffodils.

Philatelists are able to learn of the special cancellations from publicity through the United States Postal Service in Washington, while we advertised locally at the town post office. For sixty days beyond the date of the Daffodil Show, people were able to continue to mail in for the special cancellation. After this time frame, the stamp is destroyed, thus creating a collectors item for philatelists and daffodil enthusiasts.

How do you go about creating this additional promotion for your show? Six months prior to the date of your event, contact the Post Office at the location of the event. The postmaster there will be able to give you the guide lines for the size and proper wording. Now your designs are sent for approval in Washington. Once approved, the postal service takes care of the rest. At the show, a space must be provided for the postmaster to set up a cancellation station.

At the Northern New England Show this May 7th, approximately 200 cancellations were made. During the following week, another 200 requests for the cancellation were received by the postmaster through the mail. This was a great way for the word of daffodils to be spread across the land. Consider this fun promotion for your show. If you have any questions please contact me, Susan K. Barker, P.O. Box 101, Dublin, N.H. 03444.

A Package from Weldon

Frasier O. Bingham. Tallahassee, Florida

At dusk on a January afternoon, I met and spoke for a few minutes with Weldon Childers at his *Narcissus* garden near Carbon Hill, Alabama. That meeting was a consequence of two earlier events. Two years previous, I had dug and moved several clumps of blooming bulbs from a long forgotten homestead in central Alabama to my place in Tallahassee, Florida. Instead of disappearing as is usually the case with bulbs bought locally, these prospered and were later identified by Brent Heath to be the Campernelle jonquil, a variety probably in European gardens before 1600 A.D. The second event was a one-in-a-million chance. I was on a three week work assignment in Huntsville, Alabama when I read an ad in the *Birmingham News*, "Help Needed in Daffodil Garden, Bulbs for Your Efforts, Weldon Childers, Carbon Hill."

Late one afternoon while on the way back to Tallahassee, I stopped by Carbon Hill. A neighbor of Weldon's helped me find him and his daffodil garden. It turned out that Weldon had been through a time with a heart operation and had not been able to work in the garden for more than a year. While a number of people toiled with dog fennel, Golden Rod, and broom sedge, Weldon speculated that the prospering bulb from Alabama was probably a jonquil variety. He suggested that most Division 7's and Division 8's should do well in north Florida but that none of the divisions should be overlooked. He mentioned a national organization that he thought I would enjoy, and that he would, in the fall, send along a few varieties for me to enjoy.

Two weeks later an ADS membership application arrived from Weldon. Mary Lou Gripshover sent a list of the seven ADS members in Florida along with my membership card. One of the Florida members was John Van Beck who has been most helpful in sharing his 20 or so years of *Narcissus* gardening experience here in Tallahassee. John has recently headed up the formation of The Florida Daffodil Society.

A package from Weldon, a cardboard box of about 18" on the side, arrive in the fall of 1993. He had packed 104 different varieties covering all the divisions with 45 varieties being in divisions 7 or 8. Each bulb was in a small paper bag such as roasted peanuts are sold in. Each bag was marked for variety name, division and color code.

Of the 104 varieties, 103 came up and 94 bloomed. The blooming season for these varieties was from February 14 through April 15, with most blooming in March. The first year's bloom of course doesn't tell much, but the foliage on many varieties looked good and lasted well. In a year or two a "List of Daffodils for Florida" may be available for nurseries and garden clubs here. If so, it will be largely a consequence of Weldon Childers generosity and uncommon zeal for spreading "yellow fever."

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...until we
meet again!

Estella Evans

Wordsworth's Legacy

Ronald Mansbridge, *Weston, Connecticut*

Many readers of the *Daffodil Journal* will have been inspired by Peggy Macneale's article *Wordsworth's Legacy* in the March 1994 issue. I hope that many readers will follow her suggestions.

My own attention was engaged by the references to Wordsworth. It was from looking at his 'host of golden daffodils' in 1977 that I was encouraged to make my own modest effort, as I reported in the June 1987 issue of the *Daffodil Journal*.

May I make one plea? Peggy Macneale says, "most of us are not patient enough to wait seven years to see seedlings mature." She therefore advises against growing from seed. Come, come! I was only 73 years old when I put in my first seeds, and the seven years passed quickly. It was an exciting pleasure to watch them gradually getting bigger, year after year, until the glorious year when the first bloom appeared.

One advantage of growing from seed is that you get so many bulbs for such a low cost. I now have some thousands of blooms, and I have spent nothing in the last ten years, except for a couple of bags of bonemeal.

Peggy Macneale lists a dozen cultivated varieties, and indeed those varieties are likely to do well. But if you really want to 'help achieve the Wordsworth effect', I recommend the wild species, *narcissus*, *pseudonarcissus*, *bulbocodium*, *asturiensis*, and so on. These, as Michael Jefferson-Brown has pointed out, do better from seed than the hybrid cultivars, and are more likely to reproduce themselves over the centuries. I have myself concentrated on *narcissus pseudonarcissus*. J.P. Barkham, in the *Journal of Ecology*, says that a patch of these may be expected to last a thousand years. He has told me that my patch may well last for more than a thousand years. But I'll be perfectly happy to settle for a thousand.

Weeding Pigs

Linda Lee Wallpe, *Cincinnati, Ohio*

Over the last few years, I've been the recipient of much good advice from ADS members. Peggy MacNeale and Mary Lou Gripshover have been very generous with their timely tidbits and Christine Hanenkrat, Leone Low and Libby Frey are so approachable.

But nothing tops the latest bit of advice from Helen Trueblood. She said I needed a pig.

Let me give the gist of our conversation. I explained that this summer the nutt grass is rampant in my yard. I've sprayed, pulled and dug. Nothing seems to work. Well, Helen said her son had a similar problem on a far corner of his farm in Indiana, so he walked over to a neighbor and borrowed his pigs. They rooted it all out and then he marched them home. So what I need is a pig.

One of Cincinnati's largest early industries was meat packing. Hence, the 1800's nickname of Porkopolis. Pigs roamed the streets, and carriage trade was stopped when they were herded across the streets. But today's residents are not so understanding. A few years ago a Flying Pig sculpture was commissioned for the Riverfront Park and the hue and cry was incredible.

So NOW what will the neighbors think if I bring in pigs to weed my daffodil beds? And do pigs know that daff bulbs are poisonous to rodents? Would a Vietnamese Pot Belly pig do the same job? And who do I know that keeps pigs? I suspect I'd better do a little more research.

What Is Your Favorite Daffodil?

My favorite daffodil is 'Xit'.....Naomi Liggett, Columbus, OH

My favorite daffodil is 'Thalia'.....Linda Wallpe, Cincinnati, OH

My favorite daffodil is 'Jack Snipe'.....Dottie Sable, Dallas, TX

My favorite daffodil is 'Woodland Star'...Sallie Winmill, Rumson, NJ

My Greatest Enemy

J. Shejbal, Rome, Italy

His name is *Brachycerus undatus*. Yes, *his* not *it's*, because this is the Devil in person. A weevil-type beetle, up to one inch long, grey and chitinous, which all birds and lizards avoid, unable to fly, but quickly walking from bed to bed seeking out the best daffodils.



This Curculionid beetle is native to the Mediterranean where it feeds on *Liliaceae*, *Amarillidaceae* and *Araceae*. Near Rome the adults emerge as early as November, together with the Tazettas, of which some blossom in winter. It is surprising how great the differences in the susceptibility of the plants are: paperwhites are very resistant and only marginal damage occurs, so is *N. canaliculatus* and 'Grand Monarch', while other Tazettas, such as 'Roman Double', 'Grand Soleil d'Or', 'Chinese Water Lily' and its counterpart from the southern Italian beaches, are completely at its mercy. The beetles hide just next to the first shoots in the ground and a bit of sunshine is sufficient to make them active enough to eat off all the tender tips of the new growth. This is the moment when we can do at least something: collect them and smash them under our boots. All other means have failed in the conditions of my garden, except Baygon in powder — but who can dare distribute large amounts of this poison on hundreds of square meters?

In the last six years my collection of 1300 daffodil varieties has been completely destroyed by this devil. The adult eats all parts of the plants, also causing virus dissemination, and then the females lay their eggs on the stem near the ground. The young larvae penetrate into the bulb and each individual can destroy up to four bulbs before changing into a pupa during summer, ready to emerge as a voracious adult in the next daffodil growing season.

The soil in my garden in a valley north of Rome is very heavy and it was impossible for me to lift the many bulbs of the collection and then replant them each year. In fact, four tazetta species are autoctonous in this region and daffodils in general prosper magnificently without any need of lifting. Since 1982 hundreds of people have come to see my daffodils each year in March and early April: I called it a daffodil show although there was no competition

and no cut flowers, only the flowers in the beds. But since 1989 I have had to discontinue this initiative by which I hoped to induce more and more people to become daffodil lovers. In fact, nearly all imported beauties proved highly susceptible to the beetle attack and yearly I lost several hundred varieties. Whole beds were ruined, with just a few resistant plants doing well.

I have lost this battle because the few beds near the house, protected by Baygon, are but a tiny portion of the splendour of days gone by. Fortunately enough I now have another very small garden in a Rome suburb which the Italian daffodil devil has not yet found and quietly I enjoyed some beautiful varieties during the last two seasons.

In the climate here, the first daffodils blossom in late November and the last late varieties are still beautiful towards the end of April and in early May. So our daffodil season can be a very long and rewarding one, but I still think that the harder climates, where most ADS members grow their daffodils, and where the son of hell is absent, are to be preferred.

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What Is Your Favorite Daffodil?

- My favorite daffodil is 'Kokopelli'.....Bob Spotts, Oakley, CA
My favorite is 'Williamsburg'.....George Bragdon,
Richmond, VA
My favorite is 'Perky'.....Jaydee Ager, Kathleen, GA
My favorite is N. *dubius*.....Marilynn Howe, Culver City, CA
My favorite is N. *fernaudesii*.....Steve Vinisky, Sherwood, OR
My favorite is 'Acropolis'.....Julius Wadekamper,
Faribault, MN
My favorite is 'Intrigue'.....Bill Pannill, Martinsville, VA
My favorite is 'Chapeau'.....Stan Baird, Blue Lake, CA
Mr favorite is 'Creag Dubh'.....Leslie Anderson,
Hernando, MS
My favorite is 'Cedar Hills'.....Sam Winters, Clarksville, TN
My favorite is 'Angel'.....Lee Kitchens, Cinnaminson, NJ
My favorite is 'Fragrant Rose'.....Mary Lou Gripshover,
Milford, OH
My favorite is 'Gull'.....Phyllis Hess, Westerville, OH
My favorite is 'Sweetness'.....Tag Bourne, Columbus, OH
My favorite is 'Hawera'.....Liz Ellwood, Rumson, NJ
My favorite is 'Fragrant Rose'.....Brian Duncan, N. Ireland
My favorite is 'Jetfire'.....Leone Low, Yellow Springs, OH
My favorite is 'Sandy Cove'.....Mary Koonce, Halltown, WV
My favorite is 'Trevithian'.....Evie Gullikson, Olympia, WA
My favorite is 'Hawera'.....Kathy Walsh, Oakton, VA
My favorite is 'Foundling'.....Nancy Mott, Greenwich, CT
My favorite is 'Twilight Zone'.....Richard Ezell,
Chambersburg, PA
My favorite is 'Reference Point'.....Kirby Fong, Livermore, CA

Beauty and the Beast

Kirby Fong, Livermore, California

On my photographic expedition to Virginia in 1994, I encountered a rare subject for my last day. You see it here in this photo. The Washington Daffodil Society show was held in the National Wildlife Federation building in Tyson's Corner. This stuffed bear was in a large hall where WDS was selling daffodils, memberships, and other daffodil related materials. A glance at the bear and the nearby buckets of



Caption Contest

daffodils suggested in interesting photo opportunity. By imagining how the bear might appear if isolated from his surroundings and with the help of Colleen Woomerin staging. I was able to juxtapose the beastliness of the bear with the beauty of the daffodils in a highly contrasting pose. After photographing the bear, we left the daffodils in his left paw for the amusement of the public.

Notice that there is no caption or title for our photo! This enables you, our readers, to compete in a contest for most humorous caption, e.g., as in a cartoon caption. You make as many entries as you wish, and may enclose them in a single envelope. Send your entries to the editor of *The Daffodil Journal*. The panel of judges consists of the ADS Journal Editor, the ADS Publications Chairman, and the ADS Slide Program Chairman. Anyone except the judges and their immediate family may enter. As is ADS tradition, decision of the judges will be final (and likely arbitrary as well). The winner will receive an 8 x 10 inch print of the photo and have his or her winning caption published in *The Daffodil Journal*. Entries must be received by April 1, 1995. Entries that, in the opinion of the judges, are in poor taste or are offensive will not be considered. In addition to being humorous, the caption should be consistent with the image. The winning caption and worthy runners-up will be published in the June 1995 issue.

Here's an example to get you started: "Whatya mean show entries close in 15 minutes?!?!?" Now turn on your imaginations, and send us your best ideas.

Fun At The Mall

Weldon Childers, Carbon Hill, Alabama

Everyone should have the great experience of staging a daffodil exhibit at their local mall. A group of Alabama ADS members did just that this past March during the weekend before the national convention in Portland. In addition to myself the others who participated were: Sandra Stewart, Pat Larnes, Charles and Karen Jackson, Syble Keeton, Mr, and Mrs. Ernest Ferguson, John Cottrell and Imogene Kay.

Even with the excellent cooperation and help from Jasper Mall manager Marsha Lapkovich and her staff, it was quite a chore. Mall personnel decorated and set up tables for us in the center of the mall, and we were provided with a large storage room in which to stage our exhibits. All of the work was done during business hours, so there was no lack of curious onlookers and kibitzers during this time. This slowed our work, however one of the purposes of staging an exhibition is to educate the public. We took quite a bit of time answering questions and responding to comments.

Most people with only a casual acquaintance with daffodils seemed to prefer the large, colorful gaudy blooms regardless of their shortcomings in form, texture, substance and pose. As I was placing a stem of my seedling C85G6, a rather nice 1 Y-WWY, on the table, a gentleman remarked that his grandmother had "some just like that" in her yard some 30 years ago. Instead of attempting to explain that this was the first bloom from that seedling, I smiled and said, "that's nice."

We had at least two ADS members present at the mall both days that blooms were on display from 9:00 a.m. until 9:00 p.m. to answer questions and tell people about daffodils and to distribute educational materials and ADS brochures. Security personnel at the mall estimated that over 5,000 people witnessed the exhibit.

We hope to make this an annual event until such time that we feel ready to attempt to hold a show sanctioned by the ADS. Hopefully it won't be too many years until we are able to reach this goal.

POLLEN DAUBING 101

or Beginning Hybridizing

Stephen J. Vinisky

Exploring Miniatures

Let's take a stroll together down the path that is much less traveled. We won't meet many other fellow enthusiasts and in some places the trail will be faint or even non-existent. Certain areas will force us to forge ahead with no path to follow. Along the way you'll discover jewel-like beauty, winsome grace and form, and the familiar but stimulating mix of elation and frustration.



I hope you will forgive my meager attempt at communicating the charm and lyrical grace of the miniatures. They do inspire poetry. Most accomplished gardeners would not be without several different kinds, preferably in large quantities. In the garden they seem to fit in almost everywhere. At our shows, the public at large constantly oohs and aahs over everything in the miniature classes.

From our viewpoint as beginning hybridizers, miniatures have much the same potential for improvement and rapid advancement as standard daffodils did *one hundred years ago*. This may seem an outrageous statement, but the truth is, the vast majority of available miniatures are still only one or two generations away from their wild heritage. In contrast, most modern standard daffodils are roughly 8 to 10 generations away from the species.

There are a number of reasons that this "generation gap" exists between miniature and standard cultivars. Of prime importance is the fact that up until Alec Gray's breeding program began to produce results (1940's), no hybridizer focused exclusively on miniatures. Miniatures certainly had been bred and introduced before Alec Gray, but due to his genius and focus, he is truly considered to be the father of miniature daffodils. By the 1940's when Alec Gray began to hit his stride, standard daffodils had been actively hybridized for at least 60 or 70 years.

Another factor may well have been the eelworm epidemic in England in the early 1900's. There is no real mention of miniatures

during this terrible period. There are tantalizing tidbits of information like F.H. Chapman's (breeder of 'Mini-cycla') daffodil collection included "many new small flowers". Collections like his were decimated and literally did not exist a few short years later. One notable collection was reduced in value from in excess of £12,000 to less than £100 in two short years.

A complete supposition on my part is that the rare, hard to please species and perhaps some of the first miniature hybrids were lost and are now unknown. Many of the rare, collected species could not be replaced at once. If these building block flowers were lost, breeding of miniatures would stop until new stocks could be obtained, flowered, evaluated and cross bred.

Whatever the real causes were (or *are*) of the 'generation gap' really do not matter. It should merely reinforce in your mind the limitless opportunity that exists for new forms, colors, and combinations within the miniature arena. We really are close to the beginning in terms of miniature breeding.

Remember the last issue when we talked about species? Some of the same problems of the species also effect the miniatures. Two of the problems are of critical importance and everyone interested in miniature hybridizing should be aware of them. Neither problem is insurmountable. Both will be overcome with time, careful observation, and patience.

Problem number one is the tendency for quite a number of species to reproduce themselves only by seed. Miniatures as discussed, are at best a few generations away from their species origin. It should not surprise any of us when some new and lovely small thing does not re-appear in its second or third year. Bitter disappointment, chagrin and upset are OK reactions to such a loss; just don't be surprised! This problem will solve itself over time. Natural selection seems only to allow those bulbs that propagate via bulb division to increase enough for any form of commercial distribution. Watch your miniature seedlings for bulbs that increase well and form many offsets. You will be helping to find new 'building blocks' for the future.

Problem number two is not really a short term problem. Patience, persistence and careful, long term observation will be needed to overcome this one. The problem can be lumped together under hybrid sterility, chromosome incompatibility or in everyday

language, why won't this little thing set seed? There may be more than one factor at work so let's take them one at a time.

Dips, trips and tets. In general, all species can be considered to be diploid (containing two sets of 7 chromosome = 14 total). Almost every modern registration in divisions 1, 2, 3, & 4 can be considered tetraploid (containing four sets of 7 chromosomes = 28 total). When you cross a species (diploid with 2 sets of 7 chromosome = 14 total) with a tetraploid cultivar, (containing four sets of 7 chromosome = 28 total) the pollen parent (species) contributes $\frac{1}{2}$ the chromosome or 7 and the seed parent (tet cultivar) contributes $\frac{1}{2}$ the chromosome or 14. 7 chromosome plus 14 chromosome equals 21 chromosome. This uneven pairing of chromosome almost always results in a triploid which is a sterile hybrid or mule. Up until recently, Divisions 5 & 7 (Triadrus and Jonquilla hybrids) were considered to be horticultural dead ends because all the known hybrids are sterile.

You can begin to see why reaching the second and third generations away from the species has been such a challenge. Every once in a great while, something causes an even pairing in this uneven arrangement and a spontaneous tetraploid hybrid will result. 'Quick Step' the jonquil hybrid arrived on the scene in this manner as did 'Mission Bells' in Division 5.

These spontaneous tetraploids are showing up in the upper divisions. They have not yet been observed (to my knowledge) in miniatures. As more of us begin to breed miniatures, the likelihood of these fertile tetraploids occurring, increases. Fertile tetraploid miniatures will be the next great search. For they will be the building blocks that will allow miniatures to duplicate standards in color and form.

We'll continue the discussion next time with more miniatures and some tricks and tips. I would like to thank those of you who wrote and called with your support for the Seed Exchange. If the Board of Directors approves in March, we can begin with our first list in this June's *Journal*. Please self pollinate and contribute any extra species seed you may have. Remember, seed donors will receive 3 free packets and first choice from the list. Have a Glorious Spring.

Stephen J. Vinisky, 21700 S.W. Chapman Road, Sherwood, OR 97140-8608. Tel: (503) 625-3379 or Fax: (503) 625-3399.

PAPER WHITE FARMING IN FLORIDA

1928 - 1942

A BIT OF HISTORY

Theodore "Teddy" Stephenson, Ouida Trammell Stephenson
and John C. Van Beck
Tallahassee, Florida

The Paper White narcissus (*N. tazetta papyraceous*) was a popular flower that bloomed in southern gardens from December through February. The bulbs, originally imported from France, were also planted in bowls of pebbles and water for winter bloom and were especially popular in the North. (Chances are, if you were a child in the thirties or forties, you will remember having a bowl of bulbs hidden in a closet, and peeking periodically to see if they had sprouted.) Paper whites were greatly prized by northern florists for winter bouquets. They were the undisputed flower of choice for funeral arrangements.

Southern farmers grew small plots of narcissus before 1928, testing them as a potential money crop as the flowers were popular and easy to grow in warm climates. Small plantings of paper whites stretched from Charleston, South Carolina to Daytona Beach, Florida, and west into Texas. The bulbs flourished, rapidly reproducing as they split into marketable bulbs as well as slabs that could be replanted along with the mother bulbs.

In spite of the ease in growing paper white narcissus, no market was established until 1928. In that year, a chance meeting of two men at a rural gas station in Green Cove Springs 25 miles south of Jacksonville on the St. John's river resulted in a strong permanent friendship and the creation of the largest Paper White narcissus farm in the world. Leo Allbersberg, Vice President and Sales Manager of United Bulb Company, Woodland, Washington who spoke with a heavy Dutch accent, was touring the South to check out narcissus plantings when he encountered William Vincent "W.V." Stephenson at the filling station which served as social life hub for area gents.

Stephenson originally trained and worked as a bookkeeper. He decided early on that his occupation held promise of only a very

modest living, so he moved into farming. At the time he and Leo met, W.V. was a successful potato farmer in Doctor's Inlet ready to diversify his crops. He leased seven acres in Green Cove Springs and planted three acres of paper whites and four acres of vegetables. The flowers and vegetables were sold in Jacksonville at a handsome profit — the flowers bringing almost \$2,000 more than the vegetables. That convinced Stephenson to expand his narcissus acreage. (When asked of the value of the annual bulb crop, Mrs. Stephenson, W.V.'s daughter-in-law who still lives in the Jacksonville area, said she did not know, but one year the potato crop had brought in more than \$50,000.)

Stephenson and Allbersberg scouted the Southland from Texas east, bought up all the small plots of prime bulbs that were available. Stephenson planted the bulbs in Green Cove Springs. Within six years the crop had expanded to 250 acres and W.V. had cornered the market.

In 1934, Stephenson had to move the crop because the Federal Government bought the Green Cove Springs land for a future naval storage basin. The bulb farm was relocated to Hastings in St. Johns County, an area well known for successful potato farms. Stephenson bought 350 acres by purchasing delinquent tax deeds. He kept his association with Allbersberg who continued to guide him in the operation of the huge agricultural enterprise.

In addition to the popular paper white narcissus, Stephenson grew a small, ten acre crop of yellow narcissus ('So'leil d'Or') which were also sold as flowers and bulbs. At one point, W.V., who was always trying something new, started a bulb farm in Gadsden County in the Florida panhandle west of Tallahassee. The 100+ acre farm was as successful as his eastern operations, but W.V. decided it made no sense to travel back and forth over 400 miles round trip between the farms, and have the problems associated with split operations.

From the beginning, narcissus farming was highly profitable. In 1942, after 14 highly successful years in the business, Stephenson, independently wealthy, was ready to give up farming. The crop was not essential to the war effort. Gasoline for tractors and farm vehicles was not available and fertilizer was impossible to obtain. The war effort absorbed many of the farm's workers. It was time to bow out. W.V. sold all the good bulbs and the rest were scrapped.

After the war, the flower lost its popularity as a cut flower. Paper Whites are still forced for indoor winter bloom and are grown in some southern gardens, but many gardeners today are unfamiliar with the once very popular flower.

How the bulbs were cultivated.

The bulbs were planted two inches deep and two inches apart in double rows that were six inches apart in October and November. They were fertilized at the time of planting. Fields were irrigated when needed. There were water furrows every twenty rows which were fed from ditches at both ends of the row. The plentiful water supply came from artesian wells. In extremely dry weather, the water ran day and night.

The bulbs were cultivated several times during the growing season. The fields were plowed by tractors and all weeds that were left were removed by hand by the farm workers who were called hands.

The bulbs grew from October until May and were not affected by cold weather. The bulbs were disease resistant, but one year, the crop was inspected by the Department of Agriculture and mealy bugs were found. All the bulbs had to be treated with gas made from muriatic acid mixed with potassium cyanide. The bulbs were crated and placed in the cooling chamber that was used to condition the cut flowers before shipping. The bulbs were treated for twelve hours with the gas. This was the only disease or pest problem in the farm's history. The Paper White fields were regularly patrolled for rogue bulbs such as Chinese Sacred Lilies or other interlopers.

The bulbs were dug after the tops died down in late May or early June. They were placed on drying racks in covered sheds for one month before grading. The large round bulbs were separated from the slabs and mother bulbs and sold. The planting stock went back to the drying sheds until planting time in October and November. The large round bulbs were sold to wholesale jobbers. The United Bulb Company was the preferred customer as Leo Allbersberg continued to advise W.V. Stephenson on the farm's operation assuring continuing success. The bulbs were shipped from Jacksonville on the Clyde Mallory Line and Merchant and Miners ships to New York, Philadelphia and Baltimore for distribution to the wholesalers who had placed orders for them.

When the first two florets appeared, the blooms were picked by black women who lived on the farm. They picked the flowers in bundles of twenty-five stems. The flowers were shipped to

market by Railway Express from Jacksonville in cardboard boxes containing twenty bundles of twenty-five stems each (500 stems per box.) Although freezing weather below 20 degrees did not hurt the bulbs, it did damage the flowers in bloom.

To condition the flowers for shipping, they were placed in buckets containing water and cooled in a 40 degree refrigeration unit for five hours after picking. They were cooled, packed, and shipped the same day they were picked.

Revenue from the sale of the flowers paid all the expenses of the farm from October to May. The flowers and the bulbs proved to be very profitable. The farm had six houses for the hands. About 30 people, including children, lived on the farm.

During flower picking time, the black women pickers earned \$1.50 a day. The average working day was ten hours. During the bulb digging season, more than 300 hands (migrant workers) who had just finished digging potatoes picked the bulbs which had been turned up by tractor pulled equipment. The families with children made as much as \$25.00 a week as the parents supervised the work. The hands gathered the bulbs in croaker sacks (burlap bags) at ten cents a sack. The work was hard but the pay was good for the times. The only complaint heard from the hands was about the huge gallnippers. John Williams' name for the ferocious mosquitoes that bit him while he was patrolling the sheds as night watchman. The problem was solved by covering him with mosquito netting for the summer.

The Stephensons were always a little proud and more than a little chagrined to know that their flowers graced the funerals of virtually every gangster held from St. Louis to Long Island and points north and south.

What Is Your Favorite Daffodil?

My favorite daffodil is 'Pastorale'.....Rod Armstrong, Plano, TX

My favorite daffodils is *asturiensis*.....Martha Kitchens,
Cinnaminson, NJ

My favorite daffodil is 'Rapture'.....Susan Raybourne, Macon, GA

My favorite daffodils is 'Fragrant Rose'.....Dick Frank

Brooke Ager Memorial Display Garden

Susan Raybourne, Macon, GA

The City of Macon has made an area in our Central City Park available for the planting of a daffodil display garden in the fall of 1995. We will be doing this as a memorial for Brooke Ager. We need bulbs. The list below is our wish list, hopefully for six bulbs of each. These varieties were chosen to try to represent the wonderful diversity of daffodils using varieties likely to survive with minimal care in our deep south area. Please remember us this summer when you are digging your bulbs. I will be coordinating the project so let me know what you can send. Susan Raybourne, (912) 742-2922 or 380 Hospital Drive, Suite 420, Macon, GA 31201.

| | | |
|--------|-----|----------------------------------|
| Div. 1 | W-W | 'Mt Hood', 'Rashee', 'Beersheba' |
| | W-Y | 'Karamudli' |
| | Y-Y | 'Aurum', 'Goldcourt' |
| | Y-W | 'Honeybird' |
| Div. 2 | W-W | 'Ashmore', 'Stainless' |
| | W-P | (have) |
| | W-Y | 'Festivity' |
| | Y-Y | 'Camelot' |
| | Y-O | (have) |
| | Y-W | 'Daydream' |
| Div. 3 | W-O | 'Rameses' |
| | W-W | 'Verona', 'Dreamcastle' |
| | W-Y | 'Lollipop' |
| | W-O | 'Blarney' |
| | W-P | 'Audobon', 'Coral Ribbon' |
| Div. 4 | Y-O | 'Birma' |
| | W-Y | 'Unique', 'Cheerfulness'' |
| | W-P | 'Coral Strand'' |
| Div. 5 | W-W | 'Erlicheer' |
| | W-W | 'Ice Wings' |
| | W-Y | 'Tuesday's Child' |
| | Y-Y | 'Piculet' |

| | | |
|---------|--------|----------------------------|
| Div. 6 | W-W | 'Jenny', 'February Silver' |
| | W-P | (have) |
| | Y-R | 'Jetfire' |
| | Y-Y | 'February Gold' |
| | W-Y | 'Perky', 'Jack Snipe' |
| Div. 7 | W-W | 'Pueblo' |
| | Y-W | 'Wishing Well' |
| | W-Y | 'Wendover' |
| | W-P | 'Bell Song' |
| | Y-Y | 'Sweetness', 'Quail' |
| Div. 8 | Y-O | 'Stratosphere' |
| | W-O | 'Geranium' |
| | Y-O | (have) |
| | W-Y | 'Avalanche' |
| Div. 9 | W-Y YR | 'Actaea' |
| Div. 11 | W-W | 'Cassata' |
| Div. 12 | Y-Y | 'Tete-a-Tete' |

Memorial Contributions

Frances Anewalt.....Southwest Ohio Daffodil Society, Dayton Area

Betty Beery.....Adena Daffodil Society

Kitty Frank.....Mr. & Mrs. Les Ager

Mr. & Mrs. Rodney Armstrong

Georgia Daffodil Society

Dr. Leone Low

Anna R. Nichols

Dr. Susan Raybourne

Mr. & Mrs. Stephen Vinisky

Mr. & Mrs. V. Jack Yarbrough

Sue Zapp

Deceased Members of

the Indiana Daffodil Society.....Indiana Daffodil Society

Mrs. Robert Mannfeld.....Dolores Moore

In Pursuit of Petite Poets

Meg Yerger, *Princess Anne, Maryland*

Fascination with little things seems to be nearly universal. A display of miniature daffodils at a flower show is a sure crowd stopper. Poeticus species that might qualify as miniature are *poeticus radiiflorus* and *poeticus verbanensis*. Some plants from a clone are often smaller than others. It might be possible to select from the runts in an effort toward miniaturization.

'Wag-the-Chief' was the first breakthrough as a miniature poet, having been awarded the ADS Miniature Rose Ribbon as a seedling at a Maryland Daffodil Society Show in Baltimore in April 1981. It had been said by experts that there was no such thing as miniature poets. The judges included expert hybridizers Dr. William Bender of Pennsylvania, Phil Phillips of New Zealand, and Frank Seney of Virginia who were so startled at the facts about the flower's parentage that they said: "But it can't happen." Then they did a double take saying "but in genetics anything can happen."

In 1975, one of my three *hellencicus* bulbs put up a bloom on a five-inch stem. Hoping that this characteristic might help produce small poets I found it a mate. Pollen from 'Lights Out' was at the correct fluffy stage to be used on the stigma of the little bloom. 'Lights Out' is reputed to have a small, red-eyed poet seedling bred by the Reverend George Engleheart, as an ancestor.

The mature pod was designated as 75 H 3 with each of the three bulblets coming to be labelled 75 H 3-1, 75 H 3-2, 75 H 3-3. On August 25, 1982 poet seedling 75 H 3-1 was registered with the Royal Horticultural Society as 'Wag-the-Chief' 9 W-GYR. In 1993, pod sister seedling 75 H 3-2 was registered as 'Pert' 9 W-GYR and the third pod sister seedling 75 H 3-3 as 'Kewpie Sprite' 9 W-GYO.

Two more poets of the same parentage, but not the same pod, were also registered in 1933, named for the real live children adopted by the tribe of Kewpies to look after. Poet seedling 75 H 1-3 became 'Scootles' 9 W-GYR, and seedling 75 H 2-1 became 'Giggles' 9 W-GYR. All were registered as "dwarf" since that is the word used by the RHS in alluding to height. They use the

word miniature in reference to flower size when the perianth is not more than two inches in diameter. In the United States the word miniature is used by the ADS for a daffodil selected by an ADS committee for inclusion on a list of specifically named flowers.

Would-be raisers of small poets may find genes for smallness in the parents of progeny that have qualified for miniature status. Such parents include:

| | | |
|-------------------|--------------------|---------------------------------|
| 'Doily Horace' | 'Wag-the-Chief' | 'Pert' |
| 'Dreamland' | ' <i>praecox</i> ' | ' <i>praecox grandiflorus</i> ' |
| 'Dulcimer' | 'Kewpie Sprite' | 'Proxy' |
| 'Evans N-25' | 'Lights Out' | 'Red Rim' |
| 'Felindre' | 'Lyric' | 'Sea Green' |
| <i>hellenicus</i> | 'Ornatus' | 'Tart' |
| 'Hexameter' | 'Pinkie' | ' <i>verbanensis</i> ' |

In the spring of 1994 the ADS offered for the first time a miniature Red, White and Blue Ribbon for an American bred miniature collection. Competition for this award resulted in great interest in exhibition of miniature daffodils. At least one entry was made up of poeticus daffodils which had previously been winners of the Miniature Rose Ribbon and in early April captured the American-Bred Award. They were named and registered with the RHS on April 28, 1994. These are well worth considering in a search for small genes.

| | | | |
|--------------------|---------|---------------|---------|
| 'Baltimore's Best' | 9 W-GOR | 'Pert' | 9 W-GYR |
| 'Bright Dab' | 9 W-O | 'Sail' | 9 W-GGO |
| 'Gill' | 9 W-GYO | 'Skim' | 9 W-GYR |
| 'Hatteras Light' | 9 W-OOR | 'Tyson's Kid' | 9 W-GYO |
| 'Iota' | 9 W-GYO | 'Whit' | 9 W-GWP |
| 'Kewpie Sprite' | 9 W-GYO | 'Wye Mills' | 9 W-GYO |
| 'Peach Circle' | 9 W-GGP | | |

All of these small poet cultivars are the result of planned parenthood so should be productive in the pursuit of Petite Poets.

BULLETIN BOARD

Changes to ADS December, 1994 List of Miniature Cultivars

Please make the following correction and changes to the List published in the December, 1994 *Journal*.

Add 'Hawera' 5 Y-Y (This was inadvertently left off the List)

Change codes as follows:

| | | | |
|---------------|---------|--------------|----------|
| 'Bobbysoxer' | 7 Y-YYO | 'Marionette' | 12 Y-YYO |
| 'Cupid' | 12 Y-Y | 'Oz' | 12 Y-Y |
| 'Flyaway' | 12 Y-Y | 'Toto' | 12 W-W |
| 'Junior Miss' | 12 W-Y | | |

Please make the following changes to the Miniature Candidate List:

| | | | |
|-----------------|--------|----------|--------|
| 'Cornish Cream' | 12 Y-Y | 'Midget' | 10 Y-Y |
|-----------------|--------|----------|--------|

Anyone who wants a corrected complete list may write to the office. Please include two first-class stamps with your request.

More Classification Changes

'Grand Seigneur' should have been listed as 11a W-Y* in the last *Journal*. Further correspondence with Sally Kington of the RHS confirms that 'Hillbilly' and 'Hillbilly's Sister' should both be 11a Y-Y. Also, please note that 'Trepolo' is 11b Y-R.

Those of you who have purchased the *International Daffodil Register 20th Supplement* published by the RHS should be aware of several errors. Correspondence from Sally Kington confirms that although 'Everglades' is listed as 4 W-P, it was changed correctly to 4 W-O in the *Nineteenth Supplement*. 'Clouded Yellow' should be 2 YYW-Y, and 'June Bride' should be 11a W-P. Correspondence also indicates that 'Sandy Cove' is to be changed to 2 Y-GWP (as our *Daffodils to Show and Grow* indicates); 'Terracotta' is to be changed to 2 W-GYO (as our *Data Bank* indicates); and 'Garden News' is to be changed to 3 Y-ORR as we indicated in the last issue of the *Journal*.

Call for Papers

The First Announcement and Call for Papers has been received for the Seventh International Symposium on Flower Bulbs which will be held March 10 - 16, 1996, in Herzliya, Israel. Being held under the auspices of The Flower Bulb Working Group (ISHS) and The International Bulb Society, the symposium will focus on nine topics including growth, development and flowering; production systems and techniques; post harvest physiology; biotechnology; selection, breeding and genetics; introduction and acclimatization of new crops; ecology, taxonomy and conservation; plant protection; and economics and marketing. Submission of intention forms and tentative titles for contribution are due by April

15, 1995. Immediately following, the Working Group Virus Diseases of Ornamental Plants (ISHS) will hold the Ninth International Symposium on Virus Diseases of Ornamental Plants, March 17 - 22, 1996, in the same venue. Additional information is available from the office.

Judging Schools — Note the correct date for the following:

Course III

May 7, 1995

Chicago Botanical Garden, Chicago, IL

Charles Wheatley, Chairman

P.O. Box 150 • Mongo, IN 46771

Coming Events

ADS Convention, Dallas Texas.....March 16-18, 1995
 ADS Fall Board Meeting, Williamsburg, VA.....Sept. 1995
 ADS Convention, Baltimore, MD.....Spring, 1996
 Hamilton, NZ Daffodil Show.....Sept. 13-15, 1996
 World Daffodil Convention, Christ Church, NZ.....Sept. 27-29, 1996
 ADS Convention, Jackson, MS.....March 13-15, 1997
 ADS Convention, Richmond, VA.....April 9-11, 1998
 ADS Convention, 1999 is open for invitations.....Spring, 1999
 ADS Convention, San Francisco, CA.....Spring, 2000

Show Dates 1995 — U.K. & N. Ireland

RHS Early Daffodil Competition.....March 14-15
 N.I.D.G. Early Show.....March 26
 Hillsborough Show.....April 1
 Bangor Daffodil Show.....April 8-9
 RHS London Daffodil Show.....April 11-12
 Coleraine Daffodil Show.....April 15
 Daffodil Society Show, Solihull.....April 15-16
 Harrogate Spring Show.....April 20-23
 Belfast Spring Show.....April 22-23
 Ballymena Daffodil Show.....April 29
 Enniskillen Daffodil Show.....April 29
 Daffodil Society Norther Group Late Show.....April 29
 RHS Late Daffodil Competition.....May 2-3
 Omagh Daffodil Show.....May 6
 N.I.D.S. Late Show.....May 14

HERE and THERE

Mary Lou Gripshover, ADS Executive Director

An ad in *The Topeka Capital* advertised Daffodils for Neutralizing, 25/\$7.99 Regularly \$8.99. I wonder what they neutralize? Meanwhile, an ad from Pennsylvania is promoting the DAFF-A-MUM. Twice the color for half the work! When planting your fall garden mum, plant daffodils around the perimeter of the soil ball. As Richard Ezell, who sent the clipping says, "Well, if it sells bulbs, I guess it's OK."

John Van Beck has been hard at work promoting daffodils in Florida. Along with giving talks about daffodils, he has Tallahassee Nurseries offering daffodils for North Florida, chosen for their ability to repeat bloom and naturalize in that area. The Florida Daffodil Society now has 50 plus members. This past fall they planted 300 bulbs of 48 different cultivars in a trial section at Goodwood. If you have surplus bulbs when you dig, why not send some to John Van Beck to test in Florida? You might write him first at 6061 Weeping Willow Way, Tallahassee, FL 32311.

Another place for your surplus bulbs is the Bowling Green Elementary School, 2340 Stewart Ave., Westbury, NY 11590. Emily Shamper writes that they started four Environmental Children's Gardens this year and would like to plant daffodils, but have no funds to buy bulbs. Sounds like a good project to teach kids about daffodils.

Bill Schrader, Sandusky, Ohio has a new project. He is getting a collection of daffodils started in the McBride Arboretum which is part of the campus of Bowling Green at Huron, Ohio.

Bloem Bollen Cultuur, the magazine of the Royal Dutch Bulbgrowers Association, reports on flower bulb exports in the October 27, 1994 issue. The United States and Canada accounted for 19.8% of Dutch flower bulb exports from June 1993 to May 1994. Tulips gladiolus, iris and lillies all ranked ahead of narcissus, which was followed by hyacinths. More than three times as many tulips as daffodils are exported to North America. Worldwide it's tulips, glads, lillies, iris, daffodils, and hyacinths, with almost five times as many tulips as daffodils being exported. How can they like all those other flowers better than daffodils?

Susan Smith, of Missouri, gave a couple of gift memberships in ADS as Christmas gifts. (What wonderful gifts — why didn't I think of that?) She cleverly wrapped some beautiful silk daffodils in a long florist's box and made a decorative gift certificate with gold edges announcing a one-year membership in ADS. This is an idea worth copying for any gift-giving occasion.

Do you like growing plants from seed? News from Thompson & Morgan, Inc., states that they plan to begin a Plant Partnership program, and they're looking for a core group of test gardeners to try new varieties before the seed is made widely available. A fee is involved (they don't say how much) but the "seeds will be worth much more than the enrollment fee." If you're interested in taking part, send a stamped, self-addressed envelope for full details to Bruce Sangster, Thompson & Morgan, Dept. PP, Jackson, NJ 08527.

Sadly, we have learned of the death of Frances Anewalt of Dayton. A long-time member, Fran was an Accredited Judge and Life Member. She was also a member of many other horticultural organizations. Our sympathy to her family.

We are also saddened to learn of the recent death of Carol Barnes of Yorkshire, England. We first met Carol when she attended the ADS convention in Columbus in 1992 when her husband Don, was a featured speaker. She was a teacher, a raiser of British Short-hair cats, and a prominent judge of cats. Our sympathy to Don and her family.

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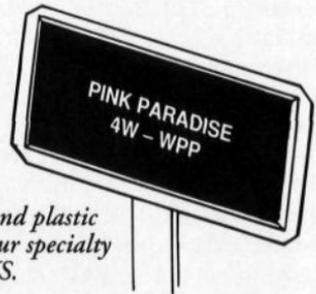
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Questions of Classification & Identity

February, 1995

This year's questions from the RHS Narcissus Classification Advisory Committee are solely to do with Papillon daffodils, the split-corona daffodils in subdivision 11b that have the corona segments alternate to the perianth segments. In such daffodils, the corona segments often have more than one colour to them, arranged in longitudinal rather than concentric bands. Those recorded in the RHS database are listed below.

In each case, the Committee wishes to know **1)** whether the colours shown in the corona codes below are correct, or what the corona colours really are; and, **2)** which of the colours contrasting with the perianth is predominant.

Please send all observations, together with the names of any other Papillons you may know of that are not self-coloured.

Please keep these enquiries in mind during your bloom season.

NB: Colours required are those of *mature blooms*.

Note: Some of the following attributions to subdivision 11b are informed guesses; confirmation that all are indeed Papillons would be welcome.

- 'Abel Tasman' 11b W-WYO (Lefeber 1970)
- 'Amarita' 11b W-OOW (Lefeber)
- 'Boston' 11b W-YW (Lefeber) Lefeber 1983
- 'Brilliant Star' 11b Y-OOY (Lefeber) Lefeber 1960
- 'Broadway Star' 11b W-WWO (Lefeber) Lefeber 1975
- 'Burning Heart' 11b Y-OOW (Lefeber) Lefeber 1958
- 'Cape Kennedy' 11b W-? (Lefeber c. 1968)
- 'Delta' 11b W-OYW (Leenen) Leenen 1983
- 'Dolly Mollinger' 11b W-OWO (Lefeber) Lefeber 1958
- 'Donna Bella' 11b Y-OOY (Lefeber 1943) Lefeber 1960
- 'Estella's Favourite' 11b Y-? (Lefeber) Lefeber 1968
- 'Fashion' 11b Y-YYO (Leenen 1966) Leenen 1977
- 'Firestreak' 11b W-WRW (Lefeber) Grullemans 1959
- 'First Lady' 11b W-OOW (Lefeber) Lefeber 1960. Syn. 'Moulin Rouge'
- 'George Armstrong' 11b Y-? (Lefeber) Lefeber 1958
- 'Gold Rush' 11b Y-YOY (Gerritsen pre-1978). Also spelt 'Goldrush'
- 'Goldrush' Syn. of 'Gold Rush'
- 'Jaques Lefeber' 11b W-ORR (Lefeber) Lefeber 1988
- 'Jeanne D'Arc' 11b W-? (?Lefeber c. 1962). ?The same as 'Light Star'
- 'Lemon Beauty' 11b W-? (Lefeber 1948) Lefeber 1962
- 'Lemon Queen' 11b (Lefeber)
- 'Light Star' 11b W-YWY (Grullemans 1965) Pennings 1988. ?The same as 'Jeanne d'Arc'
- 'Little Charley' 11b W-? (Lefeber) Grullemans 1959

- 'Madame Butterfly' 11b W-OYY (Grullemans 1955) Grullemans 1966
 'Marie Jose' 11b W-WYW (Lefeber) Lefeber 1974
 'Moulin Rouge' Syn. of 'First Lady'
 'Nicole' 11b Y-YOW (Lefeber) Lefeber 1984
 'Nippon' 11b W-WYY (Leenen) Leenen 1970
 'Palma Giovanni' 11b W-ORR (Lefeber) Lefeber 1968
 'Papillon Paradiso' 11b W-YYW (Lefeber) Lefeber 1963
 'Pico Bello' 11b W-WWO (Lefeber) Oosten 1979
 'Prins Carnaval' 11b Y-OOY (Lefeber 1950)
 'Raphael' 11b W-? (Dutch origin 1968)
 'Silvester' 11b W-? (Lefeber) Lefeber 1958
 'Sorbet' 11b W-YYO (Leenen 1966) Leenen 1977
 'Space Shuttle' 11b W-? (Lefeber 1970) Lefeber 1981
 'Spring Diamond' 11b W-OOW (Lefeber) Pennings 1988
 'Sumner' 11b Y-? (Lefeber 1968) Lefeber 1978
 'Sunset Serenade' 11b W-Y (Lefeber) Grullemans 1959
 'Tepolo' Syn. of 'Trepolo'
 'Trepolo' 11b Y-? (Lefeber) Lefeber 1988. Mis-spelt 'Tepolo'
 'Vivarino' 11b Y-? (Lefeber) Lefeber 1968
 'White Duchess' 11b W-YYW (Lefeber 1942) Lefeber 1960



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NOTES FOR THE NEWCOMER

SHOW TIME

Peggy Macneale

By now, with buds bursting ever more exuberantly each day, it's time to show off some of those flowers. Never mind if you feel too new to the daffodil scene. Never mind if you feel sure your flowers aren't good enough and you can't remember their names. Never mind if you've always said you'd rather grow them than show them. Show committees really need, and want, your participation.



If you belong to a local society that is having a show this spring you may already have a schedule in hand. If not, I encourage you to write at once to the chairman of a nearby show as listed in this *ADS Journal*, and request a copy of their schedule. Ask for some entry tags while you are at it.

You will see a page of directions for exhibitors. Read this, of course, and plan to reread it nearer show time to be sure you've absorbed all the information. Make this schedule your friend.

Then scan the pages listing the various classes. A new exhibitor will be most interested in Section A, which is for single stems. On the other hand, most shows have a "Novice" or "New Collector" section which could be further along in the schedule — perhaps Section K or J? This is where you may feel less intimidated, though you may be sure you will be welcome to enter your flowers anywhere you wish.

If you feel you cannot compete with people who have all those expensive new varieties, you may find a section that calls for "heritage" daffodils, or those introduced twenty-five or more years ago. Your copy of *Daffodils to Show and Grow* will give the introduction date for every variety, so you can figure out if your collection fits this category. Do you realize that many, many "old" daffodils are capable of winning top awards, and do so with regularity, every year, all over the world.

Now we come to the nitty-gritty.

Selecting the flowers to enter.

Pick the blooms that are freshly open. Some daffodils do have to remain in the garden for a few days to reach the peak of color perfection. However, beware of sun-crisped or bleached orange cups.

If wind and rain have split a petal severely, that flower may best be enjoyed at home in a bouquet. Choose, instead, a bloom that is intact. If a storm threatens with the possibility of hail, it would be better to gather all prospects and let them mature indoors. Many a blossom which was picked so young it still hung its head, has been set under a lamp all night before a show to encourage it to assume a heads-up pose. Incidentally, it helps to write the variety name on each picked stem — a ball-point pen will do the job right there in the garden.

Grooming the blooms.

Judges are lenient when they come to the novice classes, but a dirty daffodil will likely be passed by. Try to keep your flowers from getting dirty in the first place by using a mulch around the clumps. If your best lovelies have their faces freckled with mud spots you can gently clean off dry specks with a soft brush. A damp Q-Tip may help clean a stubborn stain. Don't forget to check the back of the flower, too. Then straighten the petals carefully so they stand away from the cup at a right angle, as flat and smooth as possible. As you drive off to the show your hopefuls should be in containers sufficiently separated so the flowers don't rub against each other. Bottles in six-pack holders are good for transporting daffodils.

At the show.

Arrive as early as possible. Your schedule will indicate the hours for entry. Almost invariably you will have help in filling out the entry tags. Take plenty of name stickers with you, or an ink pad and name-and-address stamp. Be prepared with some rubber bands for the tags and a pen for filling in information: section and class number for each entry, and name and division of flower. Both top and bottom of the tag must be filled out. Take your time — the main idea is to *enjoy* this experience!

Available in the staging room are the holders for the entries, usually test tubes in black wooden blocks. Often the show committee has put water in the tubes, but take your own watering can just in case. You will also need to take clippers to cut pieces of the available greenery of a size to steady each flower in its tube. Adjust the stem in the tube so it is at the right height to be in proportion to the blossom.

The excitement in the staging room is contagious. It is utter chaos — tables jammed with containers of flowers, contestants working on their tags while "go-fers" take box tops filled with staged entries into the show room. The classes fill up rapidly as the morning grows late. Relax as "time" is called. Maybe you haven't entered all the daffodils you brought but you've certainly done your best, and when you see some ribbons, you'll feel triumphant.

Schedule of 1995 Daffodil Shows

Leone Y. Low, *Awards and Show Reporter*

387 N. Enon Rd., Yellow Springs, OH 45387

(513) 767-2411

March 11-12

Clinton, Mississippi

14th Annual Central Mississippi Daffodil Show at the Hall of Fame, B.C. Rogers Student Center, Mississippi College. Information: Dr. Ted Snazelle, 418 McDonald Drive, Clinton, MS 39056.

March 11-12

Pittsburg, California

Northern California Daffodil Society at the Marina Community Center, 340 Marina Boulevard. Information: Sharilyn Schuetz, 5654 Broadway, Oakland, CA 94618 (510) 655-2939

March 16-17

Dallas, Texas

ADS National Show. Texas Daffodil Society at Plaza of the Americas Hotel, 650 Plaza of the Americas. Information: Mrs. James R. Walther, 7244 Ashington Drive, Dallas TX 75225.

March 25-26

Conway, Arkansas Regional Show

Arkansas Daffodil Society at Hendrix College, Hulen Hall. Information: J.A. Strauss, 322 Hall St., Malvern, AR 72104 (501) 332-2109.

March 25-26

Atlanta, Georgia

Georgia Daffodil Society at the Atlanta Botanical Garden, Piedmont Park at the Prado. Information: Dr. Susan Raybourne, 380 Hospital Drive, Macon, GA 31201.

March 25-26

Fortuna, California Regional Show

Fortuna Garden Club at the Fortuna Monday Club. Information: Mrs. Dian Kersee, 1000 Angel Heights Ave., Fortuna, CA 95540.

March 25-26

Chapel Hill North Carolina State Show

North Carolina Daffodil Society at the North Carolina Botanical Garden, Totten Center. Information: Betsy Hackney, 104 Carolina Forest, Chapel Hill, NC 27516.

April 1-2

Hernando, Mississippi

Garden Study Club of Hernando at the National Guard Armory, McCracken Road. Information: Miss Leslie Anderson, Rt. 5, 2302 Byhalia Road, Hernando, MS 38632.

April 1-2

Gloucester, Virginia

The Garden Club of Gloucester at Page Middle School, Route 17, South. Information: Mrs. Edward H. Ould III, Miramer, Ware's Neck, VA 23178.

April 1-2

Shedd, Oregon

Linn County Fairgrounds, 3051 S.E. Oakway Ave., Albany, OR. Information: Betty J. Forster, 31875 Fayetteville, Shedd, OR 97377. (503) 491-3874.

April 15-16 **Washington, DC**
Washington Daffodil Society at the National Wildlife Federation, 8925
Leesburg Pike, Vienna, VA. Information: Delia Bankhead, 1816 Ivy Oak
Square, Reston, VA 22090.

April 17-18 **Chillicothe, Ohio**
The Adena Daffodil Society at Veterans Administration Medical Center.
Information: Mary Rutledge, 704 Ashley Drive, Chillicothe, OH 45601.

April 19-20 **Baltimore, Maryland**
Maryland Daffodil Society at the Church of the Redeemer, 5603 North
Charles Street. Information: Joan M. George, 614 W. Timonium, MD
21093.

April 20-21 **Indianapolis, Indiana**
Indiana Daffodil Society at the Meridian St. United Methodist Church,
5500 N. Meridian St. Information: Mrs. Walter Vonnegut, 8141 N.
Illinois St. Indianapolis, IN 46260. (317) 255-9638.

April 21-22 **Morristown, New Jersey**
New Jersey Daffodil Society at the Frelinghuysen Arboretum's Joseph
Haggerty Educational Building. 53 E. Hanover Ave. Information: Mrs.
Peter D. O'Hara, 251 Glenwood Road, Englewood, NJ 07631. (201)
567-7136.

April 22 **Pittsburgh, Pennsylvania**
Northland Library, North Gate. Information: Mrs. Dianne Mrak, 124
Fieldgate Dr., Upper St. Clair, PA 15241.

April 22-23 **Kennett Square, Pennsylvania**
Delaware Valley Daffodil Society at Longwood Gardens. Information:
Mrs. Marvin Andersen, 7 Perth Drive, Wilmington, DE 19803.

April 22-23 **Columbus, Ohio Regional Show**
Franklin Park Conservatory, 1777 E. Broad St. Information: Mrs. Cindy
Hyde, 8870 State Route 22 East, Stoutsville, OH 43154.

April 26-27 **Greenwich, Connecticut**
Regional Show. Greenwich Daffodil Society at the Christ Church Parish
Hall, 254 E. Putnam Avenue. Information: Mrs. Nancy Mott, 38 Perkins
Road, Greenwich, CT 06830.

April 29 **Akron, Ohio**
Rolling Acres Shopping Mall, 2400 Romig. Information: Mrs. Otho
Boone, 340 Reimer Road, Wadsworth, OH 44821.

April 29-30 **Regional Show, Chambersburg, Pennsylvania**
Information: Mrs. Joseph Dickenson, 980 Leidig Drive, Chambersburg,
PA. 17201.

April 29-30 **Rockford, Illinois**
Northern Illinois Daffodil Society and the Council of Rockford
Gardeners at the Colonial Village Mall, 1100 S. Alpine Rd at Newburg
Rd. Information: Mrs. Nancy Pilipuf, 11090 Woodstock Rd., Garden
Prairie, IL 61038. (815) 547-6244.

April 30 - May 1

Nantucket, Massachusetts
Folger Hotel, Easton St., Information: Mary Malavese, P.O. Box 1183,
Nantucket, MA 02554.

May 5-6

Dublin, New Hampshire
Northern New England Daffodil Show at the Dublin Town Hall.
Information: Mrs. Harvey L. Schwartz, Sky Hill, P.O. Box 194,
Harrisville, NH 03450.

May 6-7

Glencoe, Illinois
Regional Show. Midwest Daffodil Society at Chicago Botanic Garden,
Lake-Cook Road. Information: Laurie Skrzenta, 2959 Hobson Rd.,
Downers Grove, IL 60517.

May 13-14

Regional Show. St. Paul, Minnesota
Information: Mr. Raymond Swanson, 11680 Leeward Avenue S.,
Hastings, MN 55033.

DR. ABILIO FERNANDES

Dr. Abilio Fernandes, internationally recognized authority on the taxonomy and cytology of the genus *Narcissus*, died in his native Portugal on October 7, 1994. In 1963, the American Daffodil Society presented its Gold Medal to him in recognition of his contribution to the understanding of the genus and origin of the species through detailed chromosome studies of numerous species and their variants.

Over the years, he published widely in English, French and Portuguese. In the English-speaking world, he is perhaps best known for his "Keys to the Identification of Native and Naturalized Taxa of the Genus *Narcissus* L." published in the 1968 *Daffodil and Tulip Yearbook* of the Royal Horticultural Society. His monumental 1975 treatise "L'Evolution Chez Le Genre *Narcissus*" appearing in *Anal. Inst. Bot. Cavanilles* explains logical interrelationships among the species based on cytological studies. Even though a number of new species and many new interspecific hybrids have been described in recent years, these two pioneering works are still of great significance today.

Perhaps one of the greatest pleasures Dr. Fernandes received during his lifetime was the naming of a newly-discovered species in his honor in 1947. His name remains with us forever in *N. fernandesii*, a yellow multi-headed species of the Iberian peninsula which is a favorite parent for those involved in hybridizing miniature daffodils.

Fly With A Robin This Spring

Delia Bankhead • 1816 Ivy Oak Square • Reston, VA 22090

If you have a special interest in any aspect of daffodils, enjoy sharing that interest, and like to get informative letters, think about joining a round robin. Being in a robin is very special — almost like having another family, a daffodil family — but one of your own choosing! Even after many years in two robins, I still get excited when that fat package of letters, photos and who knows what delightful surprises arrives every six months or so.

It's easy to join — just write to me, or fill in the survey. And doing your part is easy too. When the robin arrives, simply replace your old letter with a new one and send the package on to the next person on the flight list. Each robin has a director who suggests topics and helps to keep the robin moving.

There are now four robins in existence, but any number can be created — even more on those four subjects, if enough people are interested. The current four are the Historic Daffodils Robin, the Miniature Robin, the Divisions 5-9 Robin and the Hybridizers' Hummingbird (so called for the only bird pollinator in the U.S.) Many other subjects are open for exploration, some of which are suggested below. Growers in areas of less than ideal conditions might welcome an "Iceberg Robin", or "Growing Daffodils in the Torrid Zone". Collectors of daffodil artifacts could share their sources or gloat over unique finds. Lovers of small standards might help define the elusive Intermediate category, etc., etc. and so forth....

Just for fun, let's hear your ideas. Send the survey on the next page to the new Robin Chairman (who will contact you *before* adding your name to any robin):



THE DAFFODIL SOCIETY

was established in Britain in 1898 to cater for the needs of all daffodil enthusiasts and now has members in all the countries where daffodils are grown seriously.

The Society issues two publications each year to all members and welcomes contributions from all growers on the complete range of topics.

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I have an interest in the following ROBINS

(If more than one, prioritize with numbers.)

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(Specify region, type climate, etc.)

___ NEWCOMERS & OLD HANDS
(General)

___ HISTORIC DAFFODILS

___ HYBRIDIZERS'

___ DOWN UNDER DAFFODILS

___ BULB TRADERS

___ OTHER

___ MINIATURE

___ INTERMEDIATE

___ DIVISIONS 5-9

___ SPECIFIC DIVISION _____

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Doctor Knows Best

Henry Hartmann, *Wayne, New Jersey*

Dr. Bill Bender of Chambersburg, PA has a system for growing daffodil seedlings that really opened my eyes. He plants his daffodil seeds in double rows on 4 inch centers. That is, the seed rows are separated by 1 inch, 3 inches, 1 inch, 3 inches, etc. He could have uniformly spaced the row 2 inches apart; but, he found it easier digging and planting double rows 1 inch apart. Should all the seeds grow, each plant will have 2 square inches of garden space. I thought this was tight planting. However, in Doc's garden I saw many plants blooming during their fourth growing season. His soil has been thoroughly tested and carefully balanced to support good plant growth. Rows are limited in length to four feet so that access is available from each end. The daffodil plants are allowed to grow for seven seasons during which time anything promising is removed. By the end of the seventh season, all remaining bulbs are removed.

This is the simplest and most compact system I have ever seen for growing daffodil seedlings. There is no need to dig and replant bulbs. Just leave them where they are until they complete their seven year cycle. The only digging is the removal of the few bulbs that appear to be winners.

In my own seedling patch, the plants are spaced 2 inches apart in rows 13 inches long. Each of my seedlings has 26 square inches of garden space to grow. Doc is doing the same thing in 1/13 of garden area. Using Doc's system, my present planting in a patch 30 x 39 feet could have been accomplished in a 4 x 17.3 foot planting. Wow!

Now, daffodil growers with very limited garden space can start the exciting hobby of creating new daffodil varieties.

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Growing & Showing Miniatures, Southern Style

Beverley Barbour, Lawrenceville, GA

I have been growing miniatures in the Lawrenceville, Georgia area (28 miles northeast of downtown Atlanta) since 1982. I do not consider myself to be in any way an authority on the subject; however, I have learned some things by trial and error. I have always had many varied interests and therefore don't devote the time and energy to growing my daffodils that I should to get the very best results.

I have a few simple rules which have worked for me in growing miniatures:

1. Prepare a well drained area. My best miniatures bed is a raised bed made out of railroad ties on a slight slope. The bed is a minimum of two railroad ties high and is filled with a mixture of granite sand, "nature's helper" (reasonably fine pine bark mulch material), and soil. It is in an area where it does get good summer baking if we have a reasonably dry summer. Mulch lightly in late fall and remove mulch mid-February.
2. Fertilize lightly. I have only used wood ashes from our fireplace and a light sprinkling of an all purpose fertilizer once a year generally in late February. I know I would have better results with an individualized fertilizer program for selected cultivars.
3. Don't move or divide until the clumps are overcrowded and quit blooming. Others will disagree — this works for me and I do not lose as many miniatures as I did before. I do move cultivars that do not bloom and try to find them a home where they will perform better.
4. Plant miniatures immediately after dividing or receiving a new order of bulbs. If I have to wait, I plant miniatures as soon as possible...Unlike standards, I find they tend to dry out too much if left out too long. I do use the "shotgun mixture" of fungicides that James Wells recommends in his *"Miniature Daffodils"* or something similar. I do plant my miniatures in strawberry baskets.

It took me five years of purchasing, growing and experimenting to be able to have 12 cultivars from three RHS divisions to enter (and win) my first Roberta C. Watrous collection. I now can enter a Watrous collection at almost every show, but not with the apparant ease of other growers. I have not tried planting miniatures in different locations to "speed up or slow down" blooming times. All of my miniatures are grown outside and they are not in protected beds. If one of Atlanta's famous ice storms is coming,

I do tent the main bed with plastic to protect the plants and blooms overnight. I have also burned plants and blooms when I did not remove the tent early enough the following day. It's not fun tromping around in snow and ice after having spring days the week before!!! Weather permitting, I prefer to let them take their chances with Mother Nature.

In my garden the best growing and blooming miniatures over the last twelve years are as follows: 'April Tears', 'Bobby Soxer', *bulbocodium* var. *bulbocodium*, 'Clare', 'Demure', 'Hawera', *jonquilla* var. *jonquilla*, 'Jumblie', 'Little Beauty', 'Minnow', 'Mitzy', 'Pequenita', 'Segovia', 'Snipe', 'Sundial', 'Sun Disc', 'Tete-a-Tete', 'Quince' and 'Xit'.

Miniatures that are slow to multiply for me, but do bloom are as follows: 'Chit Chat', 'Flyaway', 'Paula Cottell', 'Pixie's Sister', 'Rikki', *rupicola* subsp. *triandrus* (this one does bloom if dug every year).

I have been growing the following for only a few years...So far they do bloom and multiply: 'Angel's Whisper', 'Fairy Chimes', 'Little Rusky', 'Little Sentry', 'Macleayi', 'Sewanne', 'Stafford', 'Toto', and 'Yellow Xit'.

The following five rarely bloom for me: *asturienis* (minimums), *minor pumilus plenus*, *n. canaliculatus*, *n. wilkommii*, 'Piccolo', 'Rockery White', and *watieri*. I suspect some of these would benefit from more care...Maybe fertilizer??? I would love to hear from some experts on these. Maybe someone would write an article on the tricks to get the difficult miniatures to bloom.

What is difficult here may be easy in other areas. I do grow other varieties that I haven't mentioned — they are either relatively poor growers for me or ones that bloom poorly or have unattractive looking blooms. If I have left someone's favorite off my list it is probably one that I purchased, but it didn't live for me. For example, I did buy 'Cupid'...It died before I even got to see the bloom.

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In the early years of building my collection, I had the same frustrations experienced by other miniature growers — what you order is not necessarily what you receive. I now order only from sources that I know send true-to-name cultivars. Trading or purchasing bulbs from other ADS miniature growers is another way to increase your collection. There is also the matter of disagreement among various ADS "experts". For example, I have a lovely 'Clare' which came from Kate Reade. Her original stock came from Alec Gray. Other growers who also grow 'Clare' in the Ohio region feel that "their" 'Clare' is the "real" 'Clare' which is also from stock originally from Alec Gray. I grow and show hostas and can assure our readers that we do not have the corner on the market for confusion of plants and their correct names!! I am convinced the originator in some cases sent out different bulbs under the same name. Maybe like 'Xit' and 'Yellow Xit' we should have a "Georgia Clare" and an "Ohio Clare". They are both lovely and good growing miniatures. I will leave that to others more qualified than I to solve these puzzles.

I do know as a qualified ADS Judge that I am extremely careful when judging miniatures not to declare that a particular cultivar is "not" what the exhibitor thinks it is. I wish all judges who judge miniatures would be more thoughtful and careful in their judging.

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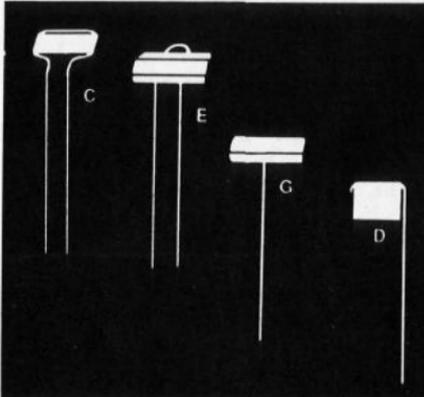
by Kirby Fong

Exhibition winners: the one miniature which has won more top awards for me is Roberta Watrous' lovely 'Flyaway'. It has been so slow to increase I have been unable to enter a vase of three in a show but hopefully, some day I will. The public adores this delightful and delicate multiple bloom and so do I. Others which have been top winners for me are: 'April Tears', *bulbocodium* (various), 'Clare', 'Demure', 'Fairy Chimes', 'Hawera', 'Pequenita', 'Pixie's Sister', 'Segovia', 'Sundial', *triandrus sub. triandrus*, and 'Xit'. If I can get some of my newer miniatures to stabilize and multiply, I expect 'Angel's Whisper' and other new Rod Barwick (Glenbrook Farms) miniatures as well as some of the Havens' new ones to be show stoppers. I also look forward to some of Mary Lou's new lovelies to continue to be wonderful winning flowers when they are generally more available. Bob Spotts and Bill Pannill have new miniatures which I look forward to growing and showing. Incidentally, those miniatures which some have questioned as to size grow like miniatures for me in this climate. Of course, most of my standards look like miniatures or intermediates compared to those grown in kinder climatic sections of the country.

It will be obvious to the reader that I haven't learned all the secrets of growing miniatures. I do find them to be challenging to grow and to show. I continually learn from my mistakes...1994 taught me to buy a good magnifying glass for future shows. I love to bring the "rejects" into the house and create miniature flower arrangements...They are so lovely to view up close. A few miniature bulbs planted in a bonsai pot make a wonderful accessory planting for a "Shohin" bonsai (one which is under 12 inches in height).

Usually I am repotting my bonsai when I should be hybridizing miniatures, so my few efforts have not yielded good results. Maybe one day!

Try growing and showing miniatures...They are lovely and fun.



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