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Front Cover: 'Emerald Empire' 2W-GWW, First in Class, Tag Bourne, Columbus Show. *Tom Stettner Jr. photo*

Back Cover: John Reed takes Beth Holbrook on a tour of Oakwood Daffodils. *Suzy Wert photo.*

Civil Unions in the Garden, Part 2

(See story page 153.)

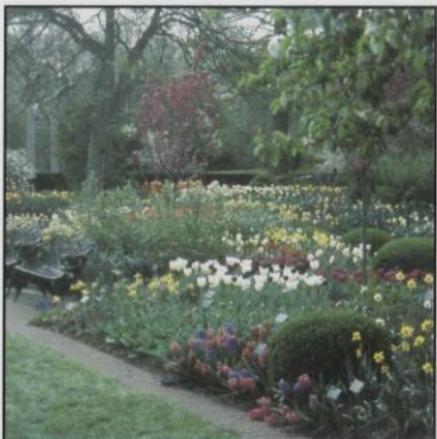
Jason Delaney photos at the Missouri Botanic Gardens



'Ceylon' 2Y-O and *Chionodoxa luciliae* 'Pink Giant'



Crocus, daffodil, and lily foliage—
successions of interest



Samuels Bulb Garden in mid-April



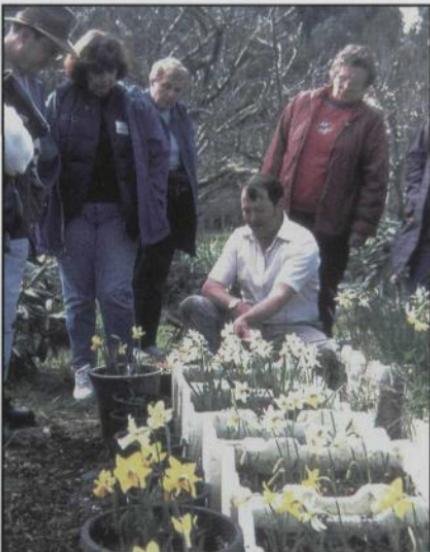
Lilies blooming mid-June where the daffodils flowered in spring.

Daffodil Wizards of OZ

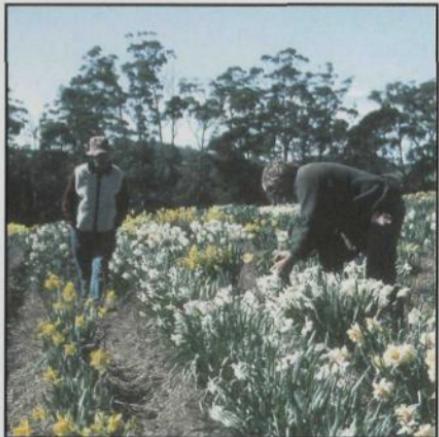
(See Story page 176.)



Jamie Radcliff with a trumpet seedling
Kirby Fong photo



Rod Barwick with visitors at Glenbrook
Kirby Fong photo



David Jackson in his field with a visitor
Tony James photo



Geoff Temple-Smith with his seedlings
Tony James photo

PASSING THE TORCH

Bill Lee, Journal Editor

With this issue, I announce my retirement from the editorship of *The Daffodil Journal*. Loyce McKenzie will assume the editorship with the June issue.

The first issue that I edited, taking the reins from Lee Kitchens, was March, 1977. Beginning with that issue, I took the *Journal* from the old technology of an outside typesetter, proofing galleys, pasting up dummies, and proofreading in several stages. Throughout my years as editor I have typeset all the articles and sent the printer one file for the whole issue, with everything in place. During that time Daffnet came into existence and digital photography forever changed the way photographic images are handled.

It has been an exciting and gratifying ride to serve the ADS and its members by producing the quarterly *Journal*. I have had the opportunity to meet many ADS members and I count many of them as dear friends. I urge all ADS members to take an active role in the society; the rewards in knowledge and friendship will exceed all expectations.

During my tenure, I have been blessed with enormous cooperation from so many ADS members. Rarely have I been refused when requesting an article from someone, and only then because of lack of time or knowledge. In fact, so many people have taken the initiative and asked, "Would you like a story about...?" Those who have posted interesting items on Daffnet or sent personal correspondence have also been generous in giving me permission to publish their efforts.

I deeply thank all those who have contributed so generously of their time and knowledge to help me fill 64 pages every three months. You know who you are, as do all the readers of the *Journal*. Special mention must be made of Tom Stettner Jr. and Kirby Fong for the many hours they spent each year taking high-quality photographs of show winners so that readers all over the world can see the latest in high-quality daffodils. I am counting on all contributors to be as generous when Loyce McKenzie begins her stewardship of the *Journal*.

Special thanks too, to Hurst Sloniker, Chairman of Publications, who has spent many hours each issue proofreading and copyediting every word in the *Journal*, making all of us look better.

With regret, I depart the *Journal*. However, I will remain active in the ADS and look forward to new challenges.

MEET THE NEW EDITOR: LOYCE MCKENZIE

Bill Lee, *Journal Editor*

Meet Loyce McKenzie who assumes editorship of *The Daffodil Journal* with the June, 2004 issue. Many of us saw Loyce's garden in Madison, Mississippi when we attended the 1997 ADS convention in Jackson. Mary Lou Gripshover says, "It was the first, and maybe only time, I saw a complete planting of Wister winners in one garden." Her garden now contains more than one hundred different Division 7 cultivars—no wonder she won the Throckmorton class in Asheville last year with her all-Division 7 entry.

The photograph of Loyce on page 152 shows her with her winning Throckmorton entry in Asheville last year. The Division 7 daffodils are:

Row 1: 'Work of Art' 7W-P, 'Indian Maid' 7O-R, 'Kasota' 7Y-O, 'Pu-kawa' 7Y-R, 'Roberta Watrous' 7Y-GYP.

Row 2: 'Avocet' 7W-YYW, 'Tender Moment' 7W-GYP, 'White Bird' 7W-W, 'Pink Angel' 7W-GWP, 'Joppa' 7Y-YYO.

Row 3: 'Fertile Crescent' 7YYW-YYW, 'Lemon Supreme' 7YYW-WWY, 'Golden Perfection' 7Y-Y, 'Oryx,' 7Y-W 'Perpetuation' 7YYW-W.

Loyce is well qualified to edit the *Journal*, as she has taught high-school English and coached the school's Academic Competition team that went to Nationals for eleven years. She still helps with the team. For 35 years she has also written a gardening article called "Gardening Glimpses" for a north Jackson weekly newspaper. In addition, she has compiled, written, and edited the ADS History, which will be unveiled at the 50th Anniversary convention in Washington next month.

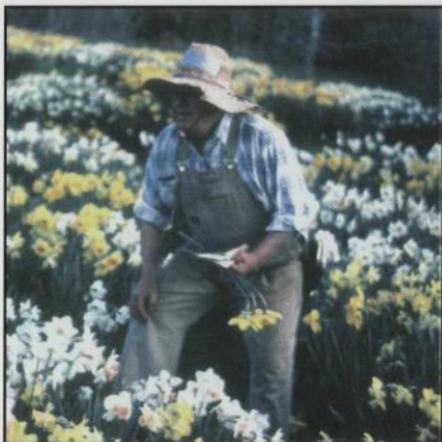
Loyce joined the ADS in 1967. She was the Show Reporter for fourteen of those years. She is also an ADS Silver Medal recipient, a judge, and a hardworking charter member of the Central Mississippi Daffodil Society. For several years she has served as ADS Historian and has contributed many articles to the *Journal*.

Daffodils are a three-generation activity for the McKenzie family. Husband Herman likes the pink-cups best. Son Kevin won the White Ribbon at the 1980 Memphis convention, and favors Division 6 daffodils and 'Erlicheer'. Granddaughter Ashley has won many Youth awards, claiming 'Rapture' and 'Pink Silk' as her absolute favorites.



Loyce McKenzie, new editor of *The Daffodil Journal*

(See story page 151. Daffodils in Loyce's winning Throckmorton entry at the 2003 Asheville National Show are identified in the story.)



Fred Silcock in his garden

(See story, page 176.)

Tony James photo



'Erlicheer' 4W-Y (1934)

3-Stem Historic Ribbon, Joe Hamm
Scottsburg Show

Tom Stettner Jr. photo

CIVIL UNIONS IN THE GARDEN, PART TWO

Jason Delaney, St. Louis, MO

With spring on its way and the post-daffodil season just after it, now is the perfect time to consider ways of enhancing your garden's beauty once the daffodils have finished. Part One of this story was published in *The Daffodil Journal*, March, 2001. Part Two deals with companion plants for daffodils which have proven successful in our displays at the Missouri Botanical Garden in Saint Louis. We are in USDA zones 5-6, with hot, humid summers and occasional rainfall and cold, wet winters with little snow, punctuated by frequent freezes and thaws).

Regardless of how many daffodils you have, when the flowers are gone the foliage all looks the same. There are no bold variegations or interesting textures, just green strap-like leaves that in a short while will turn yellow, go limp, fall over, and create an eyesore. It's easy to see why some people prematurely remove the foliage after flowering, rather than wait for it to ripen. And what's so wrong with that? Well, years of testing and trials have proven that natural maturation of foliage is crucial to a bulb's health and long-term perennialization; the plant harvests essential energy from its foliage, prolonging its life. Denying the bulb this opportunity will in time weaken it beyond recovery. But there is an attractive alternative to a bed of ugly-looking daffodil foliage.

The solution? Instead of removing the foliage, or tying or braiding it into Martha Stewart-esque renderings, add to the garden one or more types of other non-crowding complementary *companion* plants. These will be functional stewards to the daffodils, distracting our eyes from their maturing foliage and focusing them on something else, something flourishing. If well-planned, these companions will also act as reinforcements, lending elements of color, fragrance, and texture well before and long after the daffodils have climaxed. Plantings of other bulbs, annuals, and perennials among the daffodils create successive displays of multi-seasonal interest that will allow the maturation of foliage to go virtually unnoticed.

Considerations

The companions you choose for your daffodils will depend on many things. Consider the factors discussed in Part One: root space, water and nutrient requirements, longevity of both the plants themselves and their bloom times, and personal preference. Then consider your climatic environment. The laws of nature dictating hardiness often have the greatest influence in your selection. And something as important as the aforementioned factors combined, consider the maintenance requirements for the companions you choose. How challenging do you want this to be? Start

simply in order to see if your scheme is manageable. You can always increase the complexity of your plan later if you desire.

Suggested Companions

Bulbs: Believe it or not, daffodils are not the only bulbs inhabiting planet Earth. Bulbs (or *geophytes*, a term meaning bulbs, corms, and tubers) come in all shapes and sizes, blooming periods, growth habits, flower forms, and ranges of hardiness. Other bulbs are often the easiest companions, requiring (mostly) the same conditions. Try to use types that are hardy and perennial in your climate. Non-hardy bulbs that require deep spring planting and autumn lifting are best planted away from the daffodils, not with them. This ensures your daffodils remain undisturbed for as long as possible.

First, consider geophytes that bloom before the daffodils. These plants are often the garden's first flowers, heralding the arrival of spring. The many selections of snowdrops (*Galanthus*), crocuses (*Crocus*), glories-of-the-snow (*Chionodoxa*), and irises (*Iris*) are geophytes which will carpet the ground with their low yet mighty displays. They are readily obtainable, reliably perennial, and some of the easiest plants to grow. I especially enjoy green-tipped *Galanthus nivalis* 'Viridapice', and double *Galanthus nivalis* 'Flore Pleno', both often blooming through the snow. Purple *Crocus tommasinianus* 'Ruby Giant', creamy *Crocus chrysanthus* 'Cream Beauty', and striped *Crocus vernus* 'Pickwick' are three of our best, returning each year with increased performance. I can never have enough sky-blue *Chionodoxa forbesii*, or rosy-pink *Chionodoxa luciliae* 'Pink Giant', two superb naturalizers that in time create seas of color. And the glorious deep blue flowers of *Iris reticulata* 'Harmony' are, in fact, harmonious with the earliest golden yellow daffodils.

Following these bulbs will be the majority of the daffodils. If space allows, plant early, midseason, and late varieties together to extend interest, especially in mass plantings. Remember that it is possible to get six weeks—or more—of bloom from selected daffodils alone. Consult other daffodil enthusiasts and catalog descriptions for approximate blooming times (very early, early, mid season, mid-late, late, very late) to get the most from your display.

Accompanying and succeeding daffodils is the tulip, queen of the mid-to-late spring garden. Our perennial tulips (yes, these do exist) include the Darwin Hybrid Group, the Single Late Group, and the Lily Flowered Group. (Like daffodils, tulips are divided into divisions, based on style of flower and season of bloom, and are sold accordingly.) Three of my favorite tulips from the Darwin Hybrid Group are bright and bold 'Red Apeldoorn', gold and hot pinkish-orange 'Apeldoorn's Elite', and streaked and mottled 'Gudoshnik', a variety with no two flowers alike.

From the Single Late group are stately golden-yellow 'Mrs. John T. Scheepers', cream and yellow-flamed 'Sweet Harmony', and deep magenta-pink 'Renown'. 'Burgundy', a deep, clear purple with mottled foliage, is one of our best lily-flowered types. Look for the many hybrids of these recommended groups in bulb catalogs or garden centers this fall, and be sure to buy extra for cutting.

Late-spring blooming bulbs include snowflakes (*Leucojum aestivum* 'Gravetye Giant'), wood hyacinths (*Hyacinthoides hispanica*), ornamental onions (*Allium christophii* and *Allium* 'Globemaster'), stars-of-Bethlehem (*Ornithogalum magnum*), camassias (*Camassia leichtlinii* 'Blue Danube'), and glads (*Gladiolus byzantinus*, and most hybrids when planted deeply). The bulbs help carry the display to the end of spring when the garden takes on a new look. Also noticeable for the first time are emerging stems of a companion that has been lurking amidst the assorted foliage, eagerly waiting to seize the spotlight as the next best thing. Allow me to introduce the daffodil's favorite companion bulb: the lily.

Up to this transitional point your garden's hardy, spring-flowering bulbs have been somewhat ephemeral: they emerge, flower, and go dormant, all in a relatively short time. The majority of lilies, nonconformists that they are, will be different. They emerge mid-spring, continue growing until flowering, then remain green until fall, when their foliage succumbs to frost, though not before turning yellow or maroon, adding interest to any display. Their exotic-looking leafy stalks enhance the garden's architecture with a wonderful element of line. And need I mention their flowers that provide not only luscious color but also the most exquisite fragrance, from late May through possibly early September? I use lilies wherever I can, and as permitting, always with the daffodils.

Lilies, too, are assigned divisions. The four divisions that do exceptionally well in our displays are Longiflorum-Asiatic (L.A.), Asiatic, Trumpet, and Orienpet (O.T.—i.e., Oriental x Trumpet), each group blooming in that order with ample overlap, beginning in late May and finishing mid August.

The L.A. and Asiatic types are typically shorter, growing from one foot to four feet; they don't require staking, and offer the greatest color range, though they have only a slight, if any, fragrance. All-white L.A. 'Royal Lace', lavender-rose and orange-pink L.A. 'Royal Sunset', and Asiatic 'Granny', an earlier yellow and pink, and 'Shirley', a later pink and cream with up to thirty flowers per stem, can't be beat. These four lilies are so good they might make you second-guess your passion for daffodils. Because of their stature L.A. and Asiatic types are best suited for the front and midsection the display.

Trumpet and Orienpet lilies are my personal favorites. Aside from their intoxicating fragrance both groups grow very tall, commanding attention from afar. (Being tall myself I especially appreciate not having to bend over to enjoy their beauty and scent.) Deep purplish 'Midnight', greenish-white 'Green Magic', and creamy white and pink 'Easter Morn' are three Trumpet lilies that reach seven feet tall or more in our displays. Their only disadvantage is that they often require staking, but it's so worth the effort. The O.T. lilies, a breeding triumph combining the fragrance and look of the Orientals with the hardiness and heat tolerance of the Trumpets, end our lily season with a bang. The entire plant, from the enormous bulb to the tall, tree-like stem carrying numerous waxen flowers, is one of the toughest in our display. 'Scheherezade', a deep red with a cream edge is one of the best. 'Sublimity', a clear pink and butter yellow blend, simply glows. For some drama consider 'Silk Road' with its stunning deep rose-purple and white flowers atop six-foot stems. An added bonus is that the stronger stems of O.T. lilies rarely require staking. Plant these two lily types toward the rear of the display unless you don't mind an enchanted forest of lilies inhabiting your entire garden.

Annuals: Though later blooming bulbs abound, I rarely add more to what I've already grouped together in various combinations from the suggestions above. Underground overcrowding becomes an issue with too much in one location, and with lilies still physically present the site is at least visually filled for the remainder of summer and fall. But lily foliage alone isn't exactly exciting, and bulb plantings devoid of companion lilies certainly need something. At this point reliance on other plants to quickly and effectively fill gaps and opening spaces is paramount. This is where annuals come to the rescue.

Whether started from seed, rooted cuttings, or purchased in growth at garden centers, annuals exist in great numbers and diversity throughout spring, summer, and fall. Most important is their shallow and strictly annual root growth that rarely, if ever, competes with the bulbs buried beneath. With too many individual selections to suggest I will keep to the different types that we grow. Whatever your preference, use annuals with wild abandon—just be sure to choose types that don't require excessive watering.

Autumn-planted pansies (*Viola*) are the first of our spring annuals to flower, exploding into bloom in late winter and carrying their exceptional non-stop show through spring. Next to flower, planted after the threat of freezing weather, are hybrid selections of toadflax (*Linaria*), snapdragons (*Antirrhinum*), carnations (*Dianthus*), stock (*Matthiola*), and alyssum (*Lobularia*). Collectively these cold season annuals are

shorter and work very well around the bases of flowering bulbs, providing a steady stream of color and sweet fragrance.

Overlapping and following the early spring annuals are the bolder, taller, and more heat-tolerant bachelor's button (*Centaurea*), larkspur (*Delphinium*), biennial sweet William (*Phlox barbatus*), love-in-a-mist (*Nigella*), and English asters (*Callistephus*). Superb visual companions to late-season bulbs, these also make excellent cut flowers, rewarding you with beauty inside the home as well. Yet another perk, these old-fashioned charmers often seed themselves about the garden, providing renewed interest year after year.

Spring annuals eventually become exhausted and need replenishing, ideally from something with interest extending through fall. At this time you can elect to go with a simple and conservative planting or go crazy and live a little, tossing all reservations to the compost heap. It is very easy to utterly and completely lose yourself in the incredible selections of summer annuals at garden centers and in specialty catalogs, where the urge to splurge should be strongly exercised.

Salvias and sages (*Salvia*), sun and shade coleus (*Solenostemmon*), zinnias (*Zinnia*), spider flowers (*Cleome*), cosmos (*Cosmos*), cock's comb (*Celosia*), sweet potato vine (*Ipomoea*), and ageratum (*Ageratum*) are just some of the many common summer annual companions we use in abundance. Newer annuals available include Persian shield (*Strobilanthes*), bat flower (*Cuphea*), angel mist (*Angelonia*), million bells (*Calibrachoa*), Joseph's coat (*Alternanthera*), and monkey flower (*Torenia*). These are just as wonderful as the old standbys and are quickly becoming mainstream. Later blooming annual fall asters (*Aster*) and mums (*Chrysanthemum*) carry the display to the very end when once again pansies are planted and the cycle repeats.

Perennials: In my displays the herbaceous and woody perennials tend to take the back seat. There are many wonderful perennial companions available—I often dream of using them—but for my needs (multi-seasonal display rotations) they are not as handy and rarely become established before getting replaced with something else. Fortunately, I have two small areas that remain undisturbed. The first, a simulated wooded area, is in strongly filtered shade during summer and fall. The second, a wild area, is in full sun.

For the wooded area I use assorted ferns (namely Japanese painted fern (*Athyrium*), foamflower (*Tiarella*), pig squeak (*Bergenia*), Lenten rose (*Helleborus*), Taiwan lily (*Rhodea*), bluebells (*Mertensia*), perennial sweet William (*Phlox divaricata*), hostas (*Hosta*), Solomon's seal (*Polygonatum*), and astilbes (*Astilbe*)). Selections of these plants grow very well among spring, summer, and fall-flowering bulbs, creating a very

cool display. Even when the flowers are few this assortment provides great textural effect.

The sun worshipers in the wild area find themselves situated in very dry conditions year-round, and they thrive. This is especially good for their many host species of spring-flowering bulbs that require a strong baking during summer dormancy. Selections of tickseed (*Coreopsis*), blue beard (*Caryopteris*), candytuft (*Iberis*), catmint (*Nepeta*), guara (*Guara*), perennial salvias and sages (*Salvia*), balloon flower (*Platycodon*), flax (*Linum*), and ice plant (*Delosperma*) all work very well with the often tiny bulbs such as species daffodils, tulips, and autumn crocus.

Another perennial companion is the permanent groundcover. Naturalized bulbs can be found growing through dense mats or colonies of ivy (*Hedera*), euonymous (*Euonymous*), lily turf or monkey grass (*Liriope*), myrtle (*Vinca*), and pachysandra (*Pachysandra*). Of these, monkey grass seems the least conducive with its ultra-tight crowns, though here and there a handful of persistent toughies of landscape worth ('February Gold', 'Ice Follies', 'Flower Record', 'Sir Watkin', and 'Carlton') grow unfazed.

Summary

Allowing the foliage of your daffodils to mature in an aesthetically pleasing yet natural manner—ultimately promoting their increased presence and longevity in your garden—requires using companion plants. Proper evaluation and consideration of cultural, climatic, and maintenance factors are necessary to select the appropriate companions for your daffodils. Using a combination of spring, summer, and fall-flowering bulbs, annuals, and perennials will allow the daffodils to properly mature while providing your garden added interest throughout the growing season.

Daffodils in Florida: A Field Guide to the Coastal South

by Linda M. and Sara L. Van Beck

Meet the authors, preview the book, and celebrate the 10th Anniversary of the Florida Daffodil Society at the American Daffodil Society Convention, April 16th, 2004.

SOME THOUGHTS ON THE INCIDENCE OF VIRUS IN THE GENUS *NARCISSUS*

David Karnstedt, Silverton, OR

[NOTE: This article was first published in 1985 in the *New Zealand Daffodil Bulletin* and *The Newsletter* of the Northern Ireland Daffodil Group under the title "Some Thoughts on Virus." It has been updated with additional information for publication here.]

Introduction

At the outset, I must emphasize that the thoughts expressed below are not the result of controlled experimentation but simply reflect the experience I have gained from an intimate association with the genus *Narcissus* over five decades as grower, exhibitor and breeder. The empirical conclusions are my own, but some material published since corroborates many of them. (1, 7)

With rare exceptions, flowering plants in nature reproduce sexually by forming and dispersing seed. That trait evolved to fulfill the biological demands of a species. Not only does seed contain the genetic material of a species and, therefore, its chance for survival via evolution, but it also assists a plant in avoiding some of its non-motile parasites, including viruses. Current thought holds that seed is usually free of virus, enabling a future generation of the plant to escape the disease that may be present in the parents. However, there are data indicating this may not always be true: "Some narcissus viruses (ringspot) are seed and/or pollen-borne."(2, 7) An analogous situation can be found with orchids where "some less common orchid viruses such as potyviruses can be transmitted by the seeds."(5) Of the viruses that infect *Narcissus*, at least three are potyviruses, the most important one being *Narcissus* Yellow Stripe.(3) "In most seed-transmitted viruses, the virus apparently comes from the ovule of the infected plant. However, in several reported cases, the virus found in the seed seems to come just as frequently from the pollen fertilizing the flower."(6)

As a clone, the named hybrid daffodil is asexually propagated to increase its numbers. Any virus present in a given bulb is passed to its offsets and, through subsequent division, in an unbroken chain to the entire stock derived from an infected bulb. Obviously, it's just a matter of time until the stock of any daffodil clone becomes infected with one or more of the viruses to which the genus *Narcissus* is prone. This usually occurs at the commercial level.

It is my contention that daffodil fanciers (in particular, those who cut a great many flowers for exhibition), growers of commercial cut flower

stocks, and those in the dry bulb business are degrading their stocks by systematically spreading viruses among their plants. In addition, commercial dry bulb grower/retailers, in following the traditional practices of the trade, have been systematically and unwittingly selecting for virus in their stocks. How can we account for this startling assertion?

How viruses spread in daffodils

Like many living organisms, a daffodil plant can be infected with a single virus and show no symptoms. Symptoms can range from nothing observable to the distinctive necrotic flecking of both leaves and bloom. Sometimes, the virus remains quiescent. At other times, characteristic symptoms are obvious and diagnostic, e.g., "yellow stripe." In general, diseased bulbs tend to produce lax, unhealthy-looking foliage, smaller and fewer flowers of inferior substance and faded or mottled color, and fewer, smaller bulbs at harvest. Although I have no experiment-based proof to substantiate it, it is my belief that bulbs weakened by virus also develop an enhanced susceptibility to basal rot (*Fusarium*) and some other pathogenic fungi.

Extensive research in many genera reveals that various viruses can be spread by certain insect vectors (winged aphids and leafhoppers) and lower animals (nematodes and mites).^(6, 7) In normal feeding patterns, these vectors transfer bits of plant sap containing the particles of virus, at random, from infected to uninfected plants. I believe that transmission by these vectors is a function of temperature (more frequent in mild climates), the relative occurrence of infected host plants (both *Narcissus* and other genera), and, of course, population levels of potential vectors. It is probably also related to cultural conditions. Weed growth can attract and shelter insects. The large narcissus fly may contribute to the transference of the bulb and scale mite.

A frequently recommended method to deal with motile sucking insects, such as aphids and leafhoppers, is to treat the plants with either a contact or systemic insecticide to prevent feeding and transmission. For a treatment to be effective, however, any chemical barrier has to affect the insect *before* it feeds. Once the feeding stylet is inserted into the plant cell, transfer of viral particles can often occur, negating the application of the "preventive" chemical. Interestingly, some success in discouraging feeding has been obtained with the application of a thin film of horticultural oil to the foliage.

Virus infection in commercial stocks

When a given daffodil plant shows evidence of infection with virus, we have always been told to destroy it to prevent spread of the disease to uninfected plants. This is sound advice, of course, but what is the outcome of such action in the average collection? My own experience when

I first started out is probably typical, and it discloses the surprising problem mentioned earlier. I well remember my first big bulb orders and how I had looked forward through the long, very cold, and snowy Minnesota winter to the beauty they promised in spring. I was understandably distressed when I found myself destroying much of what I had purchased that previous autumn because the leaves showed unmistakable evidence of virus infection: yellow stripe, mosaic, and, later in the season, silver streak. When notified of the situation, suppliers readily offered refunds or replaced the affected bulbs. Unfortunately, the replacements were no better than the originals.

After several years of this, a number of things became obvious:

- The stock of any daffodil grown commercially for any length of time is infected with virus.
- Daffodil collections, whether private or commercial, contain many plants with viral infections that often are not obvious (asymptomatic). These plants can act as the source of virus, a situation sometimes referred to as the "Typhoid Mary" phenomenon.
- Destroying infected bulbs was, in effect, depriving me of the very thing I wanted most—the daffodil flowers of spring.

My attempt to obtain virus-free stock by buying bulbs upon the introduction of newly registered clones turned out to be not only very expensive but also only marginally successful, leading to the same conclusions.

How unthinking practices spread viruses

Consider, for a moment, some conventional wisdom. We have always been told by the experts to cut the stems of daffodil blooms with a sharp knife, never to cut into the white portion of the stem, and never to pull the scape from the plant. Using a knife is, I feel, unquestionably responsible for much of the spread of daffodil viruses. By cutting more than one stem with the same instrument, we create the classic mechanical transfer for introduction of virus into plant tissue. An insect may have begun the process, but it is man who is bringing the process to its devastating conclusion.

In my opinion, only a very small number of daffodils are inoculated, at random, with virus by natural vectors, although that depends on a range of variables.(1) I am convinced that the wholesale degradation of stocks is the result of human activity. Mechanical transfer, in the form of the cutting instrument used to sever the stem and moved at random from plant to plant without being sterilized (or being inadequately sterilized) between cuts, is responsible for the inoculation of uninfected plants with virus. The problem is so severe with several growers that I no longer buy bulbs from them. Doing so is pointless, since the badly infected bulbs

must be destroyed the following spring, and the replacements are no better. I have often received shipments from some breeder/growers where it was obvious that a secondary offset had been separated from the main bulb by cutting it away to form part of the replanting stock. I rather doubt the knife had been sterilized between cuts.

Here is a non-daffodil example to substantiate my point. Commercial growers of cut-flower orchids have long understood the ramifications of mechanical transference of the two most prevalent orchid viruses among their plants. Both are readily carried by cutting instruments and have no nonhuman vector.(3) Therefore, it is common practice to cut blooms from their virus-free plants with a single edged razor blade, used *one* time and discarded (unless the blades are stainless steel, autoclave sterilization for later reuse hasn't proven practical). Workers exercise particular care to prevent sap from accumulating on gloved fingers and accidentally inoculating another plant. By the same token, it is not difficult to understand how stocks of daffodils grown for cut flowers rapidly become totally infected when, each spring, thousands of stems for market can be cut with the same instrument.

Many years ago in England, the clone 'Grand Soleil d'Or' was freed of its debilitating virus diseases. Multiplied under controlled conditions, quantities of the resulting virus-free bulbs were returned to the Isles of Scilly to be once again grown for cut flowers. It has since become apparent that much of that originally virus-free stock is again becoming infected. If one accepts standard reasoning—random infection by insect vectors—how has the disease spread so rapidly and so soon? The answer, I submit, lies in the fact that these are bulbs grown for production of cut flowers. Workers using the same instrument to cut scapes from the thousands of bulbs are inoculating the entire stock with virus from the few bulbs that have been randomly infected by insect vectors. It would require only a few years to reinfect acres of bulbs.

Serious exhibitors are doing the identical thing to their collection when the same instrument is used to cut promising scapes for the show bench. Even though these growers may persistently rogue out all plants showing symptoms of virus, they are nonetheless passing sap from asymptomatic infected plants to plants as yet uninfected. Whether one is using a knife, shears, or, in the case of one well-known breeder, a thumbnail left intentionally long during the bloom season, this mechanical (rather than insect) vector is largely responsible for the rapid spread of virus. Avid exhibitors are particularly vulnerable to this danger, since it is they who cut all scapes having merit for the show bench.

The commercial daffodil hybridizer/grower represents a similar, yet subtly different, aspect of the problem. Like daffodil hobbyists, these

people also cut their flowers—whether for their own show bench effort, for seasonal displays on-site or at shows, or for cut flowers—using the same instrument (unsterilized or improperly sterilized) and moving from plant to plant within a stock or between stocks. When we consider these facts, as well as some traditional practices of the trade, the magnitude of the problem becomes apparent.

In the Netherlands, machinery was developed some time ago to cut a daffodil bulb into segments (analogous to an orange), in a process known as “cutting” or “chipping.” These segments are subsequently incubated to produce bulblets on the basal plate between the scales. After incubation, the bulb segments with their developing bulblets are planted out to grow to harvestable size. The cutting process uses a much larger piece for propagation than does twin scaling, resulting in higher rates of survival, easier handling, and shorter time to marketable bulbs. The cutting device used to section each bulb is not changed between bulbs, of course, although it may be changed between stocks of the same clone or different clones. Nonetheless, while this process represented a major step forward in productivity, it is also responsible for the spread of virus in daffodils multiplied by this process.

The broader effects of virus infection

When bulbs from the cutting process became available in commercial quantities some fifteen years ago, I bought a considerable number of stocks to augment the few bulbs of various stocks that I had from natural multiplication. These bulbs were planted on land I formerly leased in the Coast Range near the Oregon coast. In general, this area is somewhat warmer and much wetter than my present location on the east side of the Willamette Valley, the valley in Oregon between the Coast and Cascade ranges. Very early on at this lease, the foliar fungus disease, “fire” (*Botrytinia polyblastis*), rapidly became a major problem. In combating this problem, I was struck by the marked difference between the cutting-multiplied stocks and stocks of the same clones derived from natural multiplication. Even when grown next to each other, the former were always heavily affected while the latter remained unaffected or only marginally so.

The situation is analogous to certain viral infections in humans in which the infecting virus lies dormant or is relatively inactive but may reduce the host’s ability to resist further infection. An example is the chicken pox virus that infected most children until inoculation became available. Even though the symptoms of the disease disappear, this virus remains in the body, occasionally to reappear later in life (usually after stress of some kind, particularly to individuals with an inadequate, original immune response) in a different form known as “shingles.”

Studies have shown that virus can exist in a clone as a single infection, or in clusters of several different viruses infecting the same clone simultaneously. (1, 2, 5) As with the human virus mentioned above, infection with a single virus or, usually, multiple viruses often weakens a plant to the point where it becomes susceptible to an opportunistic, secondary infection. In the genus *Narcissus*, this often manifests itself in a high susceptibility to various fungi, particularly *Fusarium* rots of the bulb. It is often said that a given clone is no longer grown because of its susceptibility to basal rot. This occurs after the clone has been commercially available for some time and most likely has contracted several of the daffodil viruses. That cluster infection weakens the bulb to the point where a debilitating secondary infection destroys it. This situation is relatively common with white clones in Divisions 1 and 2 and most reverse bicolors in the same divisions. There is probably some genetic component involved, since clones in Division 7 (Jonquils) and Division 8 (Tazettas) can often be obviously infected but grow on in spite of basal rot. (1)

Daffodil growers should learn to recognize what I believe to be the most important non-classic symptom of virus infection: lax foliage. Over the years, I have grown and observed many daffodil seedlings, individually and as small stocks. In these virus-free daffodils, the foliage is always stiffly upright throughout the growing season. I have often found lax foliage—with or without accompanying foliar mottling or flecking—to be symptomatic of virus infection. If you have any doubt about a given plant, examining a leaf back-lighted by the sun will usually reveal the indistinct mottling characteristic of plant virus disease. Although the correlation between lax foliage and presence of virus isn't infallible, since trumpets and many jonquils retain a certain clarity and erectness to their foliage in spite of virus, it is certainly a useful "first-pass" evaluative tool.

Bulb grading and infection

The probability of the stock of a clone becoming partially or wholly infected prior to naming, registration and introduction is remarkably high, for the reasons outlined above. I have, for example, seen all the bulbs in small stocks (3 to 6 bulbs) of promising seedlings infected. For this to occur, it is obvious that the original bulb had to have been inoculated with the pathogen prior to separation of offsets.

In the instance of the original bulb becoming infected prior to separation of offsets, it is easy to understand how the entire clone becomes vi rus ed. Let's assume for a moment, however, that a stock of 10 to 15 bulbs of a named clone prior to introduction is clean, and that a few bulbs, at random, become infected by insect or mechanical transfer. How

does the stock seem to become totally infected so soon thereafter? And how do we account for the early deterioration with virus of many stocks of the newer daffodils so prized as show favorites? Inoculation by cutting with the same instrument is part of the answer, of course, but the real reason—quite obvious and simple—has been overlooked because it is buried in the traditional business practices of the trade.

The conscientious commercial growers (and I don't mean to imply that these don't exist), when filling orders for their product, have traditionally selected only the best, healthiest-appearing bulbs. The remaining bulbs—smaller ones, chips, offsets—are retained and replanted to constitute the propagation stock of the clone. Now, one effect of virus infection is that the bulb produced at harvest is *smaller* than an uninfected one. In addition, virus-infected bulbs are probably more likely to host fungus conditions of the outer scales that produce a scabrous (rough), unhealthy-appearing bulb. These bulbs would most likely not be used to fill an order either but might be discarded or, most likely, replanted. Therefore, by consistently filling orders with the largest, healthiest-appearing bulbs—in effect, the most likely to be virus-free—and planting back the smallest bulbs and pieces—the most likely to be virus-infected—the commercial grower is systematically selecting for the incidence of virus in a stock! There appears to be no other logical explanation for the rapid deterioration I see far too often in recent introductions of show daffodils.

Potential for infection during pollination

There is yet another possibility to consider in the way daffodil viruses are spread, and this one is probably the most insidious of them all. Daffodil breeders live for that high-quality first bloom on a seedling and I don't know of one who isn't itching to spread some pollen on the waiting stigma of that first bloom! Both John Hunter and I have noticed a more than casual incidence of virus in second-year flowered seedlings that had their first bloom pollinated. The only variable to account for the occurrence of virus that seemed consistent from seedling to seedling is pollination of that first bloom by a named clone. The probability that that commercially available clone was virused is very high. As a group, reverse bicolors seem particularly prone to this breeding event, most likely because there are so few fine examples to use as parents and they're mostly older, named clones. Thus, we believe virus is being introduced into the virus-free seedling in some way through the pollen (on the surface of the cell, perhaps) or in the cellular debris accompanying the pollen. (4, 6) This is counter to the prevailing belief that "pollen" is free of virus, but we are unable to account for what we see in any other way.

Importantly, when a fine seedling blooms for the first time, you must be extremely careful to avoid pollination of that bloom (intentional or

otherwise), no matter how much you might want it. Grow that selected seedling for two years to have several bulbs available, one of which is never to be pollinated and should be grown off the ground in an insect-proof shelter to form the basis of a healthy foundation stock.

Moreover, when working with seedlings, it is very important *not* to move back and forth between named clones and those seedlings! There is a significant possibility that virus from the named clones can remain on your fingers. Although many hybridizers use some form of gel cap to complete pollination, there is always the possibility again of getting virus on the cap and on your fingers, since, if your fingers are as large as mine, one often has to tear the corona to gain access to the stigma. The best method for working with seedlings is to transfer pollen from the donor seedling to the capsule seedling via an anther held in forceps or a hemostat. You could, of course, carefully remove the anthers and, when dry, store the pollen in a gel cap and use that pollen elsewhere in the collection. Also, it would seem prudent to periodically sterilize your pollinating tools.

It would be easy to consider the problem hopeless, since to date there has appeared no cure for the daffodil viruses. However, if we are willing to discard conventional wisdom and approach the problem from a wholly different perspective, the prognosis becomes quite promising.

It is sensible cultural practice to continue roguing virused plants as they appear, particularly those infected with yellow stripe, the most debilitating daffodil virus. If you wish to keep an infected clone, isolate it some distance from your "clean" plantings. It's disconcerting, I realize, but it's probably wise to assume that all daffodil clones currently available are infected with virus and act accordingly. "Because control of virus diseases is only possible by preventive rather than curative measures, deep knowledge of virus entities and ways to detect them is instrumental for their control."(6)

Infection through cutting scapes

Undoubtedly, the most important thing for any grower of daffodils to bear in mind in order to restrict the spread of virus diseases is the admonition, *never cut more than one scape with the same unsterilized instrument*. Methods for sterilizing cutting instruments are several and varied. Dipping the cutting instrument in alcohol (e.g., ethanol) and flaming it is a commonly used method by many plant growers. Use of this method requires that the instrument be submerged in the alcohol to permit denaturing the protein coat of the live virus. Subsequently flaming (i.e., igniting the residual alcohol on the blade and allowing it to burn off) the blade coagulates the protein coat killing the organism. For obvious reasons, use of this method requires one to be very careful! Bleach solutions

(1 part 5% household bleach to 9 parts water), while also effective, require an hour residence time for the submerged cutting instrument to become sterile. Tri-sodium phosphate requires an even longer residence time, at least 24 hours. Bleach and, particularly, tri-sodium phosphate, are corrosive solutions and will ultimately pit even stainless instruments, rendering them more difficult to sterilize. While the bleach-sterilized instrument can probably be used to cut stems without rinsing, use of a tri-sodium phosphate solution will require the instrument be rinsed with water prior to use. Supposedly, dipping instruments and gloved hands in milk has been found to reduce live virus and is commonly used by greenhouse tomato growers in the Netherlands.

While relatively simple and effective alternatives to autoclaving exist, they are not practical for general use by either hospitals or medical practitioners. For them, autoclaving remains the method of choice to guarantee instruments free of virus. However, successful though it may be for sterilizing instruments, autoclaving is probably not practical for the daffodil grower.

For a small collection, use of a spring-loaded device dispensing single-edge razor blades one at a time might be practical. Certainly, one-time use and disposal of a razor blade would be much cheaper than assuming the risk of infecting a \$100 show daffodil by cutting the scape with the same knife used to cut others.

Really, though, there is a simple solution to the problem that others and I have used over the years and have found to be effective and without damaging side effects. It flies in the face of conventional wisdom, however: what I usually do is pull the stem from the plant. Often, because the stems are so turgid at flowering time, they readily snap away. There is, however, the danger that sap may accumulate on the fingers and be transferred to a plant through the surface of the broken stub. One can feel the tissue of the stem stretch as pressure is applied, but it quickly weakens and the stem snaps free, usually in the "white" part. Again, contrary to standard advice, I have found this portion of the stem to take up water just as easily as any other, and I have exhibited and won blue ribbons, even after lengthy refrigeration, with blooms so "picked." I've encountered only one small problem with this method: the stretched tissue at the end of the stem has a tendency to split and curl during, or after, the flowers are hardened. The stem can easily be re-cut to eliminate the curl, either before hardening or just prior to placement on the show bench.

The obvious problem that you might fear with this method, damage to the plant, just has not happened. Indeed, the truncated stem often continues growing after the scape has been removed. It's a variable trait and cultivar-dependent, but I've seen the truncated stems of 'Stratosphere'

continue growing to half the height of the foliage. I seldom lose bulbs, and certainly none that I can specifically relate to pulling scapes rather than cutting them. Realistically, however, it may occasionally cause problems under conditions of excess moisture and warmth. Pulling scapes is certainly to be recommended, particularly when one considers the alternative: wholesale degradation of a collection through viruses transferred by using the same instrument (or an inadequately sterilized instrument) to cut blooms, or the unwieldiness inherent in the use of many instruments.

Conclusion

I strongly believe that the hybridizer/grower who sells dry bulbs of their (or another's) introductions must be willing to assume responsibility for the health of a stock. These growers must remain ever cognizant of the dangers of virus inoculation through their growing, cutting, and propagation practices. With respect to hybridizers, I don't think it can be emphasized too strongly that extreme care must be exercised with the first bulbs of high quality seedlings selected for multiplication. In this instance, a very effective form of insurance is twin scaling. The *first* available round (a round contains the maximum ratio of bulb volume to basal plate area) of a selected seedling should be twin scaled. Assuming attentive control of the entire process, in particular sterility and moisture content of the incubation medium, it's foolproof. The advantage to twin scaling a seedling this early is that you will have an additional 20 to 40 virus-free pieces of the clone to work with. Aside from the obvious benefit of having a meaningful stock to evaluate in a time frame much shorter than usual, you have greatly reduced the probability of a stock becoming totally infected with debilitating virus.

The first allegiance commercial growers must have is to themselves—and the health of their stocks. Without healthy stocks, they are effectively out of business. To that end, then, *they must retain the biggest and healthiest-appearing bulbs as general propagation stock*, even if that means physically marking the best-looking plants during the growing season to reserve them as propagation stock. Obviously, if a given bulb becomes virused (and therefore smaller), the probability is that it will be removed from the stock one way, or another. Should a customer receive a bulb whose growth the following spring displays characteristic foliar symptoms, it is far better to graciously replace it than to put an entire stock at risk by continuing to operate under the self-defeating traditional practices of the trade. This suggestion is not as callous as it may appear on the surface; in reality, it is in the best interest of all concerned. Under the suggested regimen, the probability the replacement bulb will also be virused is rather low—and that is certainly not the case now. If these

suggestions are accepted and implemented, I can see no reason why the viable life of a given clone cannot be extended by many years.

Growers must understand that what represents value to the knowledgeable buyer of daffodil bulbs is *the assurance that they will be able to obtain disease-free bulbs*. There must also exist the clear assurance that any replacement will be with clean stock.

Having said all that, I am sure the question arises: "Does it really make any difference?" Yes and no. No, it's not going to make any difference for the gardeners buying some daffodils and tulips in a big-box store to line out along their driveway, or for the home gardener planting some daffodils here and there about the landscape. However, when those gardeners become more interested in daffodils and start adding to their collection, then, yes, it does matter, and as the collection grows, it becomes even more important. Finally, it is vitally important to the hybridizers, since new daffodils originate with them. It is these specialists, particularly if they are also involved with a commercial enterprise, who must be ever vigilant to ensure the continuing availability of virus-free material.

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LINE BREEDING, INBREEDING, AND MORE

Leone Yarborough Low, Yellow Springs, Ohio

The wonderful daffodils that grow in our gardens, grace our show benches, and serve as seedling parents for those of us who hybridize them are the result of more than a century of careful selection. Those who followed the early growers built on their work by using their improved flowers.

Although hybridizing plants, in particular daffodils, differs substantially from animal breeding, many of the same approaches are valid. The goal of a cross or series of crosses should be to improve one or more characteristics of the progeny relative to the parents.

Line breeding

Line breeding is usually accomplished by studying pedigrees and observing that the potential parents have some common ancestor(s) with desirable characteristics. It is also important that the actual parents do not have faults in common. It is possible for good or bad recessive qualities of the common ancestor to reappear. Also, when crossing excellent parents, one would like the progeny to be distinct from them in the case of daffodils and to keep the existing good qualities of the parents.

The late John Lea used line breeding extensively. One example of this was his excellent cultivar 'Pol Voulin' 2 W-P, which won many best bloom awards. A line-bred Toty de Navarro 1962 cross produced a number of excellent 2 W-P seedlings. His famous neighbor, John Lea, was so impressed by them that he used the pollen of one (or two) of them to produce the award-winning pinks 'Dailmanach' and 'Pol Dornie'. The de Navarro seedlings had historical daffodil 'Rose of Tralee' and its pod parent 'White Sentinel' on its pedigree more than once, as did 'Kildavin', the pod parent of 'Pol Dornie'. In fact, the Rev. G.H. Engleheart's 2 W-Y c.1915 'White Sentinel' occurs on the pedigree of 'Pol Voulin' eight times, no closer than four generations back.

The pedigree of 'Inverpolly' 2 W-W, the pod parent of 'Dailmanach', is 'Easter Moon' 2 W-W x 'Omeath' 1W-W, which also illustrates line breeding. Three historic daffodils are in the pedigree of both parents of 'Inverpolly'. 'Quartz' is a great grandparent twice. 'Naxos' is a grandparent and a great-grandparent. Pre-1887 1W-W 'Madame de Graaf' was on 'Inverpolly's pedigree seven times! The parentage of the pollen parent, 'White Sentinel', is unknown. Perhaps genes from 'Madame de Graaf' are also lurking back in its parentage.

Even without that supposition, we have 'White Sentinel' in the pedigree of three of the four grandparents of 'Pol Voulin', and therefore in both parents. In this case, two of the grandparents are siblings. Had these

siblings been the same seedling, the cross would be called a half-sib mating. Incidentally, I've found both types of crosses to be useful in obtaining very nice reverse bicolors

Inbreeding

You probably noticed that the parents of 'Pol Voulin' are first cousins. Most of us would consider that type of cross to be inbreeding because the parents are closely related. However, some consider parent/child, uncle or aunt/child, or sibling x sibling (a full-sib mating) to be the inbred crosses.

Half-sib crosses have a common, usually outstanding, grandparent and are not unusual in plant and animal breeding. That type of cross can be used to fix or to recover a wanted trait, such as reverse bicolor or cup length.

Note that daffodils and many other plants are hermaphrodites. This allows types of crosses not available to animal breeders. For example, my mid-season 1Y-Y 'Golden Milestone' was produced by putting the pollen of 2Y-Y 'Gold Convention' on its grandfather 1Y-Y 'Strathkaniard'. Most of the seedlings of the cross were Division 2. I was fortunate to obtain a nice trumpet that bloomed later than most in its class. This is another type of borderline inbreeding/line breeding.

Selfing

There is another chapter to the 'Pol Voulin' story. My very first blooms of it opened on an eighty-degree day. The pollen dehisced immediately. When I tried to harvest the pollen for use in hybridizing it got on the stigma. The pod set seed. Five or six years later the seven seedlings bloomed on the same day, and all looked exactly like 'Pol Voulin' except for differing heights. The tallest/largest and shortest/smallest ones were kept but they did not survive. Putting the pollen of the same cultivar on the pistil is called selfing or self pollination.

Selfing is extreme inbreeding. Viability may be compromised. Selfing could be a useful technique if the parent is very heterogeneous and one is trying for a useful recombination of features.

Good News

My pedigree searches were done before the availability of the *IDB*. I learned a lot about daffodil history and daffodil breeding while searching through the *International Daffodil Register* to make up my pedigree cards. However, it appeared that almost any cross of pink daffodils in division two was line breeding. Avoiding inbreeding was the problem. One could almost say the same thing about white daffodils, trumpets, reverse bicolors, and yellow-reds. If your time is limited, spend your time studying the characteristics of the flowers that you are crossing rather than studying their pedigrees.

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TO BE, OR NOT TO BE—JUDGING DIVISION 11A

David Karnstedt, *Silverton, OR*

For many decades, Division 11 daffodils have been seen both on the show bench and in the landscape. Yet ongoing (and often heated) debate with respect to their value as daffodils continues—with ardent supporters on both sides. One still hears impassioned comment in support of Division 11 daffodils and rather acerbic observations that question whether these flowers are even daffodils. It's not my intention, here, to step into that fray! On the other hand, I feel there are two issues with respect to judging these flowers that need to surface and be discussed.

I have often judged exhibits containing flowers from Division 11a. During that time, I have not placed many collections (e.g., Quinn) containing these flowers very highly, if at all, because the Division 11a exhibit was always the weak bloom. And it's not that I personally have an ingrained and unrecognized bias against these flowers! To the contrary, the issue is one of correctly judging these blooms.

When it comes to showing daffodils, Division 11 is like any other—it contains both good and bad examples of show bench-quality flowers. The astute grower/exhibitor will select only those clones that, irrespective of division, have valid show bench potential when well grown. Certainly, the quality of the daffodils in Division 11 has greatly improved over the years, often to the point where some of the newer examples do make fine show flowers. Yet, it will probably be a while before one is selected as Best Standard Bloom in an ADS show.

The first rule, express or implied, when judging daffodils (or any other flower, of course) is that the exhibit be morphologically perfect. A daffodil bloom must have three sepals and three petals and the crown must conform to certain standards, not the least of which is that it must be entire. With respect to the crown in divisions other than Division 11, this rule is inviolate. The RHS requirement for Division 11a daffodils is somewhat vague, requiring only that the length of the coronal segments be “usually” split more than halfway and, in the 11a form, have “two whorls of three” corona segments lying “opposite the perianth segments.” Irrespective of the horticultural divisions in this system of classification there is an unstated, yet clearly implied, requirement for the perianth to possess six tepals (three sepals and three petals).

What I have found when judging Division 11a flowers with others is that judges are focusing attention on the perianth and not dealing adequately with the corona. I believe that judges, often unsure how to judge these particular daffodils, tend to gloss over corona faults. To begin with, there is an implied requirement for six corona segments, since each

corona segment must lie opposite one of the perianth segments (tepals) and there are six of these. Each corona segment must be entire, that is, it cannot have cuts or holes (due to physiology/genetics or mechanical damage). The crown of any daffodil missing any portion of tissue (morphology) is justifiably downgraded, often severely, as a form fault. The corona segments must be regular in form and resemble one another as closely as possible. Unfortunately, judging becomes markedly more difficult in Division 11a when the crown is heavily ruffled and the segments tend toward the vertical. If there is a justifiable bias in judging these blooms as show flowers, it would be for flattish segments possessing only minimal ruffling and lying snugly in one whorl against the sepals and in another whorl against the petals, i.e., perfection for the type. I would expect to see this uniform interleaving in a "top drawer" Division 11a show bloom. A clone whose corona is cut into six pieces but exhibits no interleaving is questionable as a Division 11a flower, in my view, even though interleaving is implied rather than specifically stated in the RHS requirement that the corona segments be "opposite the perianth segments" and "usually in two whorls of three."

There has arisen in recent years a form that does not meet either the requirements for Division 11a or the immutable requirement that a given flower be morphologically perfect. Irrespective of how one feels or chooses to define it, those "split corona" daffodils that have six tepals and only three coronal segments are morphologically imperfect. As morphologically imperfect flowers, they should never be registered. If registered, they cannot be regarded as Division 11a flowers. If this new form were to be considered for registration and acceptance, it would have to be in another division. However, in my opinion it is a blunder to accept morphological imperfection when considering such flowers for registration. Allowing registration of this form in Division 11a is as much a mistake—and as ridiculous and indefensible—as would be a requirement calling for only three tepals, to match in number the pieces of the corona.

A judge needs to bear in mind that selecting, naming, and registering a given daffodil does not lend it unquestioned validity as a sound example of the type! "Registration equals validity" is a mistaken belief that many judges hold. The RHS currently does not pass judgment on the given clone it is being asked to register, although it reserves the right. Registrants supply the data with the onus being on them for meeting the requirements of the division. There are justifiable positions on both sides of the question of who determines the division of a registered daffodil; the current stance seems to favor the position that the RHS remain neutral. Thus, it is the daffodil judge who has to learn and interpret the division requirements (in this instance, Division 11a) and set aside exhibits

that do not meet requirements for the division/subdivision, irrespective of the misplaced wishes of the registrant. Put simply and succinctly, judges have to know what they are doing.

BOOK REVIEW: DAFFODILS WITH SNOWDROPS AND TULIPS, 2003-2004

Mary Lou Gripshover, Milford, OH

What can you say about the RHS Yearbook that hasn't been said before? It's a book to which I look forward each year, and I was not disappointed with this edition. This year the symposium covered Section Bulbocodium and Division 10, the bulbocodium hybrids. At first blush, you might think this would be a very short article, but that is not the case. Interest in these small flowers is growing around the world. Rannveig Wallis in Wales has some charming hybrids between various of the species crossed with the triandrus species.

There is John Blanchard's article about his Spanish adventures, "Galicia Revisited." He describes the species *N. lagoi* which he had not seen before. He describes it as similar to *N. asturiensis* but larger.

Derek Bircumshaw's article on "Choosing the Twelve" to enter a 12-stem class should give you food for thought when selecting your own 12. The author invites you to submit your own choices.

Are you growing daffodils in a small garden? Then John Gibson's "Daffodils in a Small Garden" is for you. In a separate article, he describes "The Art of Gentle Persuasion" in forcing blooms for a show.

Daffodils at Wisley, show reports from around the world, and growing healthier daffodils are all subjects of interest.

Snowdrops and tulips are getting more notice in the *Yearbook*, and I found the article on Galanthus conservation in Turkey fascinating. It is an internationally funded project to get the villagers to grow bulbs which can then be sold. The problem is that the farmed bulbs are more expensive to produce, and so the public must be educated as well as the villagers. Several other articles on snowdrops round out the offerings, and there is also one on twin-scaling snowdrops and miniature daffodils.

Anna Pavord writes of "Tulips in Kazakhstan" and James Akers writes of the RHS Tulip Day. He also gives us a bit of history of the tulip in the U.K. in his article "Sir Daniel Hall and Merton."

So, what can you say about the RHS Yearbook? They've done it again! The book, together with the latest Supplement to the *International Daffodil Register and Classified List*, is available from the ADS office for \$24, postpaid in the U.S. (See the inside back cover for ordering information.)

THE DAFFODIL WIZARDS OF OZ

Bob Spotts, Oakley, CA

One definition of a “wizard” is an admirably skilled person. The daffodil hybridizers in Australia are indeed exceptionally skilled creators of modern daffodils. The World Daffodil Convention, Show, and Tours in Australia September, 2004 will offer the opportunity to meet the Daffodil Wizards of OZ and to see some of the beautiful daffodils they have created.

History: Growing and hybridizing daffodils has been continual in Western Europe for many centuries. The emergence of modern forms of daffodils can be attributed mainly to enthusiasts in the United Kingdom, beginning in the nineteenth century. It was natural that the love of daffodils would accompany those who emigrated from the UK to other places such as the USA or down-under.

In Australia and New Zealand, the great physical distance from the British Isles made it difficult for settlers to import familiar plants (including daffodils) from the homeland. Later, as air transport eased the barriers of distance, the imposition of strict quarantine regulations aimed at preventing infestation by foreign plant pests and diseases made getting stocks of new daffodil cultivars nearly impossible. Thus isolated from the mainstream of daffodil breeding, daffodil enthusiasts down-under turned to breeding their own.

One twentieth-century outcome was that the center of daffodil breeding may well have shifted between continents! The UK still has the continuing flow of magnificent new cultivars from Postles, Duncan, Pearson, Burr, Blanchard, Scamp and others. However, these now are matched by OZ with stunning introductions from Jackson, Barwick, Radcliff, Broadfield, Temple-Smith, and many others. In addition, Fred Silcock may well rewrite the book on trumpets in the near future, and Graham and Helen Fleming (Keira Bulbs) are emerging as gurus of miniatures. Only in New Zealand is there such a stable of hybridists advancing the daffodil. (Perhaps a sequel to this article could be “The Daffodil Kiwizards.”)

Geography: Daffodil growing in Australia is chiefly in the Southeast: Victoria north through the Australia Capital Territory (ACT) to New South Wales, and on the island state of Tasmania. On the distant west coast, some areas of Western Australia also have a climate suitable for growing daffodils. The northern and central areas of the continent are too hot or too dry.

Victoria: Melbourne is the city hub of the region. The World Daffodil Convention 2004 is to be held in Glen Waverley, a suburban area to the southeast of the city proper. During the World Convention, three

days of bus tours will visit daffodil activities, gardens, and scenes as well as the significant natural attractions of the region.

In the pastoral, rest-and-recreation village of Mt. Macedon to the northwest of Melbourne resides Fred Silcock, with one of the best daffodil patches, all of his own breeding, in the world. Wizard Fred has devoted some fifty years of effort to perfecting the form and colors of his daffodils. He specializes in trumpets, of which he has outstanding seedlings in every color combination. Of especial interest are his deeply colored red/orange trumpets, either with white or yellow perianths. Long-cups and cyclamineus hybrids are also among his favorites.

Fred has only limited property of his own, but has devised an effective strategy to enable seedling plantings that rank among the largest non-commercial daffodil plots in the world. By agreement with local farmers, he tills and plants seedlings in one-or-two-acre patches cut from their fields. After removing selections for five years, Fred turns the plots of blooming daffodils back to the farmers, who then have a ready source of cut flowers for the profitable cut-flower market. Fred has harvested his seedlings from over a dozen such patches in the hills around Mt. Macedon. During a visit to one of his abandoned patches prior to the 1999 Australasian Championship in Bowral, it seemed to Richard Ezell, Tony James, and me that we could have picked from that single patch of abandoned seedlings a highly-competitive twelve for the upcoming competition!

For many years, Fred has averaged an annual planting of over 50,000 seeds. In recent years he has made fewer crosses in order to reduce his time spent evaluating new seedlings and to free time to measure and register his best seedlings. To date, he has registered only a few of his seedlings; however, during the visit in 1999, he mentioned to us that his plans were to register more with his eventual goal being a list of introductions. Recent editions of the *Annual Supplement to the RHS Daffodil Register and Classified List* indicate that Fred has indeed begun registering his cultivars. A treat surely awaits all of us!

In Menzies Creek to the southeast of Melbourne is the internationally-known daffodil retail and catalogue business, Hancock Daffodils. The farm business was purchased by Will and Christine Ashburner in 2000. Will has pursued a career as a professional horticulturist. He is an active hybridist of numerous plants, daffodils among them. He specializes in miniatures, primarily in the higher divisions. With the facilities, property, and sales mode provided by his business, Will has expanded his daffodil breeding program. He has the advantage of having youth on his side.

Ian Dyson, in Pearcedale, and Graeme Brumley, in Monbulk, live to the south of Melbourne. Ian and Graeme, under the auspices of the Victoria Daffodil Society, are the Co-chairs for the World Daffodil Convention and Premier Show. Both men are established hybridists with some excellent seedlings in their pipelines. Graeme inherited his interest from his father, Louis Brumley, who bred daffodils as an avocation.

Australia Capital Territory (ACT): In Canberra and its surroundings in the ACT there are two active sources producing significant advances in daffodils. Keira Bulbs, the name under which Graham and Helen Fleming are known, specializes in miniatures—particularly breeding from the species. Toward this goal, they propagate a wide array of the miniature species, mostly obtained from seed.

Although Graham and Helen are lawyers for the government and have a family of three children, somehow in their spare time they manage a farm of approximately six acres. Keira is a major breeder of daffodils, in quantity as well as quality. In one past year, they planted almost 30,000 seedlings. They average 15,000 seeds planted annually, of which approximately 80% are miniatures! *Cyclamineus* hybrids are their favorites and their results are awesome. Keira has introduced miniature show flowers in Divisions 5, 6, 7, 10, and 12 and are actively breeding intermediates as well.

Perhaps those of us in the United States should take heart. Keira must lay netting over its plants to prevent disastrous attacks by sulphur-crested cockatoos and the decimation of their miniature plants by the pied currawongs!

Lawrence Trevanian is another daffodil breeder residing in the ACT. His childhood reminiscences sound much like ours in the States, such as seeing daffodils growing wild around abandoned shacks, reminders of families who once lived there. While living in Western Australia, he visited his first daffodil show in 1991 and soon thereafter attempted his first crosses. He imported species seed and concentrated his efforts on jonquils and tazettas, which are suited for that warm, dry climate. Upon moving to Canberra in 1995, he expanded the breadth of his efforts. Lawrence always wants to create fertile progeny, so he has used colchicine to obtain tetraploid species to use in crosses with standards. He frequently makes “bizarre” crosses with the goals of producing new color combinations, extending the blooming season, and producing new kinds of daffodils.

A small-scale breeder, as most of us are, he has, through innovative choice of crosses, achieved some spectacular results. The small-cupped, split-cup seedling (*N. Odoratus* x ‘Cantabile’) shown in Bowral at the

1999 Australasian Championship demonstrated that there is room for innovation in breeding of show and garden daffodils.

New South Wales: No discussion of Daffodil Wizards in OZ would be complete without mentioning Tony Davis of Bowral. My reaction upon first seeing Tony at the Bowral show was that we had a biker in our midst. Tony has a most severe allergy to the daffodil and must wear extreme protective clothing (including gloves and helmet with skin-tight seals and air filter) whenever he is in the show room or in contact with daffodils. In spite of this, he maintains an extensive daffodil garden containing many successful seedlings from his own crosses. Which of us would truly risk our lives for the love of daffodils?

Tasmania: In Port Sorell on the north of the island, Jamie and Kaye Radcliff have settled into their new home. They maintain the family heritage in daffodils which started with Jamie's grandfather, C.E. Radcliff and continued with father Jim. C.E. Radcliff made historic breakthroughs in breeding pink daffodils. He also registered such enduring cultivars as 'Pleiades' 8W-O and 'Redlands' 2Y-R. A late-in-life project was work toward a 1W-O. Son Jim continued his father's work, though he registered but few of his creations. 'C.E. Radcliff' 2W-P and 'Redlands Too' 2Y-R honoring his father are notable cultivars. In 1987, a most significant registration was 'Crucial Point' 1W-O, perhaps the first white/orange trumpet.

Grandson Jamie Radcliff and wife Kaye have continued on the breeding lines already established and have extended their interests as well. Exquisite, deeply-colored 'Lutana' 2W-O misses trumpet measurement only because of its broad perianth. It opens the door for future 1W-O cultivars. 'Rheban Red' 2Y-R has been highly successful in shows in Tasmania and abroad, winning Best Bloom at a New Zealand National Show. 'Des Oldham' 2W-P won Best in Show recently in California. A late interest of Jamie and Kaye has been split-cups, with improvements in color and form evident in their pipeline seedlings.

During my visit with the Radcliffs in 1999, Jamie extolled his new introduction "Holy Gold," which he felt was a significant advance in orange trumpets. I looked everywhere among his beds for the sign without finding it. Finally, I asked Jamie to show me the prize, and he took me to a short row of most exciting 1W-YOO trumpets. On the marker there was inscribed: 'Hawley Gold'. Thus did I learn the peculiarity of my American accent. I advise you to seek out this one, as well as his other registrations under the "Hawley" series.

Des Tongs lives in Ulverstone. His 'Pink Belladonna' 1W-P is a legend with me. For years I have read of its show successes. The Radcliffs use it in their breeding program for pink trumpets. David Jackson feels it

might well be the best 1W-P yet introduced. Frustratingly, it has defied my two attempts to "turn it around."

Broadfield's Daffodils is also located on the northern coast of Tasmania. Operated by Craig Broadfield and his father Don, their roots go back to Craig's great-grandmother, Charlotte Glover. Grandfather Ross Glover made significant advancements in breeding daffodils during much of the twentieth century. Among others, his 'Flash Affair' 2W-Y, 'Ida May' 2W-O, and 'Craig' 1Y-Y had show success. After Ross Glover's death, son-in-law Don and grandson Craig have continued hybridizing. Broadfield's 'Lady Diana' 2W-W is unregistered, but sets the standard worldwide as a pristine daffodil of culture. Sadly, the serious illness of Don Broadfield has put their daffodil efforts into dormancy.

At Surges Bay in the south of Tasmania live David and Robin Jackson, the latest members of this family of world-honored daffodil wizards. David has received both the Peter Barr Cup and the ADS Gold Medal in recognition of his advancement of daffodils. Their business, Jackson's Daffodils, is the outcome of efforts spanning three generations: William Jackson, son William Jackson, Jr., and grandson David Jackson. Grandfather William, Sr. was a pioneer in daffodil breeding in Tasmania. He devoted one-third of a half-acre garden to daffodils. In 1927 he registered 'Blodwin' 2W-YYR. During World War II, while stationed in England, a cousin of David's was visiting a garden where his host showed him a remarkable new daffodil: it was 'Blodwin'! During World War II, William, Jr. left his family and daffodils to serve in the Royal Navy, where he kept a pot of daffodils on the ship's bridge! David's mother tended the bulbs during his father's absence so that William, Jr. was able to resume hybridizing upon his return home. He bred and registered many daffodils that are familiar show winners even today, such as 'Akala' 1Y-Y, 'Verran' 2W-P, and 'Vahu' 2W-P.

Though David grew up with daffodils, "yellow fever" never really infected him during his youth; he admits he much preferred participating in sports. After he and Robin married, they decided to grow some of his father's daffodils and soon they began hybridizing on a small scale. After William, Jr. passed away in 1975, David, Robin, and his mother continued exhibiting and hybridizing as "W. Jackson Estate." David and Robin were developing a serious addiction! Once their seedlings were in flower and being introduced, they adopted their current business name.

David Jackson concentrates on standards in Divisions 1-4; recently he has added Div. 11 as well. Robin also grows miniatures. David's breeding focuses on plant health and vigor first. In blooms he wants consistency, non-fading color, and good size. From his father, he inherited a distaste for weak necks and muddy colors. David doesn't concern him-

self with judges' opinions. He breeds daffodils to meet his own strict criteria. Recent major show successes here and abroad include Jackson cultivars 'Theorum' 1W-Y, 'Misquote' 1Y-Y, 'Cryptic' 1W-P, 'Oops' 2W-Y, 'Banker' 2Y-O, 'Impeccable' 2Y-Y, 'Nynja' 2Y-Y, 'Nonchalant' 3Y-Y, 'Chortle' 3Y-W, 'Tao' 3Y-O, 'Yum-Yum' 3W-WWY, 'Fortesque' 4W-R, and 'Muster' 4W-O. In a change of pace, David and Robin recently introduced 'Little Tyke' 1Y-Y, surely the most outstanding intermediate trumpet, and have added a second intermediate, 'Matrix' 2Y-P, last year.

Geoff Temple-Smith is a relatively recent resident of Tasmania, having emigrated to Hobart from England in 1953. He has had a lifelong passion for horticulture and in breeding daffodils he has specialized in miniatures. He is having significant success in incorporating color in the cups of miniature daffodils. He and his son Mike operate Killara Bulbs.

While a high-school student, Mike Temple-Smith gained an early introduction to horticulture by raising iris from seed and exhibiting in Hobart Horticultural Society shows. After completing a degree in agricultural science and getting married, he grew and exhibited chrysanthemums, winning Amateur Champion Bloom his first year. At the Spring Hobart show, daffodils caught his eye and his career was launched.

Mike began hybridizing in 1976, his initial year of growing daffodils. A willing learner, in his early years he received the tutelage of such masters as Harold Cross, Jim Radcliff, Ross Glover, and Des Oldham. Later, Hubert Yeates and David Jackson also served as mentors. It wasn't long before Mike realized the great difficulty of matching the standards of the seedlings in Divisions 1-4 grown by his exceptional tutors. On the other hand, in the late '70s there was little interest in Tasmania in hybridizing in Divisions 5-8 (the divisions the late Harold Cross deemed "the rats and mice"). Only Rod Barwick had started hybridizing with species. Mike realized the potential in crossing quality cultivars with *N. cyclamineus* and decided to make advances in Division 6 his first quest. In 1985 he succeeded with the three siblings 'Voodoo', 'Alacabam' and 'Abracadabra', all 6Y-Y (*N. cyclamineus* x 'Ristin'). 'Abracadabra' raised the bar for Division 6, gaining successes down-under rivaling those of 'Rapture' 6Y-Y in America. 'Abracadabra' and its siblings are unusual in that they are the result of standard pollen applied onto the species; a reverse of the common procedure.

Early on, Mike got orange-trumpet fever, embarking first on the quests for 1Y-O/R and later 1W-O/R. His well-formed introductions 'Ruddynosey' 1Y-O and 'Jump Up' 1Y-O were significant advances in depth of color over the existing cultivars. He has more advances nearly ready. In addition, Mike is following his father's lead into miniatures,

seeking to add color. Mike likes miniatures in the upper size range, not "those tiny things you can hardly see"!

Any discussion of Tasmanian daffodil hybridizers must spotlight Rod Barwick. He lives in Claremont to the north of Hobart, and operates Glenbrook Bulb Farm. It is hardly an exaggeration to say that Rod Barwick revitalized world interest in miniature daffodils through his amazing series of introductions. His hybridizing is comprehensive: miniatures and standards, Divisions 1 through 12.

Rod started hybridizing in 1977, seeking daffodils with style, grace and charm, as well as a bit of humor! He has specialized in miniature hybrids using at least one species as a parent. With his exceptional artistic talent, Rod has become an icon for miniature daffodils. All of us are familiar with many of his exquisite miniature creations. From the inter-species cross *N. triandrus* x *N. fernandesii* came his renowned trio 'Angel's Breath' 5Y-Y, 'Angel's Whisper' 5Y-Y, and 'Angel o' Music' 5Y-Y. His crossing of species *N. rupicola* with *N. cyclamineus* yielded his delightful set of "cartoon mice" micro-minis: 'Ferdie' 6Y-Y, 'Mickey' 6Y-Y, 'Minnie' 6Y-Y, and 'Mortie' 6Y-Y. From crosses among various bulbocodium species he has created his "detective" series of vigorous Division 10 miniatures including 'Kholmes' 10W-W, 'Smarple' 10W-W, and 'Spoirot' 10W-W. In 2004 Rod has introduced new miniature cultivars in Division 1 and Division 8. He also has developed several presentable small doubles using the pollen from 'Rip Van Winkle' 4Y-Y. These seedlings could be the precursors of show-quality miniature doubles.

Although Rod's reputation for miniatures is firmly established, one is struck by the breadth of standard cultivars he has produced as well. Some we often see in the States are: 'Ah Gee' 1Y-Y, 'Wild Women' 1Y-Y, 'Meshach' 3W-YYR, 'Oh Kaye' 4W-P (intermediate), 'Riddle-Diddle' 5W-W, 'Affiance' 6Y-Y, 'Slip'ry' 6W-W, 'Sighing' 7W-P, 'Ringer' 9W-GYR, and 'Splatter' 11aW-Y.

In the past few years, Rod has reduced not only the scope of his business but also the number of crosses he makes each year, giving him more time and space to evaluate the seedlings he has in his pipeline.

In recent years, Kevin Crowe, also from the Hobart area, has made a significant impact in shows with his miniature seedlings and introductions. Kevin was inspired by Rod Barwick's results in Division 6 and with Rod's encouragement began hybridizing in 1992. He uses pollen from those species that grow most easily for him: *N. fernandesii*, *N. cyclamineus*, *N. scaberulus*, and *N. nevadensis*. He is using *N. poeticus* and small pink standards in his efforts to instill red or pink cup-color into his miniature seedlings. Kevin sadly relates "that the pinker they come, the

more likely they are not to survive the next summer!" I would venture that the experiences of most hybridists would echo that.

Isolation has both a downside and an upside. Daffodil fanciers down-under were separated by distance, season, and regulation from the sources of daffodil bulbs in the UK. If they were to grow modern daffodils, they would have to create them, and so they have. The last two decades have produced advances in hybridizing by the Wizards of OZ that have moved them to a pre-eminent position worldwide. The 2004 Daffodil World Convention, Premier Show, and tours of Victoria and Tasmania provide the opportunity to meet many of these Wizards and marvel at the magic of their creations.

2004 WORLD DAFFODIL CONVENTION AND TOUR

Richard Perrignon, Berowra, Australia

I am pleased to confirm that the 2004 World Daffodil Convention will be held in Australia from September 7 to 13, 2004. The Convention commences on September 7 at the prestigious Novotel at Glen Waverley, just outside Melbourne, Victoria, and ends with the aptly named "Premier Daffodil Show" on September 11 and 12 at nearby Mount Waverley in the beautiful Dandenong Ranges.

For those who survive the Convention, David Jackson of Jackson's Daffodils in Tasmania has very kindly organised a Tasmanian "post-ludium," in the form of a wonderful seven-day tour of Tasmania and its daffodils.

The Convention's Show Manager, Ian Dyson, and David Jackson have both sent me some literature on the Convention and the Tasmanian tour respectively. What follows is a short précis for the benefit of anyone thinking of attending. But be warned: only the barest outline is possible in these pages, and details can change without notice. Anyone thinking of participating should first contact Ian Dyson, David Jackson, and the Convener of the Convention, Graeme Brumley, to obtain up-to-date details, and of course, to book. The contact details for these three VIPs, including fax and e-mail for the technologically adept, are as follows.

Convener, 2004 Australian Daffodil Convention: Mr. Graeme Brumley, 101 Fairy Dell Road, Monbulk, Victoria, Australia 3793; phone: +61-3-9756-7427; fax: +61-3-9796-3665; ncontrol@ozemail.com.au

Convention Show Manager: Mr. Ian Dyson, PO Box 1409, Pearcedale, Victoria, Australia 3912; phone: +61-3-5977-3866 (W); +61-3-5978-6005 (H); fax: +61 3 5977 3899; joydyson@optusnet.com.au

Co-ordinator of Tasmanian tour: Mr. David Jackson, PO Box 77, Geeveston, Tasmania, Australia 7116; phone/fax: +61-3 6297-6203; bushy@southcom.com.au

2004 World Daffodil Convention

The Convention itself consists of presentations on our favourite subject, and the Premier Show. Speakers include luminaries such as Harold Koopowitz, Brian Duncan, Sally Kington, and an Australian panel of miniature hybridizers. However, the real attraction of the Convention lies in a series of optional tours, which no one should miss—indeed, it seems that a number of days are set aside for these alone. For instance, on September 7, participants can travel to Fred Silcock's marvelous garden in Mount Macedon, Victoria, a five-acre showcase of the best in Australian daffodil breeding. For those who perhaps suffer the “gold fever” of their spouses out of a sense of duty, the day includes a visit to the magical environment of Hanging Rock near Woodend, where that infamous female picnic was held a century ago. The tour then extends to the historic gold-fields town of Kyneton, where travellers can visit “Ellerslie,” an old dairy farm whose extensive gardens were made by Alison Miller and her late husband, Graeme—names which have often appeared in the RHS publication, *Daffodils*. Though not at this stage on the agenda, the historic farm of Langley Vale, also mentioned often in *Daffodils*, owned by Rob Murray, is close by. The next day, for anyone up to it, there is a tour to the commercial cut-flower farm run by the hospitable John Blyth, Australia's largest producer of daffodils for the cut-flower markets. Philip Island and its fairy penguins are also on the agenda. On September 9, there is a tour to the (now historic) daffodil farm known as Hancock's in the Dandenong Ranges. You also get to ride, if you wish, on the much-loved “Puffing Billy,” which takes you through some of the loveliest mountain country imaginable, and to visit the extensive Rhododendron gardens at Olinda, where a daffodil display is maintained for the entire daffodil season. For those not joining David in Tasmania on the Monday, the Convener has arranged a “return to Silcock's,” which will no doubt cause much soul-searching among those intending to join the Tasmanian tour, and probably cause some of them to be late.

Premier Show

For those wishing to compete in the Premier Show—presumably, New Zealanders intent on revenge for a century of New Zealand jokes and the more-or-less regular defeat of the All Blacks, or Brits and Americans trying their hand at a little forcing—the Show Manager informs me that the collection classes will be as follows:

- RHSV Challenge Cup: 12 seedlings, distinct, bred by the exhibitor from Divisions 1-4 and/or 11.

- 6 seedlings, distinct, bred by the exhibitor from divisions 5-9 and/or 12.
- Australian Daffodil Society Trophy: 6 seedlings bred in America, not necessarily by the exhibitor, distinct.
- 6 seedlings bred in Australia, not necessarily by the exhibitor, distinct.
- 6 seedlings bred in Holland, not necessarily by the exhibitor, distinct.
- UK Daffodil Society Gold Medal: 6 seedlings bred in England and/or Scotland, not necessarily by the exhibitor, distinct.
- 6 seedlings bred in Ireland (presumably, north or south), not necessarily by the exhibitor, distinct.
- 6 seedlings bred in New Zealand, not necessarily by the exhibitor, distinct.

Ominously, the Show Manager suggests that there have been "a few changes" since the draft schedule he gave me, so intending competitors would be wise to check with him carefully before committing their blooms to the rigours of international flight.

Cost of Convention

The cost of registration for the Convention is AUS\$385, payable before June 30. This rather moderate fee includes attendance at all sessions, speaker's notes when available, entry to (and, quite extraordinarily, lunches, morning teas, and afternoon teas at) the Premier Show, a formal dinner on Saturday, September 11, and the President's Social Evening on September 12. I don't know how they do it for the price.

Tours and accommodation, of course, are extra. Accommodation at the Novotel during the convention is AUS\$169 per room per night, including breakfast. You'll have to enquire whether that means 2 pieces of toast and jam, though I suspect it means something rather more substantial. The cost of tours varies, depending on length, distance, and the substance of the tour. All prices are available on request from Ian Dyson or Graeme Brumley.

Tasmanian "Postludium"

Those wishing to take advantage of this treat should fly from Melbourne to Devonport in northern Tasmania on Monday, September 13. Highlights of the tour include visits to the beautiful daffodil gardens of the Radcliff family in northern Tasmania; a stay in the tranquil fishing village of Strachan on Tasmania's rugged West Coast (best known perhaps for its proximity to the Franklin River and the Tasmanian Dam controversy of the 1980s, and dubbed, David informs me, by the *Chicago Tribune* "the best little town in the world"); a visit to the historic mining town of Queenstown with its eerie landscape; and a long journey east-

ward across the island, through the richly pastoral Derwent Valley, to attend the famous Spring Show at Hobart City Hall on the east coast.

Setting up for the show commences on the evening of Friday, September 17, and the show opens the next morning for two days. On the Saturday night, trophies will be presented at dinner at your hotel. On the Sunday, lunch will be provided at Jacksons' Daffodils, where one can walk the beds and enjoy some of the best blooms that Australia has to offer. The tour ends at breakfast on the Monday. The Friday and Saturday are "at your leisure", so that participants can enjoy the many delights which historic Hobart Town offers.

The land cost of the Tasmanian tour—including all accommodation, travel by coach, and all meals except morning and afternoon teas, and except lunches on Friday and Saturday, which are 'at your leisure'—is a remarkable AUS\$1200, on a per person, twin share basis. Discounts are available for anyone paying before May 31 or July 31. The cost of single room supplements is available on request, as is the cost of the "Hobart only" segment. Participants should arrange their own airfares.

Any participant in the Tasmanian tour with an interest in Australian miniatures would do well to get in touch with Rod Barwick, whose farm is situated at Claremont in suburban Hobart, and see what he's up to. No doubt many of the Barwick clan will be at the Hobart Show.

But, first things first. If you fancy a second spring in 2004, waste no time in getting in touch with Messrs. Brumley, Dyson, and Jackson. They will be delighted to hear from you.

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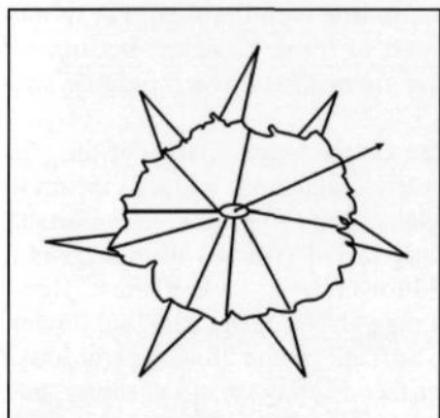


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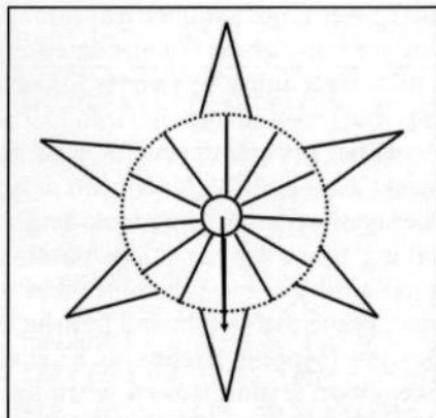
Nancy R. Wilson, Judges Schools Chair

N. bulbocodium and its hybrids are becoming more frequent on the show bench. They appear to be an unusual flower to many judges who have never grown them or judged them in shows. All judges need to be familiar with their attributes and be ready to step in and judge them fairly. The more recent American Daffodil Society (ADS) Judging Schools have a small section on their judging and this section will expand as more *N. bulbocodium* species and newer hybrids are exhibited. In the future *N. bulbocodium* hybrids may be judged along with standards and will compete for the Gold Ribbon.

N. bulbocodium species are placed by the Royal Horticultural Society (RHS) in Division 13, "Daffodils Distinguished Solely by Botanical Name." The American Daffodil Society has gone further and adopted criteria for judging species, as described on page 9-14 of *Handbook for Growing, Exhibiting, and Judging Daffodils*. Species require a different set of judging standards because "in the wild, each specimen has a different set of genes, and each species population will display attributes according to the biological diversity of species." All species, including *N. bulbocodium*, can be wild variants or hybrids but are found in the wild. Each individual bulb may divide to produce identical plants of itself. However, species also set seed. Seed-grown species will generally resemble the parents. However, in the wild many factors may lead to variations in the children.



Imperfect Form



Idealized Form

Drawings by Karen Neef

When one judges species in an ADS show the following considerations should be borne in mind. The condition of the flower (50 points) means that the blossom should be clean, fresh, and free of damage, with an intact spathe and young ovaries. Points should be deducted for mechanical injury, an aging flower with pollen in the cup, dirt and disease. Aging will first show when the tips of the perianth segments turn brown. Form (15 points) for *N. bulbocodium* is the symmetry and balance of both the large corona and the long, thin, triangular perianth segments (see illustration). The corona can be straight or bulbous. It should be evenly round. The edge of the corona can be smooth or frilled. This frilling is referred to as "petunioid" or "like a petunia." If the corona is frilly, the frills should be evenly spaced. As the flower is genetically based on six parts, the corona's edge may show this trait. It is not a fault and can be quite pleasing, but these six divisions need to be even and symmetrical. The perianth tube begins at the ovary and extends toward the corona. It divides into six segments. These segments come out over the corona, joining at the base and forming a long triangle that may reach beyond the cup in length. These perianth segments should be symmetrical and evenly spaced. A fault exists when there are five, seven, or any odd number of segments. The perianth tube can be very green but this is not a fault. In some species, such as *N. bulbocodium* var. *conspicuum*, one of the identifying features is the green on the perianth. Perianth segments can be flat or twisted but should look identical. They usually stand out about 45 degrees from the corona at the point where they separate from the tube. The bottom perianth segment can be straight down or the two bottom ones can frame the stem. The stamens and stigma make the flower more symmetrical if they are in line with the stem. For miniature hybrids, grace is considered are part of form; however, because of natural variability of species, grace is not considered when judging species that are miniature in size.

Color (10 points) is reflected in the evenness and clarity of the pigment. Colors of *N. bulbocodium* typically range from white to cream to deep yellow; some may look beige. Substance (10 points) is important; having tissue that is thick, starchy, and turgid (filled with water) is a good attribute, but remember that wildflowers may look ethereal. However, tissue that is thin and translucent may also indicate an aging flower. Texture (5 points) refers to what the surface of the flower parts looks like. Good texture is seen when the surface is smooth, silky, satiny, and has a sheen. Pose (5 points) is the angle at which the flower holds itself from the stem. Bulbocodiums do not normally hang their heads but look straight ahead or up; after all, they are looking to attract the insect that will pollinate them. The stem (5 points) should be straight and free of dirt

and disease. Often the stem looks very small but if it can hold up that big, bulbous flower it is doing its job.

Judges should err on the side of caution when questioning the identification of an exhibit of *N. bulbocodium*. Most judges are not species experts. If a judge is absolutely certain that a flower is misnamed, then he or she should leave a note for the exhibitor; but be lenient with the *bulbocodium* species.

If a pot of *N. bulbocodium* is being judged, you cannot assume that each flower should be identical. If the pot contains *bulbocodium* seedlings, some natural diversity may be found and should not be penalized. However, if the pot shows great uniformity in the flowers, the bulbs may be clones.

Bulbocodium cultivars are placed by the RHS in Division 10. These bulbs are from cultivated stock. They can be produced by crossing two plants, one or both of them being a *bulbocodium*. The features of *N. bulbocodium* should be dominant. They can also be a selected wild bulb that has been singled out, divided, and subsequently named. ('Julia Jane', for example.)

Because hybridization is increasingly being practiced with *N. bulbocodium*, radical changes will occur. We now have bi-colors such as 'Mitimoto' and there will soon be split coronas and more color variants. Size is becoming an issue. 'Little Soldier' Division 10, for instance, has not won a place on the ADS Miniature List and therefore can compete with larger flowers. *N. bulbocodium* var. *conspicuus* and *N. cantabricus* var. are being bred for significant size and may be entered to compete with larger daffodils in the very near future. It will be interesting to see what happens as time goes on.

N. bulbocodium hybrids are becoming popular and do compete and do win awards. When judging, keep an open mind and give awards on the merit of the flower not just because the flower is a *bulbocodium*. Above all, enjoy these lovely flowers.

ADS MEMBERSHIP

Kathy Welsh, Membership Chair

The last quarter has welcomed thirty-two new ADS members. This is particularly exciting given the fact that it is typically our slowest time of year. Judging Schools in both Virginia and the Northeast have contributed to this influx of new members, so perhaps your region would like to consider holding a school or series of seminars. Hosting a convention is also a great way to increase membership in both your local society and the ADS. Consider hosting a convention if your society

hasn't done so in the last five to ten years. Even small groups can host a convention with the help of nonlocal ADS members who are willing to lend a hand running our most exciting annual event. Last year's convention is a testimonial to this fact.

Please welcome the following new ADS members listed in alphabetical order by state. We would like to congratulate our newest life member, Jonathon Loring, a nephew of the Conrads.

Janet Wier, 3301 S. Washington St., Apt 310, Englewood, CO 80113
James Kochevar, 2454 N. Seminary Avenue, Chicago, IL 60614-2240
Rosemary Campbell, 210 Larch Row, Wenham, MA 01984
E. P. Ipswich, Editorial Department, 10 Estes Street, Ipswich, MA 01938-2106
Jonathan B. Loring, P O Box 182, Prides Crossing, MA 01965; (978) 921-0088
Thomas J. Weadock Jr, 97 Green Street, Needham, MA 02492; tjweadockjr@mac.com
Gay Barclay, 11600 River Road, Potomac, MD 20854-1238; (301) 299-5312; agathab@erols.com
Lois S. Noonan, 2844 Cox Neck Road, Chester, MD 21619-2346; (410) 643-4069
Marjorie Schiebel, 3841 Mt. Airy Drive, Mt. Airy, MD 21771; (410) 795-0584; rmschiebel@aol.com
Bonnie Peck, 2324 Buffalo Street, White Bear Lake, MN 55110-2326; bonniepeck@comcast.net
Topher Geigle, 6221 Hoffman, St Louis, MO 63139
Bill Grelle, 3537 Kathleen Ann Drive, St Louis, MO 63129; bgrelle@att.net
Karen Marcus, 1180 Branch Road, Holts Summit, MO 65043; (573) 896-4595; msnkrm@aol.com
Larry Brazil, 730 Goose Hollow Road, Tremont, MS 38876; (662) 652-3665; larrybrzl@aol.com
Jean M. White, 40 Old Pumpkin Hill Road, Warner, NH 03278; (603) 456-2458
Debra Knapke, 873 Clover Drive, Columbus, OH 43235; (614) 459-7167; dknapke@copper.net
Kit Walter, 278 N. Union Street, Galion, OH 44833-1738; (419) 462-5852
Janice Gordon, 1250 Upper Gulph Road, Radnor, PA 19087
Suzanne C. Powers, 167 Markham Drive, Mt Lebanon, PA 15228-1056
Patricia Brooks, 102 Jefferson Lane, Ladson, SC 29456; (843) 871-0239
Mary Browne Durtschi, PO Box 88, Stockton, UT 84071; marydurtschi@msn.com
Bob & Ann Baldwin, 1901 Belfield Road, Alexandria, VA 22307; (703) 329-8669; Tarhoo@aol.com
Charlotte Benjamin, 3131 N. Abingdon Street, Arlington, VA 22207-4211; fcbenjamin@aol.com
Rebecca Bostick, 920 Vicar Lane Alexandria, VA 22302; (703) 370-2022; ghbostick@comcast.net
Mary K. Hoerneman, 94 Talon Court, Lancaster, VA 22503
Linda Knerr, 10609 Vickers Drive, Vienna, VA 22181-3029; rknerr@cox.net
Karen O'Meara, 442 Park Street NE, Vienna, VA 22180-3559; (703) 281-4334
James M. Smith, 415 Mills Road, Callaway, VA 24067; lilyparkva@aol.com
Mary Stickley, 4 Huntley Court, Sterling, VA 20165; (703) 444-0668; mkatstickley@aol.com
Sue Wickwire, 917 Leigh Mill Rd, Great Falls, VA 22066; (703) 759-0151; suewickwire@hotmail.com
Noeline McLaren, Mercer Road RD 1, Balclutha, Otago, New Zealand
Alan George Strachan, PO Box 330, Goulburn, NSW 2580 Australia; astrahan@ozemail.com.au
Petra Vogt, Friesenstrasse 28, 45665 Recklinghausen, Germany

Contact the Executive Director, Naomi Liggett, with corrections and/or additions to the above information.

Thanks to those who have taken on the task of setting up the ADS displays at our shows and embraced it with enthusiasm. We hope that the addition of our 50th anniversary and daffodil mylar balloons will help to

attract attention. Local groups, as well as the ADS, should benefit from the heightened awareness we are trying to create. This 50th anniversary gives us reason to celebrate and draw attention to our organization. I hope all ADS members will work to make this our best year ever! If anyone has suggestions on how to improve our displays or recruitment of new members, please contact me at (703) 242-9783 or kathy-welsh01@aol.com. Hope to see you at the Convention!

MY FIRST DAFFODIL SHOW

Gary Springer, Georgia

I followed the recommendation given by many of you on Daffnet and attended the Georgia Daffodil Society show at the Atlanta Botanical Gardens and even brought along several stems. This was excellent advice which I'm glad I accepted.

The first thing I learned was that the flowers on my own property were far prettier than I had imagined. For some reason assembling the finest blossoms from one garden into one display magnifies by many times the beauty of the individual flowers.

Then when the finest daffodils from many gardens are assembled into one daffodil show, the beauty is far superior to what I could have possibly imagined before the experience. Neither can I find words to describe this beauty. But I also found myself realizing that as my gaze moved from flower to flower, each one was as magnificent as the next. I could never be a judge of these wonderful creations.

I also did something I said I never would: I had to develop a basic understanding of the alphanumeric coding used to describe daffodil blossoms, such as 2Y-Y. After snapping the finest blossoms from my gardens to enter in a show, nothing was going to stop me from displaying them. So when it became obvious that my refusal to learn the coding was an obstacle to displaying those beautiful flowers, my resistance was quickly overcome. I must admit this invaluable system used to describe the myriad of daffodil types is far more intimidating to contemplate than it is difficult to learn.

My weak memory makes it impossible for me to remember the names of many of the people at the show who in all probability have become more beautiful by their association with these magnificent daffodil blossoms. I thank the people whose names have stuck in my poor memory, such as John Lipscomb and Clay Higgins for encouraging me to attend and helping me find the way and making the event an enjoyable learning experience. Special thanks to Fran Higgins for the hours she spent teaching and assisting me in the process of staging, without which

my flowers would have never made it onto the show tables. Many thanks to Bonnie Campbell, Sara Van Beck, Betty Hartzog and others who helped identify the flowers from my gardens and who made the show very special.

It was also a pleasure to meet and converse with Sandra Stewart and Tom Roche over their wonderful flowers and the daffodil show experience.

**SMITH COUNTY TEXAS
MASTER GARDENER BULB SALE**
Keith Kridler, Mt. Pleasant, Texas

It was the best organized mass sale of any kind that I have seen. Over 300 people registered for the slide presentations, and I was amazed that many were first time attendees and many had driven over 100 miles to get to the Tyler Rose Gardens. The room held about 400 chairs, all with a good view of the screen, and quite a few people stood along the back wall! About 15 minutes after the last program I went outside to see how they were going to try to sell 12,000 bulbs to the mass of people who seemed to get sucked out of the doors of the auditorium after the last question was answered. In five minutes there were probably only 12 people still in the room!

When I stepped out onto the observation deck that overlooked the sale area, at first I thought they were still setting up the tables. But it turned out the long lines of people were quickly being checked out and in 45 minutes 12,000 bulbs had been sorted out, picked over/grabbed/snatched/guarded and were rushed out both ends of the sale area. Tables were already being taken down, just 15 minutes into the sale! I saw poor infants kicked out of strollers and their buggies filled with bags of bulbs, forcing the children to ride out on their mother's hip. The agility of some of those blue-haired ladies makes me think they were younger women or men in disguise!

There was a fierce trading area/black market section where you heard, "I'll swap 24 *N. jonquilla* for your twelve rain lilies!" or "I'll give you \$12 for that *crinum*!" Just like the end of trading at the New York Stock Exchange, the center of the sale area had people waving "wish lists" of bulbs trying to get someone to work a trade! The professional bulb buyers (those that had been here before) brought in multiple runners who scattered at the starting bell so that these buying consortiums would hit five or six different tables at once.

The sale area was practically vacant in just under 45 minutes as the last table only had three varieties of bulbs left, and two of these were

huge boxes of extras that were donated at the last minute by local Master Gardeners and there hadn't been enough bags to prepare them for sale! I missed the opening buying rush, but one of the veteran ladies said that it looked just like the Oklahoma Sooner landrush, only without the whips, horses and wagons!

HERE AND THERE

LOOKING FOR 'MAID MONICA'

Sally Kington, RHS Daffodil Registrar, is looking for any information on the survival of the daffodil 'Maid Monica' 5W-W. It is an H. Backhouse variety dated 1913. Christopher Bourne had the stock, and in fact his catalogues show that the *Register* date of 1913 can be taken back to 1911. Christopher Bourne's great granddaughter has written to enquire after the daffodil because there is a family tradition that it was named by him for one of his daughters. Contact Sally at Sallyk@rhs.org.uk.



APRIL 2004 ISSUE OF HORTICULTURE

The well-known magazine *Horticulture* is celebrating its 100th anniversary. The April, 2004 issue begins a list of the top twenty books, horticultural societies, native perennials, native shrubs, and native trees. Four in each category are in the April issue and the American Daffodil Society is one of the societies listed. The article mentions our 50th anniversary, *The Daffodil Journal*, daffodil data bank, and other publications.



MEMORIALS

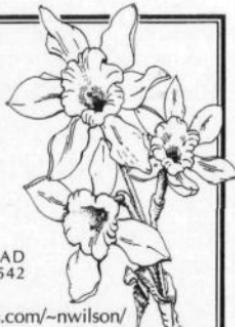
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2004 DAFFODIL SHOWS
Eileen L. Whitney, Awards Chairman

*(Changes from the listings in the December Journal are underlined.
March show are excluded because of publication date.)*

April 2-3, 2004, Nashville, Tennessee: Middle Tennessee Daffodil Society at Cheekwood Botanic Gardens, 1200 Forrest Park Drive, Nashville, TN 37205. Contact: Ann McKinney, 921 South Lane Court, Brentwood, TN 37027; (615) 333-1242; ateamTN@aol.com

April 3, 2004, Louisville, Kentucky: Kentucky Daffodil Society at Middletown Elementary School, 218 North Madison Avenue, Middletown, KY. Contact: Hilda Dunaway, 3104 McMahan Boulevard, Louisville, KY 40220-2241; (502) 458-7121; HTDunaway@aol.com

April 3-4, 2004, Albany, Oregon: Oregon Daffodil Society at Heritage Mall, 1895 14th Street, S.E., Albany, OR, (503) 874-8100. Contact: Nancy Cameron, PO Box 789, Newberg OR 97132; (503) 628-0204; dad@cafetoday.net and Betty Jean Forster, 31875 Fayetteville Drive, Shedd, OR 97377; (541) 491-3874

April 3-4, 2004, Gloucester, Virginia: Garden Club of Gloucester at Page Middle School, Route 17, Gloucester, VA. Contact: Mary Helen Birdsall, P.O. Box 54, Ware Neck, VA 23178; (804) 693-2927; mgbirdie7@aol.com

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April 3-4, 2004, Princess Anne, Maryland: Somerset County Garden Club at the Peninsula Bank, 11732 Somerset Avenue, Princess Anne, MD. Contact: Marjorie Poisker, 27735 Oriole Road, Princess Anne, MD 21853; (410) 651-1373; marpoi@dellnet.com

April 7-8, 2004, Scottsburg, Indiana: Daffodil Growers South at Leota Barn. Contact: Helen Trueblood, 3035 Bloomington Trail Road, Scottsburg, IN 47170-1507; (812) 752-2998

April 7-8, 2004, Edgewater, Maryland: District II Federated Garden Club of Maryland at Historic London Town House and Gardens, Edgewater, MD. Contact: Marie Coulter, 342 Prestonfield Lane, Seveno Park, MD 21146-1512; (410) 647-8971, Frankandmarie@earthlink.net

April 9-10, 2004, Union Gap, WA: Monday Daffodil Club and Mount Cleman Garden Club, Valley Mall, 2529 Main Street, Union Gap (Yakima), WA 98903. Contact: Bonnie Johnson, 1610 Dazet Road, Yakima WA 98908-9211; (509) 966-9257; BJohn58229@aol.com

April 10-11, 2004, Cincinnati, Ohio: Southwestern Ohio Daffodil Society at Cincinnati Zoo and Botanical Garden, 3400 Vine Street, Cincinnati, OH 45220. Contact: Linda Wallpe, 1940 Gregory Lane, Cincinnati, OH 45206; (513) 221-4140; lwallpe@juno.com



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April 10-11, 2004, Mid-Atlantic Regional Show, Richmond, Virginia: Virginia Daffodil Society at Lewis Ginter Botanical Garden, 1800 Lakeside Avenue, Richmond, VA 23228-4700. Contact: George and Patty Bragdon, 103 West Square Drive, Richmond, VA 23233; (804) 784-3527, (239) 592-7014

April 10-11, 2004, St. Louis, Missouri: Greater St. Louis Daffodil Society at Missouri Botanical Garden, 4344 Shaw Boulevard. Contact: Jason Delaney, Department of Horticulture, MOBOT, PO Box 299, St. Louis, MO 63166; (314) 577-0234, ext. 7; jason.delaney@mobot.org

April 12-13, 2004, Corbett, Oregon: Oregon Daffodil Society at Springdale School, Columbia River Highway and Bell Road, Corbett, OR 97019. Contact: Carol Hesse, 37049 SE Louden Road, Corbett, OR 97019; (503) 695-5480

April 13, 2004, Rye, New York: The Little Garden Club of Rye at The Osborn Retirement Community, 101 Theall Road, Rye, NY 10580. Contact: Marilyn Donahue, 191 Kirby Lane, Rye, NY 10580; (914) 921-0195; Mguggi@aol.com

April 13, 2004, Upperville, Virginia: Upperville Garden Club at Trinity Parish House, Route 50, Upperville, VA. Contact: Linda Dodderidge, 19599 Ridgeside Road, Bluemont, VA 20135; (540) 554-8816; Ldodder@aol.com



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April 16-17, 2004, ADS National Show, Tysons Corner, Virginia: Washington Daffodil Society at the Sheraton Premier, 8661 Leesburg Pike, VA 22181. Contact: Mitch Carney, 5906 Clevelandtown Road, Boonsboro, MD 21713; (301) 432-4728; MCa1062357@aol.com

April 17-18, 2004, Wichita, Kansas: Wichita Daffodil Society at Botanica, the Wichita Gardens, 701 North Amidon, Wichita, KS. Contact: Margie Roehr, 594 North Broadmoor, Wichita, KS 67206; (316) 683-9158; margie@roehrco.com; or Ray Morrissette, 1840 North Garnett, Wichita, KS 67206; (316) 636-5562

April 21, 2004, Towson, Maryland: Maryland Daffodil Society at Church of the Redeemer, 5603 North Charles Street, Baltimore, MD 21212. Contact: Frances Horich, 12750 Greenspring Avenue, Owings Mills, MD 21117; (410) 363-1975; Fvhорich@aol.com

April 21-22, 2004, New England Regional Show, Greenwich, Connecticut: Greenwich Daffodil Society at Christ Church Parish Hall, 254 West Putnam Avenue. Contact: Nancy Mott, 38 Perkins Road, Greenwich, CT 06830-3511; (203) 661-6142; grancymott@aol.com

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April 21-22, 2004 Indianapolis, Indiana: Indiana Daffodil Society at Pleasant View Lutheran Church, 801 West 73rd Street, Indianapolis, IN. Contact: Kay Cunningham, 7828 West Ratliff Road, Bloomington, IN 47404; (812) 876-7947, donkay1959@aol.com

April 21-22, 2004, Midwest Regional Show, Chillicothe, Ohio: Trinity United Methodist Church, 82 E. Main Street. Contact: Mary Ellen Sheridan, 83 E. Fourth Street, Chillicothe, OH 45601; (740) 775-7595

April 22, 2004, Wadsworth, Ohio: Sacred Heart Catholic Church, 260 Broad St., Wadsworth OH 44281 (staging opens at 5:00 AM). Contact: Daniel Bellinger, 341 Akron Road, Wadsworth OH 44281; (330) 336-6314; cuyahoga@neo.rr.com

April 23-24, 2004, Northeast Regional Show, Morristown, New Jersey: New Jersey Daffodil Society at Frelinghuysen Arboretum, 53 East Hanover Avenue, Morristown, NJ. Contact: Sally Booth, 325 Woodland Avenue, Westfield, NJ 07090; (908) 232-1954; sbooth1954@aol.com and Mary Kent, 857 Winyah Avenue, Westfield, NJ 07090; (908) 232-1566; maryelk612@hotmail.com

April 24, 2004, Shelter Island, New York: The Garden Club of Shelter Island at St. Mary's Parish Hall, 26 St. Mary's Road, Shelter Island, NY 11964. Contact: Paulette Van Vranken, PO Box 189, Shelter Island Heights, NY 11965-0189; (631) 749-5014; Letty2505@aol.com

April 24, 2004, Pittsburgh, Pennsylvania: Daffodil and Hosta Society of Western Pennsylvania at Galleria Mall, Mt. Lebanon, PA. Contact: Barbara Dittmer, 611 Royce Avenue, Pittsburgh, PA 15243-1149; (412) 343-7881; jddittmer@compuserve.com

April 24-25, 2004, Nantucket, Massachusetts: Nantucket Garden Club at the Point Breeze Hotel, Easton Street. Contact: Mary Malavase, Box 1183, Nantucket 02554; (508) 228-2241; mary@thebeachside.com

April 24-25, 2004, Columbus, Ohio: Central Ohio Daffodil Society at Franklin Park Conservatory. Contact: Phyllis L. Hess, 3670 East Powell Road, Lewis Center, OH 43035-9530; (614) 882-5720; fax (614) 898-9098; plhess@ee.net

April 24-25, 2004, Chambersburg, PA: Chambersburg Garden Club and Tuscarora Daffodil Group at First Lutheran Church. Contact: Richard Ezell, 334 Baltimore Street, Gettysburg, PA 17325; (717) 334-2304; brownezell@innernet.net

April 24-25, 2004, Show, Kennett Square, Pennsylvania: Delaware Valley Daffodil Society at Longwood Gardens. Contact: Martha Griner, 21 Chesterfield Road, Bordentown, NJ 08505; (609) 298-4375; Martha809@comcast.net

May 1-2, 2004, Glencoe, IL: Midwest Daffodil Society at Chicago Botanical Garden. Contact: Bruce Eckersberg, 535 Reese Avenue, East Dundee, IL 60118; daffodil@nsn.org or www.LZAREA.org/daffodil

May 1-2, 2004, West Boylston, MA: Seven States Daffodil Society at Tower Hill, West Boylston, MA. Contact: Diane Stoner, 83 Maple Street, Litchfield, CT 06759; (860) 567-5041; Dbstoner@optonline.net

May 02, 2004 Niles, Michigan: Midwest Region of the ADS and Oakwood Daffodils at Bertrand Barn, Niles, MI. Contact: Suzy Wert, 7350 North Illinois Street, Indianapolis, IN 46260; (317) 259-0060; limequilla@aol.com

May 8-9, 2004, Chanhassen, Minnesota: Daffodil Society of Minnesota at University of Minnesota, Landscape Arboretum. Contact: Edie Godfrey, 4050 Kings Point Road, Excelsior, MN 55331; (952) 472-5623; ediegodfrey@yahoo.com

Non-ADS shows:

April 17-18, Granville, OH: College Town House, 334 E. Broadway. Contact: Tina Washka; Osageacresfarm@aol.com

April 17-18, Youngstown, OH: Fellows Riverside Gardens Daffodil Show, 123 McKinley Avenue, Youngstown, OH 44509. Contact: Keith Kaiser, Fellows Riverside Gardens, 123 McKinley Avenue, Youngstown, OH 44509; 330-740-7116; KKaiser@CBoss.com

April 27, Akron, OH: Northern Ohio Daffodil Society, Chapel Hill Mall. Contact: Doug Fuhrmeyer, (330) 467-4788

NEW BERTRAND BARN SHOW

Suzy Wert, Indianapolis, IN

The Midwest Region has a new show at the end of the season: The Bertrand Barn Show, to be held at John Reed's Oakwood Daffodils in Bertrand, Michigan, on Sunday, May 2, in the big barn. It will be a show heavily dependent on exhibitors who will have to download their show schedule from a website (watch for details to be announced on Daffnet) and fill their own tubes from the available blocks and tubes at the show. If you come to exhibit, and you're a judge, then you will stay and judge.

Hopefully, many Midwest Region exhibitors will be curious enough to make the trek to the South Bend area to see what is going on—doesn't everybody have a couple of perfect poets on May 2? This is certainly one show where not all the show flowers are on the table—they're out in the fields too, and I imagine there will be some tours given in the afternoon. John Reed has reserved a few hotel rooms in case you want to come the day before.

2004-2005 ADS BOARD OF DIRECTORS CALENDAR

Mark your calendar and make your travel plans!

(Actual meeting times may change slightly)

ADS 50TH ANNIVERSARY CONVENTION 2004—WASHINGTON, D. C. Friday, April 16 through Sunday, April 18, 2004; Sheraton Premiere at Tysons Corner, 8661 Leesburg Pike, Vienna, VA 22181; Reservation Phone: 1-800-325-3535. **Friday, April 16, 2004:** 3 PM, Executive/Finance Committee Meeting; 4 PM, ADS Board Meeting; After dinner, ADS Annual Meeting; **Sunday, April 18, 2004:** 4 PM, ADS Board Meeting

ADS FALL BOARD MEETING, 2004—ATLANTA, GEORGIA, Jaydee Ager; Friday, October 29, 2004, 1 PM, Finance Committee; Saturday, October 30, 2004, 9 AM, Board Meeting

ADS CONVENTION, 2005—ST. LOUIS, MISSOURI

ADS FALL BOARD MEETING, 2005—COLUMBUS, OHIO, Phyllis Hess, Betty Kealiher; Friday, September 30, 2005, 1 PM, Finance Committee Meeting; Saturday, October 1, 2005, 9 AM, Board Meeting

JUDGES FORUM

Nancy R. Wilson, Judging Schools Chair

School I: Albany, Oregon, April 4, 2004, 8:30 AM at The Phoenix Inn, at I-5 & Highway 20 (3410 Spicer Road S.E., Albany, Oregon 97321). Rates \$59.00 nightly, with Continental breakfast buffet. Nancy Cameron, P.O. Box 789, Newberg, OR 97132-0789; (503) 628-0204; dad@cafetoday.net; fee \$5.00; audit fee for refresher \$3.00

REGISTRATION FORM FOR JUDGING SCHOOL II

Tysons Corner, Virginia, April 19, 2004, 9:00 AM

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If taking this school for credit, please complete this form and mail it **before March 15, 2004**, along with a check for \$15, made payable to Nancy R. Wilson, 6525 Briceland Thorn Road, Garberville, CA 95542; nwilson@asis.com. Limited to 20 ADS members.

To prepare for Judging Schools obtain the new 4th edition of the *Handbook for Growing, Exhibiting and Judging Daffodils*, which can be obtained from the ADS Executive Director.

Judging School I, Albany, Oregon , April 4, 2004

The required reading is listed on pages 8-3 and 8-4 of the *Handbook*.

Judging School II, Tysons Corner

The required reading is listed on pages 8-4 and 8-5 of the *Handbook*.

OAKWOOD DAFFODILS

Midwestern-Bred and Acclimatized Daffodils



'Haunting' 3Y-Y
John Reed photo

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Oakwood Daffodils is pleased to offer our 21st annual listing of mid-western-grown daffodils in conjunction with the American Daffodil Society 50th Birthday. In a departure from years past, this year's listing is smaller to allow time to attend the 2004 World Daffodil Convention in Australia. To help make up for the reduction many rare and seldom listed bulbs are being offered. Besides new registrations of mine, those of Larry Weir are being offered for the first time, including his award winning 'Markers Mark' 1Y-O.

Customers from the last two years will automatically receive a catalog. All others should request one and enclose \$1.00 which will be applied toward your order this year.

*See you at Tyson's Corner!
Congratulations and Happy Birthday ADS.*

**ADS APPROVED LIST OF MINIATURE CULTIVARS
CORRECTED JANUARY 7, 2004**

'Alec Gray' 1W-W (v)	'Douglasbank' 1Y-Y	'Kibitzer' 6Y-Y
'Angel o' Music' 5Y-Y	'Drop o' Gold' 5Y-Y	'Kidling' 7Y-Y
	'Edgedin Gold' 7W/Y-Y	'Laura' 5W-W (v)
'Angel's Breath' 5Y-Y		'Likely Lad' 1Y-Y
'Angel's Whisper' 5Y-Y	'Elfhorn' 10Y-Y	'Lilliput' 1W-Y
	'Elka' 1 W-W (v)	'Little Beauty' 1W-Y
'April Tears' 5Y-Y	'Exit' 3 W-W	'Little Becky' 12Y-Y
'Arrival' 1W-Y	'Eystettensis' 4Y-Y	'Little Emma' 12Y-Y
'Atlas Gold' 10Y-Y	'Fairy Chimes' 5Y-Y	'Little Flik' 12Y-Y
'Atom' 6Y-Y	'Fenben' 7Y-Y	'Little Gem' 1Y-Y
'Baby Moon' 7Y-Y	'Ferdie' 6Y-Y	'Little Lass' 5W-W
'Baby Star' 7Y-Y	'First Kiss' 6Y-Y	'Little Missus' 7Y-Y
'Bagatelle' 1Y-Y	'Flomay' 7W-WWP	'Little Rusky' 7Y-GYO
'Bebop' 7Y-Y	'Flore Pleno' 4Y-Y	
'Bird Flight' 6Y-GYY	'Flute' 6Y-Y	'Little Sentry' 7Y-Y
'Bird Music' 1Y-Y	'Flyaway' 12Y-Y	'Little Star' 6Y-Y
'Blynenk' 6Y-Y	'Fresh Season' 10Y-Y	'Little Sunshine' 6Y-Y
'Bow Bells' 5Y-Y	'Fyno' 10W-W	'Loyce' 7Y-YYO
'Camborne' 1W-W (v)	'Gadget' 10Y-Y	'Mary Plumstead' 5Y-Y
'Canaliculatus' 8W-Y	'Gambas' 1Y-Y	
'Candlepower' 1W-W (v)	'Gipsy Queen' 1YYWWY (v)	'Mickey' 6Y-Y
'Cedric Morris' 1Y-Y	'Golden Quince' 12Y-Y	'Midget' 1Y-Y
'Chappie' 7Y-O		'Minnie' 6Y-Y
'Charles Warren' 1Y-Y	'Gumnut' 6Y-Y	'Minnow' 8W-Y (v)
	'Haiku' 9W-GYR	'Mite' 6Y-Y
'Chit Chat' 7Y-Y	'Hawera' 5Y-Y	'Mitimoto' 10W-Y
'Clare' 7Y-Y	'Heidi' 6Y-Y	'Mitzy' 6W-W (v)
'Coo' 12Y-Y	'Hors d'Oeuvre' 1Y-Y	'Moncorvo' 7Y-Y
'Cornish Cream' 10Y-Y	'Hummingbird' 6Y-Y	'Mortie' 6Y-Y
	'Icicle' 5W-W	'Muslin' 10W-W
'Crevette' 8W-O	'Jessamy' 10W-W	'Mustardseed' 2Y-Y
'Cupid' 12Y-Y	'Joy Bishop' 10Y-Y	'Nanty' 6Y-Y
'Curlylocks' 7Y-Y	'Julia Jane' 10Y-Y	'Niade' 2Y-Y
'Cyclataz' 12Y-O	'Jumble' 12Y-O	'Northam' 2W-W (v)
'Dainty Monique' 5Y-Y	'Junior Miss' 12W-Y	'Norwester' 6Y-Y
	'Kehelland' 4Y-Y	'Oakwood Sprite' 1Y-Y
'Demure' 7W-Y	'Kholtmes' 10W-W	'Odile' 7Y-O

'Odoratus' 8W-Y	'Sassy' 12Y-Y	'Swagger' 6W-W (v)
'Opening Bid' 6Y-Y	'Segovia' 3W-Y	'Taffeta' 10W-W
'Orclus' 10W-W	'Sewanee' 2W-Y	'Tanagra' 1Y-Y
'Pacific Coast' 8Y-Y	'Shebeen' 6Y-Y	'Tarlatan' 10W-W
'Pakotai' 12Y-Y	'Shillingstone' 8W-W	'Tete-a-Tete' 12Y-Y
'Pango' 8W-Y	'Shrew' 8W-Y	'Three of Diamonds'
'Paula Cottell' 3W-GWW	'Shrimp' 5Y-Y	3W-GWO
'Peaseblossom' 7Y-Y	'Sir Echo' 1Y-W (v)	'Tiffany' 10Y-Y
'Pequenita' 7Y-Y	'Skelmersdale Gold' 1Y-Y	'Tosca' 1W-Y
'Petit Beurre' 1Y-Y	'Small Talk' 1Y-Y	'Towai' 12Y-Y
'Piccolo' 1Y-Y	'Smapple' 10W-W	'Treble Chance' 10Y-Y
'Picoblanco' 2W-W	'Smidgen' 1Y-Y	'Wee Bee' 1Y-Y
'Pixie' 7Y-Y	'Snipe' 6W-W (v)	'Wideawake' 7Y-Y
'Pixie's Sister' 7Y-Y	'Snook' 6Y-Y	'Woodstar' 5Y-YWW(v)
'Pledge' 1W-W (v)	'Spider' 6Y-Y	'Wren' 4Y-Y
'Poplin' 10Y-Y	'Spoirot' 10W-W	'Wyandot' 1Y-Y
'Quince' 12Y-Y	'Sprite' 1W-W (v)	'Wynken' 7W-W
'Raindrop' 5W-W	'Stafford' 7Y-YYO	'Xit' 3W-W
'Rikki' 7W-Y	'Star Music' 6Y-Y	'Yellow Fever' 7Y-Y
'Rockery White' 1W-W	'Star Song' 6Y-Y	'Yellow Pet' 10Y-Y
'Rosaline Murphy' 2Y-Y	'Stella Turk' 6Y-Y	'Yellow Xit' 3W-Y
'Roundita' 1Y-Y	'Stocken' 7Y-Y	'Yimkin' 2Y-Y
'Rupert' 1W-Y	'Sun Disc' 7Y-Y	'Zeals' 8W-Y
'Sabrosa' 7Y-Y	'Sundial' 7Y-Y	'Zip' 6Y-Y
	'Sunny Maiden' 6Y-GYY	

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'Entente' 2Y-O



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'Quiet Waters' 1W-W

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Tom Stettner Jr. photo



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Payment in US\$ to be made to the ADS Executive Director; Payment in UK£ to The Daffodil Society, Ian Tyler, 32 Bentham Road, Standish, Wigan, Lancashire WN6 0ND, UK (daff@ityler.freeserve.co.uk)

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AMERICAN DAFFODIL SOCIETY

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