

Symposium on Miniature Daffodils

Mary Lou Gripshover

A symposium on miniature daffodils was held in Nashville, Tennessee, on 1 November 2008 following the American Daffodil Society Fall Board Meeting. Six speakers presented their views on current trends in breeding miniature daffodils. Speakers were Nancy Wilson, California; Delia Bankhead, North Carolina; Harold Koopowitz, California; Larry Force, Mississippi; Leone Low, Ohio; and Lawrence Trevanion, Canberra, Australia.

Nancy Wilson's presentation was a look backward on 'A History of Miniature Daffodils.' She traced early writings back to John Gerard who quoted writings in existence since 900AD, and included illustrations of several in his 1597 *Herbal*. Alfred Tait wrote in 1886 that he was receiving numerous requests from friends in England for information on various species. These early botanists and hobbyists were collecting species for their herbariums and rock gardens. It is principally the rock garden that inspired hybridizers to work with small daffodils. One of the first publications that uses the term 'miniature' is A M Kirby's *Daffodils*, Chapter 7, 'Miniature Daffodils for the Rock Garden.' (1907) All miniatures mentioned are species, but by 1914 'W P Milner' appeared in the Walter Blom (Holland) list. Historically, miniatures came about as a result of hybridizers who were trying to create and improve standard daffodils. Alec Gray, England, was one of the first serious hybridizers of miniatures. As the interest in miniatures grew in the US, the ADS discussed the proportions required of miniatures, but arrived instead with a subjective definition and eventually settled on an Approved List of Miniatures. This first list contained the names of 75 hybrids and nearly 50 species. Roberta Watrous, Chairperson of the Committee on Miniatures, Species and Minor Classification, was one of the first Americans to pursue hybridization of small daffodils in her small Washington, DC garden.

Delia Bankhead spoke on the importance of choosing the proper parents. Early on she recognized the importance of Blanchard's 'Pequenita' as a parent, and has produced both white and yellow flowers from it. Her pollen parents are usually white—*N. dubius*, *N. triandrus*, *N. watieri*, and 'Candlepower' and 'Camborne', both 1W-W. These crossed with 'Brooke Ager' and 'Pink China', both 2W-P, and 'Newcomer' 3W-P have given her miniature hybrids with strong pink cups. She says she wasted a lot of time trying to use *N. watieri* as a seed parent before realizing the difficulty of getting other pollen to take on it. While she has many pink Division 8 seedlings from both 'Pink China' and 'Brooke Ager' × *N. dubius*, her favorite is 'Luciebelle' ('Brooke Ager' × *N. triandrus* subsp. *triandrus* var. *triandrus*), the first miniature 5W-P.

Harold Koopowitz spoke on the difficulty caused by ploidy in breeding miniatures, since most miniatures are diploids and crosses between them and the standard tetraploid daffodils yielded sterile triploids. Embryo rescue is one way around endosperm failure, though this is expensive and requires laboratory facilities. Using Oryzalin to convert some miniatures to polyploids has induced fertility which allows breeding on. He says the most successful route to getting color into miniatures has been either to mate intermediate or small standard daffodils with miniatures from Divisions 1 and 6. These have yielded a number of strongly colored flowers in Division 2. In his climate, Southern California, *N. dubius* grows and flowers very well, and since 1997 he has used it extensively in his breeding program. Some

95 crosses have been made using it as a pollen parent, though not all have yielded miniatures, and quality varies in those that are. A cross of 'Rimski' × *N. dubius* has produced some nice seedlings, but they became very important when he noticed a seedpod on one seedling. Other species pollen was used on several more flowers, seed was harvested and hopes are high that breeding within and among these hybrids will be possible. Koopowitz has also used 'Pink China' as well as 'Little Ruby' with *N. dubius* to develop highly-colored Division 8 flowers.

Larry Force began breeding miniatures when he found that there weren't many miniatures available commercially, so his only option was to raise his own. His first cross was 'Sprite' × 'Swagger'. Early on, his crosses were between various cyclamineus hybrids—'Mitzy', 'Snipe', 'Swagger', 'Minicycla', 'Little Star', 'Snook', as well as *N. cyclamineus*, and the little white trumpets 'Candlepower' and 'Camborne'. He finds that 'Gypsy Queen' is a good parent and often transmits white coloring to its children. Force likes the petunioid-form bulbocodiums, so he has tried to get later blooming bulbocodiums by crossing the early flowering 'Julia Jane' with the Golden Bells Group. 'Pink China' × 'Swagger' has yielded a fine 2W-P.

Leone Low's emphasis has followed two tracks—to increase their viability, primarily that of 1W-Ws, and to obtain more color and more midseason blooms. 'Candlepower', 'Alec Gray', and 'Camborne' figured strongly in the first track, as did pollen of Colin Crotty's miniature 6W-Ws. Duncan D727 ('Altruist' o.p.) as seed parent has given flowers with yellow petals and various amounts of orange in the cups. An open pollinated seedling from 'Glory of Lisse' shows promise as do some poets from a cross of 'Array' × 'Angel Eyes'. Many small poet seedlings are in the pipeline.

Lawrence Trevanion, living in Canberra, Australia, has daffodils flowering for seven months of the year, from February to October. Tazetta breeding is difficult because the seed pods are destroyed by winter frost. Therefore, three months of the year are dominated by bulbocodiums, which seem to be the hardiest winter daffodils. They come in colors from sparkling white to very deep yellow, as well as reverse bicolors. Green sometimes appears on the perianth, sometimes as a fully green perianth (10G-Y), sometimes as a tip, and sometimes as green veins. The green can be very attractive and should not be judged, in his opinion, as a color fault. In size, bulbocodiums range from miniscule to larger than the accepted size for miniatures. In form, the perianths range from reflexed to deflexed while the coronas range from conical to petunioid, with incurved and outcurved rims, with ruffles, pleats and serrations. Lobes of three and six are possible and can be so deep that the flower is technically Division 11. Intersectional hybrids are hard to achieve. He has flowered just one from 'Alfriston' × *N. bulbocodium*. It has proven vigorous and surprisingly fertile, so it may be that intersectional hybrids will prove to be an important new area of breeding.

For a complete report on the proceedings which are in the March 2009 issue of *The Daffodil Journal*, contact Jaydee Ager, ADS Executive Director, at jager@dishmail.net. Price, including overseas postage, is about \$7.00.

About the author:

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