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THE AMERICAN

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## Daffodil Handbook

*A Special Issue of the American Horticultural Magazine*

GEORGE S. LEE, JR., EDITOR

Representing the American Daffodil Society  
WILLIS H. WHEELER, *Executive Editor*

Representing the American Horticultural Society  
FREDERIC P. LEE, *Member Editorial Committee*

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The cover illustration is a four-color photograph of Accent, one of the new pink daffodils. Bred and introduced in 1960 by Grant E. Mitsch of Canby, Oregon.

Plates 2, 11, 36-41, and 54 are published through the courtesy of the Netherlands Flower-Bulb Institute, Inc.

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PLATE I

U. S. DEPARTMENT OF AGRICULTURE

B. Y. MORRISON

to whom this issue of the *American Horticultural Magazine* is dedicated.

## B. Y. Morrison

1891—1966

Benjamin Yoe Morrison died in Pass Christian, Mississippi, January 24, 1966. Born in Atlanta, Georgia, he spent most of his professional life in the Washington, D. C. area and nearby Takoma Park, Maryland, where he had his home until retirement in 1951.

Ben Morrison was the principal founder of the American Horticultural Society in 1924. He served as Editor of its *American Horticultural Magazine* for 37 years until 1963, and as President of the Society from 1936 to 1940. Through the years his enthusiasm, limitless energy, extensive contacts with horticulturists, gardeners and botanists and his remarkable number of horticultural lectures and articles enabled the Society to grow and take a leading position in American horticulture. Morrison spoke and wrote with an excellence of style that included a special verve and charm.

For the Magazine Morrison insisted on a high standard of original horticultural contributions, scholarly, forthright and accurate, genuinely to inform the serious amateur. He was bluntly inimical to authors whose manuscripts were rehashes or embodied uninformed opinions.

There were many facets to Ben Morrison's activities. By profession he was a horticulturist and landscape architect. Following his undergraduate work at the University of California and a master's degree in landscape architecture from Harvard University, completed in 1915, he served as a 2nd Lieutenant in World War I and then briefly practiced landscape architecture with a New York City firm. In 1920 he went with the United States Department of Agriculture as assistant to David Fairchild. From 1934 to 1948 he was Chief, Division of Plant Exploration and Introduction, and from 1937 until 1951 also Acting Director and then Director of the United States National Arboretum. The Morrison Azalea Garden at the Arboretum was dedicated to him after his retirement as Director. An indefatigable dirt gardener, he tested great numbers of unusual plants in his own gardens in Takoma Park and later at Pass Christian.

As an artist Ben Morrison excelled in his drawings of horticultural subjects and had an extraordinary capacity for carrying in mind over long periods the precise details of flowers and plants. Plates 3-10, 13, and 14 in this Handbook are example of his work. He was also a fine musician, sang as soloist with several choirs, occasionally found time to give voice lessons, was frequently his own accompanist, and had an especial fondness for German lieder.

Ben Morrison has an outstanding reputation as a breeder of ornamental plants. His greatest contributions were in azaleas, the Glenn Dale Hybrids (named after the Plant Introduction Station at Glenn Dale, Maryland) and the Back Acres Hybrids (named after the estate in Mississippi to which he retired). Recently he had been working with the Satsuki azaleas, having sought out and brought in from Japan the only large representative collection outside that country. His observations and descriptions constitute most of the materials on the Satsukis to be found in *The Azalea Book* sponsored by the Society.

Morrison received numerous horticultural awards. Among them were the Gold Medal and the Liberty Hyde Bailey Medal of the American Horticultural Society, the Gold Medal of the American Daffodil Society, the Veitch Memorial

Gold Medal and the Peter Barr Memorial Cup of the Royal Horticultural Society of Great Britain for work in connection with daffodils, the Distinguished Service Medal of the American Iris Society, the Arthur Hoyt Scott Horticultural Medal and Award, and the Sarah Fife Memorial Trophy of the Garden Club of America. He was a Vice-President of the Royal Horticultural Society from 1945 to his death.

Morrison's scholastic excellence earned him membership in Phi Beta Kappa and Sigma Xi and won him the Sheldon Travelling Fellowship in Landscape Architecture that sent him on an early trip to Japan.

Another of Ben Morrison's special interests was daffodils. References to this interest—his encouragement of the early Daffodil Societies in this country and their exhibitions, his editorship of the first five American Daffodil Yearbooks, his numerous daffodil articles, notes and illustration in the *American Horticultural Magazine*—written by John C. Wister before Morrison's death, appear in chapter 16 of this Handbook. A letter received the day after his death relates the receipt from a friend in Mentone, France, of two bulbs of the rare *N. jonquilla* var. *henriquesii*.

There is therefore an especial appropriateness in dedicating this Daffodil Handbook issue of the *American Horticultural Magazine* to Benjamin Yoe Morrison. Few have risen to his pinnacle of accomplishment in ornamental horticulture.

Frederic P. Lee

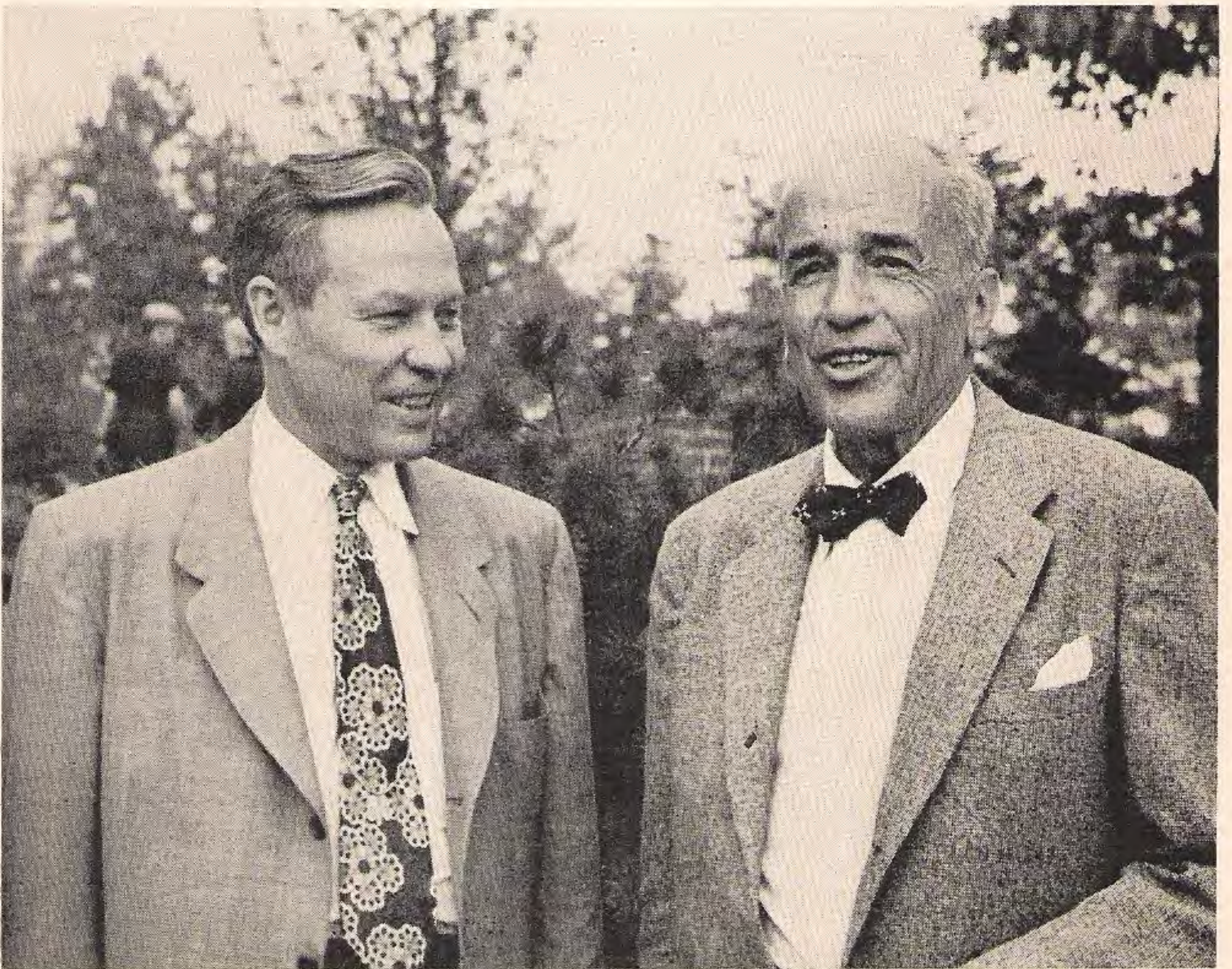


PLATE 1A

U. S. DEPARTMENT OF AGRICULTURE

J. Earl Coke, Assistant Secretary, U. S. Department of Agriculture (left), and B. Y. Morrison, at the dedication of the Morrison Azalea Garden, United States National Arboretum, Washington, D. C., May 3, 1954.

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MURRAY W. EVANS, Corbett, Oregon. Chapter 6E: *Culture in the Pacific Northwest*.

Wholesale grower of daffodil bulbs and cut flowers; has been hybridizing since 1953 to create more vigorous varieties for American gardens, especially whites, pinks, and doubles.

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Plant Pathologist, Western Washington Research Extension Center, Washington State University. Graduate of Marshall College and Iowa State College; Fulbright Scholar to Netherlands, 1951; specializes in diseases of narcissus, tulips, iris, turf, rhododendrons, and salal. Awards for research by Society of American Florists and New England Gladiolus Society; author of *Handbook on Bulb Growing and Forcing*.

ALEC GRAY, Camborne, England. Chapter 23: *Tomorrow's Miniature Daffodils*.

The first and still the leading specialist in miniature daffodils; many of the hybrids on the American Daffodil Society's list of miniatures are of his raising; has sold his nursery which for years was the principal source of small daffodils and now confines his activities to hybridizing. Author of *Miniature Daffodils*.

HELEN GRIER, Yorba Linda, California. Chapter 6F: *Culture in the Pacific Southwest*.

Charter member of the American Daffodil Society and currently Regional Vice President; a daffodil hybridizer since 1952 who recently registered her first two varieties.

DR. GEORGE G. GYRISCO, Ithaca, New York. Chapter 7: *Pests*.

Took his Ph.D. at Cornell University in 1947 and has since been on its faculty. Head of Department of Entomology and Limnology and Professor of Entomology in research and teaching; author of over 150 papers on entomology.

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Graduate of Stanford University with major in chemistry and minor in mechanical engineering; now Senior Engineer with California Division of Highways. Hobby is the family *Amaryllidaceae* especially genetics and hybrids of *Crinum* and *Nerine*; leading authority on tazettas.

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Charter member, Director and former Regional Vice President of American Daffodil Society; former Chairman of its Committee on Daffodil Study and Show Schools. Holder of honorary Distinguished Gardener Certificate from Oklahoma State University.

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Daffodil nurseryman and the only professional daffodil hybridizer in England; continuing the work of the late Walter O. Backhouse in developing red trumpets. Author of *The Daffodil* (1951).

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General Data Processing Manager for Ohio Bell Telephone Co., President of American Daffodil Society (1960-62); has grown daffodils for 25 years producing specimen flowers with minimum ritual.

FREDERIC P. LEE, Bethesda, Maryland. Chapter 24: *Choosing and Registering Daffodil Names*.

Director and member Editorial Committee of American Horticultural Society; Chairman, Advisory Council of the United States National Arboretum. Author of *The Azalea Book*, recipient of Gold Medal of the American Horticultural Society, The American Rhododendron Society, and other awards. Charter member of the American Daffodil Society.

GEORGE S. LEE, JR., New Canaan, Conn. Chapter 3: *Kinds of Daffodils*; Chapter 10: *Natural Plantings*; and Chapter 14: *Miniature Daffodils*.

Editor of the Daffodil Handbook; charter member and former President of the American Daffodil Society (1957-60) and recipient of its Meritorious Service Medal; persistent spokesman for miniature daffodils and American strains of hybrids.

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Graduate of Indiana University with major in botany; Chairman of Committee on Daffodil Study and Show Schools of American Daffodil Society; Master Judge and horticulture instructor of National Council of State Garden Clubs; charter member and recipient of Meritorious Service Medal of American Daffodil Society and Honeywell Trophy for excellence in horticulture in Indiana.

DR. FREDERICK G. MEYER, Takoma Park, Maryland. Chapter 4: *Narcissus Species and Wild Hybrids*.

Research Botanist in charge of Herbarium, United States National Arboretum, Washington, D. C. He is also a plant explorer and introducer. Recent exploration trips have included Ethiopia, Western Europe with special attention to daffodils, and the Juan Fernandez (Robinson Crusoe) Islands. Member Editorial Committee, American Horticultural Society.

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The leading grower and source of American-bred daffodils with some 125 of his own varieties registered and introduced; has made important advances with many types of daffodils, especially pinks and reversed bicolors. Charter member of American Daffodil Society and recipient of its Gold Medal (1965).

B. Y. MORRISON, Pass Christian, Mississippi. Chapter 6B: *Culture on the Gulf Coast*.

Mr. Morrison died while the Daffodil Handbook was at the printers. Photographs and a memorial statement setting forth his horticultural achievements appear in this Handbook. "He added to the stature of all horticulture."

DR. CHARLES R. PHILLIPS, Frederick, Maryland. Chapter 1: *Daffodil, Narcissus, or Jonquil?*

Division Chief at the United States Army Biological Laboratories, Fort Detrick, Md. A research chemist by profession, he has been raising and breeding daffodils as a hobby and has an extensive collection of old daffodil books and prints. Managing Editor of the American Daffodil Society Yearbook for two years.

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Operates three large dairy farms; grows two acres of daffodils for cut flowers and raises thousands of seedlings annually; competes successfully at national shows; vice president of National Daffodil Society of New Zealand.

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Migrated to Australia in 1921 from Holmwood, Surrey, England under Government-sponsored Farm Apprentice Scheme; entered St. Barnabas Theological College and ordained 1930. Began to raise daffodils in 1940 and grows an extensive collection; successful show competitor and daffodil breeder.

ESTHER SEEMAN (Mrs. Julius Seeman), Nashville, Tenn. Chapter 9: *Daffodils in the Home Setting*.

Regional Director of American Daffodil Society and former President of Middle Tennessee Daffodil Society. Lecturer in Political Science at George Peabody College.



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A lawyer representing the Dutch bulb industry as General Counsel for the Holland Bulb Exporter's Association and as Director of the Netherlands Flower-Bulb Institute. Made an officer of the Order of Oranje-Nassau by Queen Juliana in 1952 and in 1965 received the Golden Mercury Award of Interflora, the world-wide florist delivery organization.

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Associate Professor of Textiles, Clemson University. As a hobby grows and hybridizes daffodils to select and develop varieties suitable to the southeastern United States; consultant on daffodils for Clemson University horticultural test garden. Director of American Daffodil Society.

DR. TOM D. THROCKMORTON, Des Moines, Iowa. Chapter 6C: *Culture in the Corn Belt*.

Surgeon and member of many professional societies. Founder of the Daffodil Data Bank, the first application of automation to amateur horticulture. Director of American Daffodil Society and 2nd Vice President of American Horticultural Society.

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Trained in botany and plant pathology at University of California, Los Angeles; has devoted most of his time since to culture of bulbous crops and their pests and diseases; his duties have taken him to bulb-growing areas of Europe, South Africa, and Japan; charter member, President of American Daffodil Society (1962-64), and recipient of its Meritorious Service Medal.

DR. JOHN C. WISTER, Swarthmore, Penn. Chapter 16: *Daffodils in the United States*.

Distinguished American horticulturist who played a major role in spreading interest in the modern daffodil. Director of the Arthur Hoyt Scott Horticultural Foundation. Charter member of the American Daffodil Society, recipient of its Gold Medal (1961) and the honors of many other plant societies. Author of numerous books and articles; the only American to whom a *Daffodil and Tulip Year Book* of the Royal Horticultural Society has been dedicated (1965).

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Assistant Director of Arthur Hoyt Scott Horticultural Foundation of Swarthmore College. Director of American Daffodil Society and Editor of its Yearbook, 1962-64; author of *Hardy Garden Bulbs*.

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## FOREWORD

It can hardly be a coincidence that both the Royal Horticultural Society and the American Horticultural Society have shown special affection for the modest daffodil. The venerable English society sponsored the first Daffodil Conference in 1884. Since 1913, as military and economic needs permitted, it has published 31 Daffodil Year Books. Under its guidance, the accepted classification of the genus for garden and show purposes has evolved. It published the first *Classified List of Daffodil Names* in 1908, a compendium which has gone through 19 editions and been further sanctioned by designation of the Society as the International Registration Authority for narcissus. The Society's two annual daffodil shows set the standard for such exhibitions and the awards made at its Wisley trial gardens are the premier honors of the daffodil world.

It is likely that more space has been devoted to daffodils in the publications of the American Horticultural Society than to any other flower. A series of Daffodil Year Books which began in 1935 was suspended due to restrictions of World War II. The ferment which began within the Society from the enthusiasm of its editor, B. Y. Morrison, spread throughout the neighboring states of Maryland and Virginia and was the genesis of daffodil societies and shows in those states, eventually leading to the formation of the American Daffodil Society.

Such overt partiality for one of the commoners of the plant world must be due to its intrinsic merits. Perhaps Lord Aberconway stated it in opening the Daffodil Conference of 1935: "Daffodils have a wide interest, because they are, as we all know, great garden flowers; they are tolerant of soil and tolerant of climate and they resist Spring frosts as few other plants will. They are found in the garden of the cottage as well as in the garden of the mansion, and they are found in great beauty and profusion in our public parks. Not only is the Daffodil a great garden flower, but I think it is a flower which you might call everybody's flower."

It is as everybody's flower that the daffodil is presented in the following pages; easy to grow, inexpensive to buy, quite free of disease, generous of increase, radiant in the early spring garden, and graceful as a cut flower in the home. Those who surrender to its charms will find that there is almost no limit to the ritual they may make of cultivation for the creation of exhibition flowers nor to the amount they may pay for the first offering of a choice novelty, but such extremes have no place in our story of the daffodil as a garden flower.

While the daffodil is an old flower, flourishing with ancient civilizations around the Mediterranean, its story as an important garden flower is rather brief, dating back scarcely more than a hundred years abroad and only to the early part of this century in the United States. As a result of this sequence, interest in daffodils in this country waited upon progress made in the British Isles and to a large extent this dependence continues.

Dependence on distant sources for plants, either overseas or even within our own country, is not an ideal situation. It has been proved in the past, first with grapes, more recently with rhododendrons, that American-bred stock is generally healthier, hardier, and more vigorous for growing in the United States than its imported counterparts. Daffodil fanciers are willing to write off a year or so, or even more, for an imported exhibition novelty to "settle down," a period of adjustment which the Dutch seem to have largely avoided in breeding their daffodils for garden rather than show performance. However, as Tom Throckmorton has pointed out, there is no more reason to expect Irish daffodils to do well in Iowa than there is for Iowa corn to succeed in Ireland, and it might be added that a selection of daffodils which prospered in Massachusetts would not necessarily find Oklahoma to their liking.

Daffodil breeding is just getting under way in this country. A few professionals and possibly a hundred amateurs are hopefully dabbing pollen and raising seed-

lings. From all this activity will come many varieties of American breeding; most will only prove the raiser's optimism and impatience, but a few will be the forerunners of an assortment of daffodils tolerant of the American climate and resistant to domestic ailments. In a land of not one, but many, climates, it is inevitable that local strains will appear.

There is no thought to disparage the work overseas which preceded any activity in this country—it is the base upon which we must build—but there seems to be little question that the future of the daffodil as a dooryard flower of American homes awaits the accomplishments of our own amateur hybridizers. It is an unplowed field and the principal requirements are youth, enthusiasm, and patience.

It is well for the beginner in daffodils to understand certain facts which set the daffodil apart from most other plants, including bulbs. Breeding daffodils is slow work; a generation from seed to flower is from four to seven years. The bulbs increase steadily, but slowly; this year's bulb will not be much more than two bulbs next year. There are faster and easier paths to wealth than hybridizing and growing daffodils, therefore, there are few who find their livelihood in the field. The number of new varieties introduced each year is small compared to day-lilies or iris. Because outstanding new introductions are infrequent and will not be in good supply for many years, they will command high prices which drop slowly.

On the other hand, good varieties are not quickly superseded. Who knows where the iris and gladiolas of 1923 are, yet daffodil Fortune is of that vintage and still a credit to any garden. But slow whittling away of prices does eventually result in a figure which yields little gain and the urge is strong to abandon an unprofitable variety regardless of its merits and replace it with something newer, more expensive, and possibly better. For such reasons the gardener will find that a good deal of judgment may be exercised profitably in building up his collection of daffodils. He will gradually become aware that price is not always a measure of value and that the new is not necessarily better than the old.

No attempt has been made in the Handbook to mention every current novelty; they can be found in the catalogs of specialists. In the chapters concerned with daffodils in the garden (Chapters 3, 13 and 14), the discussion as a general rule has been confined to varieties which cost no more than a dollar or two, are cataloged, and have proved to be good garden flowers.

From the list of contributors it will be seen that many capable hands have joined in the preparation of this Handbook. Some have played down their own role in the events they describe, and it has been possible to correct this modesty only in a limited way in the thumbnail biographies of our contributors. No attempt will be made to single out individuals for special mention—the Handbook has been a team effort—although the rule must be breached to the extent of acknowledging that the contribution of many pages of line drawings by B. Y. Morrison is a special gift of the time and skill which has characterized his life-long interest in daffodils.

It is personally gratifying in these discordant times to have held the baton during a performance which met with such complete harmony of purpose and action between The American Horticultural Society and the American Daffodil Society. Whenever invoked, the cooperation of the management and members of both societies has been notable. In these last few lines it should be permissible for the editor of the Daffodil Handbook to face his audience and call upon all those numerous individuals behind him who have participated in this tribute to the daffodil to rise and acknowledge the approval which their efforts have earned.

GEORGE S. LEE, JR.

New Canaan, Connecticut  
January, 1966



PLATE 2

TREVITHIAN  
Jonquilla Hybrid, Div. 7b

## —1— Daffodil, Narcissus, or Jonquil?

The daffodil is the earliest of our truly important garden flowers. By important, I mean those flowers grown in almost every garden, used indoors by all those wives who have vases to be kept filled, sold by all flower dealers and even in the supermarkets—those flowers whose large followings of enthusiasts form specialized organizations, issue publications devoted entirely to their further cultivation, hold regular shows and exhibits, and offer other tributes in their honor. The daffodil starts this parade in early Spring. The chrysanthemum ends it in the Fall. Yet with all its importance, with millions of new bulbs sold each year and with old ones persisting so many years that there is hardly a garden in which it does not bloom, the general public cannot agree on what to call it.

### DAFFODIL VERSUS NARCISSUS

The question, "What's the difference between a daffodil and a narcissus?" is heard often by those organization members who tend booths at flower shows. As a result, when the members of the American Daffodil Society placed a special exhibit several years ago at the International Flower Show in New York, they had the foresight to prepare themselves with a printed leaflet to hand out to answer just that one question and spare themselves the chore of repeating the same thing over and over. And yet, the answer is simple: "There is no difference." Both refer to the same genus of flowering bulbs. One is the common name; the other the Latin botanical name, which is also often used as an alternative common name in this country.

Latin is no longer a living language, even though it did persist in regular usage long after the fall of the Roman Empire. For centuries during the Dark

Ages it persisted in the monasteries, and even into the Renaissance it lasted as the universal language, used by scholars and others who needed to write and talk to others outside their own countries with whom they had no common modern language. Science revived during this latter period, and since it was international, Latin was used by the earliest botanists in writing to one another and in printed texts. Later, French became the more or less universal language, with German a strong contender in science, and today English is gradually replacing both for this honor. This being the case, today there is no reason to avoid using English terms, even in technical writing, and daffodil should be preferred over narcissus in common English speech and in general horticultural or gardening literature. After all, there is the American "Daffodil" Society, and although the Royal Horticultural Society does still maintain a "Narcissus" and Tulip Committee, there is also a "Daffodil" Society in England. They do have "daffodil" shows there, and they publish a "Daffodil" and Tulip Year Book under Royal Horticultural Society sponsorship. Exact systematic botany, however, with its roots in Latin, still uses Latin terminology, but this should apply only to wild species, their botanical varieties or forms, or to their natural hybrids in the wild and should not carry over into the man-created modern horticultural plants. With modern garden forms, we should attempt to encourage the use of the term "daffodil."

I might mention that this confusion as to correct terminology seems to exist today only in English among modern European languages. The Dutch call the flower *narcis*, the Germans *narzisse*, the French *narcisse*, and the Spanish and Italians *narciso*, all cases in which Latin common words undergo slight modifica-

tion when carried over into modern languages. These terms are pluralized according to customary practice of making plurals in these respective languages. In French *daffodille* and *jonquille* also appear in dictionaries, but it is mainly in English that the most used common name, daffodil, differs radically from the original Latin term "*narcissus*." There are also a few colloquial terms used in the European languages as I gathered from letters from the two Dutch authorities, William van Leeuwen and Mathew Zandbergen, to whom I wrote concerning foreign usage. Zandbergen in particular referred to the French colloquial terms (also applied to other flowers, it seems) of "Tue-chien" or "Mort au Chien." Dead dog, indeed!

The problem in English is that daffodil, the early common name, and common usage of the exact botanical name *Narcissus* are to a large degree in competition with one another, with the term "jonquil" also adding to the confusion. This situation, if not universally unique, is at least unique in English among what I have termed the important flowers. Specialists who collect rare succulents may disdain the common English term "houseleek" and talk of their collection of *Sempervivum* to the utter confusion of the non-cognoscenti. With plants widely grown, however, such confusion rarely exists. In many cases such as this, the common name and the botanical name will differ widely. Everyone knows a lilac when he sees one, calls it that, and only professional botanists writing for formal publication will use *Syringa*. In many other cases the common name and the botanical generic name are very similar and, hence, not confused. A rose is always a rose in English, though the genus is *Rosa*, similarly, tulip and *Tulipa*. In many cases there is no truly common name, and the botanical name is in common usage. A case in point is chrysanthemum. The only difference is that when used scientifically, it is capitalized and printed in italics.

Thus we have in regular English usage, common names for plants that fall into three categories: those completely different from the Latin generic name,

those similar but spelled slightly differently, and those in which the generic and the common name are identical. In the article "Re Latin Plurals," *American Daffodil Yearbook*, 1959, written in a vein that I hoped was both humorous and accurate, I indicated that those flowers known a long time in their respective countries and having well-established names kept those common names. When known from Roman Empire times or introduced by the Roman conquerors, the common names usually were of Latin derivation. When the botanists placed them formally in various genera, they differed from the common name only in minor spelling differences, as do the Latin terms that come down into the modern Romance languages or into those English terms that derive from the Norman Invasion. Thus the rose in modern French and English is a member of the genus *Rosa*, as mentioned earlier. Common names not Latin in derivation received quite different Latin names when cataloged by the early botanists. So, it is *Sempervivum*, rather than houseleek, or *Ilex*, rather than holly. In cases where the common name and the exact botanical name for the genus are identical, we are usually dealing with plants introduced relatively recently, and therefore having no common name antedating the beginning of scientific botanical nomenclature.

#### ORIGIN OF THE NAME NARCISSUS

The exact derivation of names is a tricky affair, especially names in common usage in any particular modern language. Even though scholars specializing in the field have given a nice scientific term for it, "philology," individual cases are often a matter of speculation. Let us speculate on the derivation of the terms "daffodil" and "*Narcissus*."

There is no doubt about *Narcissus*. Linnaeus in his epochal *Species Plantarum*, 1753, used that word as the generic name for the same group of plants to which it is applied today, in spite of the efforts of some later botanists to split the group into five or more separate genera. The term was the old Latin term for this flower, and was used by the



Roman poet Ovid. In his *Metamorphoses* he told the tale of the handsome Greek lad who, because of his habit of admiring his own reflection in a pool, drowned and was changed into a flower forever growing and nodding at its own reflection beside a stream of water. From this version of Ovid's Latin term "narcissus," there came into the medical psychiatric literature the word "narcissistic." However, and here is speculation, Ovid was retelling a Greek story, and there is a Greek word "*narke*," meaning deep sleep or stupor, which gives rise to another chemical or medical term, "narcotic." The daffodil bulb does contain a toxic alkaloid which, when eaten, produces this effect. Pliny, another Roman author, who wrote not poetry but almost the first effort at a scientific text on natural history, attributed the derivation of the name of the flower to this Greek term, "*narke*," and not to the *fabuloso puero*, or boy in the fable. Since certain wild forms of *Narcissus* are native to both Greece and Italy, this sounds logical and led me to state in an article "And that's how the Daffodil got its Name," *American Daffodil Yearbook*, 1960, that the Greeks called our favorite flower "stupifying" and meant it literally. So much for *Narcissus*, the official botanical term since 1753 when Linnaeus established it. But what about daffodil and other less used common English names?

#### ORIGIN OF THE NAME DAFFODIL

Daffodil goes far back in common English terminology and was regularly used to describe the wild native (or was it introduced by the Roman conquerors?) yellow trumpet, *Narcissus pseudo-narcissus*. This is the daffodil that Wordsworth immortalized in his phrase "When all at once I saw a cloud, a host of golden daffodils." Bowles, in his excellent book *A Handbook of Narcissus*, London, 1934, lists nine or more variations of the spelling in older English literature, including Daffa-down-dilly, but daffodil it has been in English for a long time now. He considers it a variant of Asphodel. This term also goes back to Greek and Latin, and in its various forms appears in many of the early herbals.

What is certain, however, is that Linnaeus used the term "*Asphodelus*" for another genus belonging to the family *Liliaceae* rather than for the genus *Narcissus* belonging to the family *Amaryllidaceae*. Whatever its original derivation (and although its older form now refers to a different group of plants and one unimportant horticulturally), in modern form daffodil is certainly the common English term for those bulbous plants belonging to the genus *Narcissus* and is a perfectly respectable term for use in modern horticultural terminology.

This point has been made over and over, although it has still to become well-established in common terminology. I cannot help but quote Parkinson, who wrote in 1629 in his *Paradisi in Sole Paradisus Terrestris* (fortunately republished in facsimile in 1904 so that it is now more readily available), "Many idle and ignorant Gardeners . . . doe call some of these Daffodils Narcisses, when as all know that know any Latine, that Narcissus is the Latine name, and Daffodil the English of one and the same thing." Obviously, even after 300 years many have not yet got the word.

According to my Irish and British correspondents, Mrs. J. L. Richardson, C. F. Coleman, Alec Gray, and Michael Jefferson-Brown, the two terms in common usage there are "daffodil" and "narcissus." The former term is usually applied to the large yellow trumpet or large-cupped varieties, which are similar in appearance to the native trumpet. However, "Lent Lily" seems to be used also for the wild species. With the smaller, shorter-cupped, and mainly white varieties, "narcissus" is the term generally used by the British public. These types are of relatively recent (i.e., post-Linnaean) introduction. They originally appeared in southern Europe and the Mediterranean area in the wild form, and they do not particularly resemble the large yellow trumpets. This nomenclature is in keeping with the general theory that when plants come into common use only after they have received an official botanical name, the Latin generic name usually becomes the common name. However, because of inten-

sive hybridization between these two types, modern gardens contain all sorts of intermediate varieties, and everyday British gardeners are confused as to the correct terminology. The British authorities prefer daffodil for the whole genus, but the situation deplored by Parkinson still persists, although perhaps it is improving.

### JONQUIL

In the United States we have still more complications with a third common name, "jonquil." As a youngster in Georgia, I never heard the term "daffodil." We had old varieties there that had persisted in the same place, or had been passed along from garden to garden, for over a hundred years. The yellow ones were all jonquils to the Southerners. Some of these were actually relatives of *N. jonquilla* of Linnaeus, particularly the old campernelle type, which is now considered a natural hybrid. But as Miss Elizabeth Lawrence, North Carolina, reminds me, a small early yellow trumpet has been grown just as long in the Deep South, and it is also called a jonquil there. Narcissus is still used as a common term in the South as well as over the rest of the United States and the British Isles, but is usually applied in the South to the many varieties of *N. tazetta*, which persist outdoors there. Late-blooming *N. poeticus* and its relatives do poorly in those warm climates, but where grown they would be called a narcissus also, and not a daffodil.

B. Y. Morrison from Mississippi and Mrs. G. F. Roennfeldt from Missouri also confirm my opinion that jonquil is the usual Southern term for yellow forms, and Mrs. D. H. Patteson-Knight and Mrs. G. D. Watrous tell me it is common as far north as Virginia and the District of Columbia. I was surprised to hear of its use in Iowa from Tom D. Throckmorton and in California from L. S. Hannibal (along with the use of "China Lily," rather than narcissus, for *N. tazetta*). Only Helen Scorgie from the far North in Massachusetts denies that jonquil is a common term in her region. Apparently most of the United States is burdened with three names in common use: daffodil, narcissus, and jonquil.

The origin of jonquil is also classical. *N. jonquilla* goes back to Linnaeus. The term is a diminutive form of the Latin word for reed or rush and was used to designate the unusual leaf, which is round or rush-shaped rather than flat as in the other major groups of wild *Narcissus*. Several closely related species also have this characteristic, along with small yellow flowers, usually several in a cluster and with a strong, distinctive, sweet odor. The modern hybrids of the jonquil group (Div. 7 in the present *Classified List*, see Chapter 3) usually retain the distinctive leaf and flower characteristics. The one exception that comes to mind is Shah which most people at first glance would consider a trumpet. Its odor, however, betrays its jonquil ancestry.

As a common name, however, jonquil should be avoided unless deliberately applied to the wild species of that group and their Div. 7 hybrid descendants. It is definitely inaccurate to apply it to trumpets and other large, yellow, modern garden hybrids, as is so frequently done in the South and other regions of this country.

### PLURAL OF NARCISSUS

I cannot end without bringing up an old prejudice of mine expounded at some length in "Re Latin Plurals." It is rather commonplace now to bring foreign terms into all modern languages. Telephone and airplane are terms picked up by all tongues. Sputnik will probably appear in future editions of Webster, if it is not there already. However, spelling of these new terms is sometimes changed to conform with grammatical practice in the new languages and, in particular, established procedures in forming plurals are usually followed. This practice of forming customary plural forms was usually followed with the newer plants that had no older common name and simply used the botanical generic name in common usage after the plants were introduced. Thus chrysanthemum, plural chrysanthemums, never chrysanthema; azalea, plural azaleas, not azaleae in English. However, Latin words ending in -us cause

problems in English grammar. Modern American dictionaries give the plural *narcissuses* as first preference, *narcissi*, the Latin plural, as second choice. The latter form is rather widely used in England (even by the Royal Horticultural Society) and by the Dutch growers in their English-language catalogs. My claim is that both are equally awkward in English, the first hard to pronounce, the latter affected. So why not *narcissus* for both singular and plural, as with sheep and deer? People who say this is botanically inexact have no refuge there. There is only one genus *Narcissus* even though there are a number of species and subspecies or varieties in that genus. *Narcissi* does not exist as a term in botanical literature. To those who find this logic hard to follow, let me remind them that however many McGregors there may be in the Glasgow phone book, Scotland has just one Clan McGregor.

I sent reprints of "Re Latin Plurals" to the editors of the major American dic-

tionaries after it was published, and received from all of them nice letters saying in effect that this was a very good idea, but that they followed custom rather than establishing it. Whenever the American public took up this recommendation, they would change their dictionaries. The American Daffodil Society, by formal vote of its Board of Directors made the same form "narcissus" for the singular and plural their formal policy several years ago. The American Gladiolus Society officially banned *gladioli* quite a few years previously. The European languages that used a modified form of *narcissus* as their common term all follow their normal custom in forming plurals.

Thus both daffodil and *Narcissus* are correct, the former as the everyday name, the latter as the botanical name. Jonquils, however, are only one of the many kinds of daffodils and the name should be used only for the wild jonquil species and for those plants that are listed under Div. 7 of the *Classified List*.

## —2— General Cultural Requirements

Daffodils are very hardy plants and most varieties will thrive in all types of soil and in most areas of the United States, provided there is adequate moisture and good drainage. They will grow in full sun or partial shade and will generally withstand the vagaries of weather and the abuses of mankind. Insects, rodents, and diseases are not a major problem. The bulbs are planted in the fall and a good show the next spring is almost as certain as death and taxes. "Dig a hole and drop it in" is not the recommended cultural instruction for daffodils, but the expression does indicate that they may be planted with a minimum of effort and give surprisingly good results for 3, 5, or even more years with little or no further attention. Bulbs accidentally dropped on the ground in the fall are likely to send their roots into the soil and bloom the next spring though not even covered with soil. However, better results will be obtained if a few simple cultural rules are followed.

These rules are based on experience in Cleveland, Ohio, and should be applicable in a general way to that part of the United States east of the Mississippi and north of Tennessee and North Carolina. Elsewhere, as the summers become warmer, longer, and more humid or even drier, some modifications of the usual cultural practices are essential and these are considered in a series of regional commentaries to be found in Chapter 6.

It is important to understand that the current year's flower is produced from food stored in the bulb during the previous year's growing period. A good strong bulb, planted in pure sand in the fall, will produce a first-class bloom in the spring without any further food whatsoever, but if flowers are expected in the next and subsequent years, food

must be manufactured by the leaves and restored in the bulb during the early part of the growing cycle when conditions are most favorable. To obtain this restoration and an increase in bloom by the growth and division of the original bulb, the following requirements must be met: a good root system made possible by a porous soil capable of admitting and holding sufficient water and air, good drainage, some soil nutrient, sunlight, and foliage left on the plant until it ripens naturally.

**SOIL.**—To obtain a good root system, bulbs should be planted early in the fall, in September or at least by mid-October, in deeply prepared soil. Since the bulbs should be set so that the base is 5 or 6 inches below the surface and since the feeding area of the roots is all below this level, soil preparation of 12 inches or more is desirable. However, if rock or heavy subsoil conditions restrict preparation to a depth less than this, satisfactory results may still be expected if good drainage is provided, either naturally, or by the use of drain tile or raised beds. Daffodils will not do well in soil that is waterlogged. Depth of planting is not critical. In light soils, daffodil bulbs have a tendency to use their contractile roots to adjust and seek the level they like best, and some may be found 10 to 12 inches below the surface a few years after planting. Daffodils will grow in any type of soil: sandy, loam, or clay, acid, neutral, or alkaline. Clay soil will benefit by the addition of generous quantities of coarse sand, and, unless the soil is fairly rich in humus, the addition of peat moss will improve the tilth. But do not add animal manure which seems to encourage the growth of basal rot, especially in areas where soil temperatures are high.

**FERTILIZATION.**—Daffodils do not re-

quire much fertilizer. If grown in soil which does well for garden produce or other plants, none may be needed. When planting in beds, the incorporation of 2 or 3 pounds of 4-12-4, 5-10-5, or similar formula per 100 sq. ft., well mixed with the soil, sand, and peat mosses at planting time, should be sufficient for several years' growth. When planting in clumps of 3 to 12 bulbs, a handful of fertilizer should be mixed with the soil beneath the bulbs. Bulb food which is sold in most garden stores in small packages is expensive but good and is convenient when planting only a few bulbs. A light application of low-nitrogen fertilizer in the spring as the leaves emerge may be needed if soil tests or poor growth indicate a food deficiency. Fireplace ashes are rich in potash and may be spread on top of the soil any time.

**WATER**—Water is needed in the fall to assure good root growth before freezing weather sets in and again in the spring when active top growth starts. If your area does not have sufficient rainfall to soak the roots during these periods, artificial watering will be most helpful in producing good quality flowers and in developing strong bulbs for future years. It is especially important that newly planted bulbs have ample water soon after planting so that root growth can start immediately. Early planting is useless unless the soil has enough moisture to assure prompt rooting. In areas where autumns and winters are dry or when daffodils are planted under trees where there is competition for moisture, they may need additional soaking, both in fall and spring. Where drainage is good, they can not get too much water while in active growth in the spring.

**LEAVES**—The leaves manufacture the food which is stored in the bulb and it follows that the longer the foliage can be kept green and growing, the larger and better bulbs will be produced for good bloom the following year. It is important, therefore, that the foliage should not be cut until it dies down naturally, usually by the first week in July. The leaves should not be tied together with string or rubber bands or braided since

this restricts the amount of sunlight they would receive if left to die down naturally. When planted in borders, daffodils should be placed so the maturing foliage will not be objectionable, behind ferns or other later growing plants. If daffodil leaves are needed for arrangements, take only one or two from each plant and do not take any from new or expensive varieties.

**SUNLIGHT**—Daffodils need sunlight to develop and continue to bloom year after year. Some shading is desirable in the case of red- or pink-cupped varieties which have a tendency to burn or fade in full sunlight, but if planted in full shade on the north side of buildings or evergreens, daffodils will die out in a few years. Since much of their growth is completed before deciduous trees leaf out in the spring, bulbs may be planted in sparsely wooded areas. When planted close to trees or shrubs, there will be competition for food and moisture, but good landscape effects can be obtained in such plantings, and if additional moisture and fertilizer are added, satisfactory bloom will continue for many years.

**WHERE TO PLANT**—Daffodils of exhibition quality can be grown in clumps in the shrub border where they will receive sunlight for at least half the day. They are most effective if planted in groups of from three to a dozen of one variety in front of evergreen hedges or in the foreground of azaleas or rhododendrons. Be careful to plant the tall trumpets and large cups toward the rear and the nodding, shorter growing triandrus, cyclamineus, and jonquilla varieties in the foreground. If the bulbs are set 5 or 6 inches apart, the clumps will not become crowded for several years, but eventually the size and quantity of bloom will decrease appreciably as the bulbs in the clump multiply. It is then time to dig and replant them. Wait until the foliage has become yellow, then dig promptly before the leaves disappear. The bulbs may be divided and the larger ones replanted immediately in the same spot, after the soil has been prepared and enriched, or they may be stored for replanting in the fall. Daffodil foliage should be removed after it has dried up

and the holes left by the shrunken leaves filled in with soil or mulch to discourage slugs or insects from entering and laying their eggs in or near the bulbs.

**MULCHING**—Mulching daffodil plantings is recommended for a number of reasons. It conserves moisture, keeps the soil temperature at a more even level, discourages weed growth and makes it easier to remove those that do grow through, prevents mud spatter on flowers during heavy rains, and generally improves the looks of the beds or planting areas. Pine needles, where available, are excellent; shredded sugar cane (bagasse) is good and inexpensive; and shredded bark or wood chips are satisfactory as are ground corn cobs or sawdust after the weather has darkened the color. Peat moss is not satisfactory as a mulch since it forms a hard crust that sheds rain and, in addition, will splash on the blooms during a rain as badly as the soil itself.

**LIFTING**—If the bulbs are to be lifted, it is best to do so before the foliage has completely dried up as it is much easier to locate the bulbs especially those grown in clumps in a shrub or perennial border. Dig them with a spading fork being careful not to cut or bruise them and do not let them lie in the hot sun. After shaking off the loose soil, bulbs should be placed in shallow trays, onion sacks, or, for small quantities, in old nylon stockings, being careful to include the label with the variety name. They should be allowed to dry out in a cool and well-ventilated location for several weeks after which they can be cleaned by removing the old dried roots and loose outer skins. Discard any bulbs that are soft or which show any signs of rot. Do not throw these on a compost pile but burn them to prevent possible spread of disease. As the bulbs are cleaned, the offsets should be separated if they break away easily without tearing the basal plate, and all of those to be replanted replaced in the trays or sacks and kept in as cool a location as possible until planting time in the fall. Poet varieties have a very short dormant period and it is wise to replant those as soon as possible. Any variety may be replanted soon

after cleaning except in areas where the weather is very hot and the soil temperature is known to encourage basal rot.

Daffodils are dependable and need not be pampered. They are so easy to grow that successful results are just as likely to be obtained by the beginner as by the skilled daffodil connoisseur. Few garden plants will give so much pleasure with so little effort.

### IMPORTED DAFFODILS

Daffodil bulbs imported from Australia or New Zealand will require at least a year or two to become acclimated to the Northern Hemisphere. Bulbs shipped from Down Under will have bloomed in September and are normally received up here in February or March. If planted immediately, they will try to grow and bloom without their normal resting period. It is understood that some growers handle the bulbs this way, but probably it is better to store them in a moderately warm, well-ventilated storage place and plant them as late in the fall as possible. The effect of this is to lengthen the normal period of dormancy after flowering. If planted early in the fall, they will attempt to hurry into bloom after their extended rest and before winter arrives. However, beginning about September, the bulbs should be inspected occasionally for evidence of softness and, if found, they should be planted promptly.

The first or even second year bloom will very likely not be truly representative of the variety, but from then on the bulb should begin to recover from the shock of changing to our seasons and give more normal bloom.

Bulbs imported from Holland, Ireland, or England, and, indeed, even those moved from one area of the United States to another area may require a year or two to settle down and become contented with their new location. Some varieties become acclimated and do well the first year, others may take several years to produce the quality of bloom equal to that at their home location; a few varieties never do.

As a general rule, and ignoring varietal traits, the length of time required to

settle down is directly related to the difference between conditions under which the bulb was grown and those to which it is subjected in its new home. When the disparity is extreme, typical growth and flowers may sometimes not occur until an entirely new bulb of flowering size has developed from the imported bulb.

### MINIATURE DAFFODILS

Small species and the newer hybrid miniature daffodils have recently become quite popular with the growing interest in small gardens and the backing given them by the American Daffodil Society. They are not suited for growing in rows with the large exhibition varieties but should be planted in rock gardens, on a slope, or, best of all, at the top of a retaining wall which is high enough to let them be viewed without stooping.

While some of the species miniatures can be a bit temperamental, as a rule the miniature garden varieties are less demanding than their larger colleagues, but they do have a culture of their own. None of them is more than two generations from its species ancestors which grow in the mountains of the western Mediterranean, and they are quite contented with a lean, stony soil which is hot and dry in summer and cold and windy in winter. The exceptions are *N. cyclamineus* and all the European bulbocodiums which thrive in quite damp locations. All the rest, while they will tolerate ample moisture when in full growth like all daffodils, should be given a well-drained situation where the bulbs will receive a good baking during the summer. The trumpet and triandrus species enjoy light shade, but the jonquils seem to need full sun.

Most of the miniatures have small bulbs, although there are exceptions, and the depth of planting should take into consideration the size of the bulb; for the smaller ones 2 inches is usually sufficient. However, there is evidence that at least some of the smaller daffodils have ideas of their own as to the depth they prefer. Bulbs of Quince and  $\times$  *biflorus*, no larger than the end of one's fin-

ger and planted near the surface, have been found a few years later from 6 to 12 in. deep. To facilitate finding the smaller bulbs, try planting them in plastic berry baskets, clay pots, or even tin cans sunk in the soil. Cans should be open at both ends and pots should be large enough for ample root run.

The smaller daffodils may be planted fairly close together and the poorest soil seems to yield all the nourishment they require. To make a real showing in the garden it would be necessary to plant a hundred or so of the smaller varieties, but miniatures should be admired closely as individuals. There are easier and less expensive ways to create a big splash of color.

The miniatures offer a certain amount of challenge, especially the species. Some, like *Canaliculatus*, increase rapidly but are reluctant to bloom; others, like the bulbocodiums, are fall and winter bloomers but do not care for our kind of winter; some, like *N. cyclamineus*, are not long-lived, apparently increasing in the wild from seed rather than offsets; and a number, such as *Tanagra*, increase at a painfully slow rate. While failures may mingle with successes, there are certain to be plenty of the latter. Success will be assured if one starts with the hybrids and graduates to the species.

### CULTURE OF DAFFODILS FOR EXHIBITION

The Daffodil Handbook does not concern itself with photography, arrangements, daffodil shows, or other uses the flowers may be made to serve after they have been grown. However, growing daffodils for exhibition is a legitimate venture and a few simple cultural changes are likely to pay extra dividends in blue ribbons.

If the highest quality of bloom is desired for exhibition, or even if the flowers are grown mostly for cutting, it is better to grow daffodils in rows in beds about 4 or 5 feet wide and as long as needed. These beds should be deeply tilled and the sand, peat moss, and fertilizer thoroughly mixed. Plant in rows one foot apart and space the bulbs about 6 in. in the rows. Dig a trench 6 or 7

inches deep across the bed and put a handful of coarse sand under each bulb to improve drainage and encourage rapid root growth. Deep planting tends to discourage bulb increase and permits leaving the bulbs down longer without crowding; shallow planting encourages bulb increase. Before covering the bulbs with soil, it is wise to protect them with 5% granular chlordane or dieldrin (see Chapter 7). This treatment will control the larvae of the narcissus bulb fly which causes considerable damage to daffodil bulbs in many areas.

As bulbs are planted, each variety should be carefully marked with a permanent label and, in addition, a careful record should be made in a notebook or on a map of the location of each variety, since labels always seem to become lost or removed by the little boy next door. The best flowers are generally obtained the second year after planting, but good exhibition flowers should be expected the 3rd, 4th, or even 5th year if given sufficient moisture and good cultivation.

### FORCING

Forcing daffodils is not difficult and it is surprising that few gardeners make the slight effort required to have their daffodil season begin in January rather than March or April. Forced flowers also have a purity and depth of color which cannot possibly be obtained when flowers are exposed to unruly spring weather. A cool greenhouse is ideal for forcing, although a conservatory, sunporch, or any room where there is strong light and the temperature can be kept on the cool side will do almost as well. A few rules must be followed, but they are within the limitations of anyone.

Operations should begin about October 1 by soaking the bulbs for 24 hours in a solution of Rootone or similar rooting stimulant. At the same time sufficient pots or boxes should be prepared. An 8-inch container will hold half a dozen large bulbs, but whatever size is used it should be at least six inches deep and have holes or cracks for drainage. Fill each container to within two inches of the top with any light soil, gently compact it, set the bulbs close together, and then fill to the rim with additional soil.

The noses of the bulbs should protrude. Fertilizer need not be added to the soil, but the planted pots should be thoroughly watered on two successive days. Waterproof labels should be firmly attached.

The containers must be stored below frost while a strong root system is formed. A trench is preferable and should be dug to a depth that will allow eight inches of soil above the rims of the buried pots. An inch or so of sand or ashes, or even wooden slats, may be placed in the bottom of the trench if there is any reason to question sharp drainage. Set the pots upright, place stakes at each end of the trench to jog your memory, fill in the trench, and cover with a layer of leaves.

The pots may be dug up and taken indoors for forcing when three conditions have been met: 1) ten weeks have elapsed, 2) the new growth is at least three inches high and 3) the flower bud plainly visible. After being taken indoors, the pots should be given subdued light and for two weeks the temperature should be held to 50-55°. For the final two weeks required to complete the forcing full light may be given and the temperature allowed to rise to 60°. Once the flowers have opened, the pots may be placed where desired for decoration, always remembering that heat, especially bottom heat, will shorten the lives of the flowers. Generous daily watering is usually essential to maintain constant moisture.

Not all varieties take kindly to forcing, but there are plenty which do. As a general rule, those varieties which flower early outdoors will force well (see Chapter 13). This means the trumpets, most large-cups, a few small-cups, the cyclamineus hybrids, and certain tazettas. Some varieties known to force well are:

- 1a Cromarty, Golden Harvest, King Alfred, Magnificence, Mulatto, Rembrandt, Unsurpassable.
- 1b Foresight, Music Hall, Patria.
- 1c Ardclinis, Cantatrice, Kanchenjunga, Roxane.
- 2a Aerolite, Bahram, Carbineer, Carlton, Dunkeld, Fortune, Golden Torch, Havelock, Hollywood.
- 2b Brunswick, Carnlough, Daisy Schäffer, Greeting, Kilimanjaro, Mercato, Penvose, Rustom Pasha.
- 2c Dunlewey, Truth, Zero.
- 3a Diana Kasner, Edward Buxton.
- 3b La Riante, Verger.
- 6a February Gold, Peeping Tom.
- 8 Cragford, Early Perfection, Geranium, Silver Chimes.



## —3— Kinds of Daffodils

It would take a good deal of space and serve little purpose to trace the numerous efforts to group daffodils in a meaningful way. The work continues; there is still much uncertainty as to the true species and their relationships, but the final hairsplitting need not concern us, and probably the daffodils are quite indifferent.

Parkinson divided them in 1629 into "Narcissos, true Daffodils, and Pseudonarcissos, bastard Daffodils," based on whether the cup was longer than the "outter leaves" (perianth segments). His successors were scarcely more successful, the number of genera and species waxing and waning until in 1875 J. G. Baker, Keeper of the Royal Herbarium at Kew, brought all the earlier genera together into the single genus *Narcissus*.

Having settled on a single genus, Baker then divided the species into three groups: magnicoronati, mediocoronati, and parvicoronati; thus returning to Parkinson's notion that the length of the corona offered a useful measure for classifying the species which Baker felt did not number more than sixteen. Baker's ponderous Latin titles were irreverently, but aptly, paraphrased "long-nosed," "short-nosed," and "snub-nosed." Today they are referred to as trumpet, cup, and disc or saucer. Botanically, they are the crown or corona.

Three years before his death in 1877, Edward Leeds, a stockbroker of Manchester, England, offered his large collection of seedlings for sale and it was purchased by Peter Barr, who also presently acquired the important collections of William Backhouse and the Rev. J. G. Nelson. Meanwhile other breeders were at work and some method of classifying the growing number of hybrids seemed necessary. Barr consulted Baker and it was agreed to group the hybrids under

the names of their originators. Thus arbitrary, rather than botanical, subdivisions were created bearing such names as Barrii, Leedsii, Humei, Backhousei, Nelsonii, and Burbidgei. Baker's classification of magni-, medio-, and parvicoronati, together with the subdivisions using the hybridizers' names, was used by Peter Barr in a series of catalogs which his firm issued beginning in 1884.

Barr's catalogs proved adequate for some years, but in time the Council of the Royal Horticultural Society decided that the enormous increase in the number of named daffodils, and the crossing and inter-crossing of the once fairly distinct classes, necessitated the adoption of a classification for garden and show purposes. In 1909 a committee recommended the present system, and it was given the blessing of the Royal Horticultural Society. At the same time, the first of many editions of the *Classified List of Daffodil Names* was issued by the Society. In 1955 the Fourteenth International Horticultural Congress designated the Society the International Registration Authority for daffodils and the *Classified List* was renamed *Classified List and International Register of Daffodil Names*.

The classification, which became effective in 1910, was modified in 1915, again in 1923, and thus stood until 1950 when it was substantially revised, and so it stands today. There are eleven major divisions, and briefly it may be said that the first three are based on the length of the corona, the fourth is devoted to double daffodils, the next five bring together hybrids revealing the characteristics of certain species, Div. 10 is concerned with daffodils as they are found in nature, and the last division is a haven for daffodils not otherwise classified.

The 11 divisions with their 18 subdivisions are presented on the following pages. Each subdivision is considered separately with its specifications and its history. Species which have played an important role in development of the garden flowers are identified. A selection of varieties is named for each division or

subdivision; a few for their historical interest, but most because they are good garden varieties carried by dealers at a reasonable cost. Novelties are occasionally noted with the warning that they are scarce and therefore expensive. The chapter concludes with several special lists of varieties.

## DIVISION I TRUMPET NARCISSUS OF GARDEN ORIGIN

*Distinguishing characters: One flower to a stem; trumpet or corona as long or longer than the perianth segments.*

(a) *Perianth colored; corona colored, not paler than the perianth.*

This, the first subdivision of the Classification, has stood without major change since the present system was established in 1910. Prior to 1950, a "yellow or lemon-colored" trumpet was specified, but the revision of that year accepted the broader wording "corona colored," in order to accommodate existing pink trumpet varieties as well as red trumpets of the future; a precaution which events have justified.

A term which is frequently encountered in catalogs and daffodil literature is "Ajax" or "subgenus Ajax." It is a term first used in 1812 by R. A. Salisbury in classifying what were then considered to be the true daffodils. The genus *Narcissus* was restricted to what we now know as *N. poeticus* and its forms; Salisbury created numerous genera named after Greek heroes, and the trumpets were placed in the genus *Ajax*. In current usage, Ajax means a flower, either species or hybrid, of trumpet proportions.

Yellow trumpets trace back, almost without exception, to what is commonly called *N. hispanicus*, sometimes referred to as Maximus or Maximus Superbus, but properly *N. pseudo-narcissus* Linnaeus subsp. *major* (Curtis) Baker. This splendid flower still grows in gardens and orchards in southwestern France and has been known and described since 1576. It is characterized by a rich golden color, large size, a twisted but not unattractive perianth, by fussiness as to

where it will grow, and by extreme earliness; the latter a desirable quality which it has imparted to its numerous offspring.

Without question, the creation of King Alfred by John Kendall in 1899 was the greatest single advance ever made in the progress of daffodils. He accomplished it by crossing *N. hispanicus* with an unknown pollen parent, possibly Emperor or Golden Spur. Sixty-seven years later it is still the most widely grown variety. Those who think there is only one daffodil—the yellow trumpet seen in florists' windows—have King Alfred in mind.

With either pure *hispanicus* or the mixed blood of King Alfred dominating their ancestry, a series of seedlings gradually widened the range of trumpet characteristics. A first-generation seedling of *hispanicus* was Magnificence, still about the earliest trumpet. Royalist, a second-generation seedling from *hispanicus* by way of King Alfred, contributed a flat perianth and a well-balanced trumpet and in the third generation gave us Kingscourt, one of the better moderately priced trumpets.

PLATE 3

B. Y. MORRISON

### TRUMPETS

Kingscourt (Div. 1a), Beersheba (Div. 1c), and Garron (Div. 1a)

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KINGSCOURT 1a



BEERSHEBA 1c



GARRON 1a

Work with the yellow trumpets was scarcely under way before crosses were made with two fine old white trumpets, White Emperor and White Knight, in order to improve form and quality. Others sought the same result by mating yellow and bicolor trumpets. This infusion of white created a group of cream or lemon-yellow trumpets apart from those displaying the unadulterated gold of *hispanicus*.

Varieties of lighter shades which have proved to be good garden plants are Hunter's Moon, Inver, Moonstruck, and Mulatto, the latter very pale. Of the deeper golden yellow, favored varieties are Cromarty, Garron, Goldcourt, Kingscourt, Bastion, Irish Luck, Ulster Prince, Arctic Gold, and Slieveboy. Popular Dutch varieties are Magnificence, Golden

Harvest, Unsurpassable, Burgemeester Gouverneur, Rembrandt, William the Silent, Joseph MacLeod, Dutch Master, and Flower Carpet; the latter is the same as, or similar to, King Alfred. The best American-bred varieties are Luna Moth, Moonmist, and Late Sun.

There are a number of miniature trumpets: Tanagra and Wee Bee are usually cataloged; Bowles's Bounty, Charles Warren, and Sneezzy have been registered. Little Gem is a selected form of *N. minor*.

If criticism must be leveled at the yellow trumpets, it would be that they look a good deal alike to the untrained eye. Some of them tend to be too large and a bit coarse, and the length of the stem is not always proportionate to the size of the flower.

(b) *Perianth white; corona colored.*

Prior to 1950, white trumpets were classified as subdivision 1b and the bicolors as 1c. With the revision of 1950, these two subdivisions were reversed to conform to changes in Divs. 2 and 3. In addition, the old requirement that the trumpet be "Yellow, lemon or primrose" was replaced by the present "corona colored," so that pink and red trumpets would not be waifs.

A number of species and subspecies have bicolored forms. The record might begin with Empress, probably a cross between *N. pseudo-narcissus bicolor* and *N. pseudo-narcissus*, the Lent Lily. Bicolors combining clean, contrasting colors with a good constitution were elusive, and until recently most bicolors were incidental to the mating of white and yellow trumpets in the search for better yellow trumpets. Bonython, Boswin, and Sincerity proved to be good byproducts, although they are no longer widely offered.

As with the yellow trumpets, the bicolors may be divided into those with pale trumpets and those where the contrast is sharper. Among the former of improved quality are Content, Pres. Lebrun, Foresight, Music Hall, Spitzbergen, and Frolic. With darker trumpets are Bonnington, Effective, Trousseau, and Preamble.

A number of pink trumpets have been bred in Tasmania, but with the exception of Woodlea they are probably not available in this part of the world. The best American-bred pink trumpet is costly Rima which is incorrectly carried in the *Classified List* as a 2b.

There are a few bicolor trumpets of miniature proportions: Bambi, Little Beauty, and Rockery Beauty.

On the whole, breeders have rather neglected the bicolor trumpets because of genetic difficulties. The choice of good but inexpensive varieties is still limited.

(c) *Perianth white; corona white, not paler than the perianth.*

This subdivision has had a continuous existence from the start of the modern classification in 1910, although prior to 1950 it was 1b rather than 1c.

White trumpets trace their ancestry back to *N. moschatus* L., *N. alpestris*

Pugsley, and *N. albescens* Pugsley, all of which are now regarded as subspecies of *N. pseudo-narcissus*. Most of the early hybrids of these subspecies were weaklings; only Colleen Bawn, a miniature, is still occasionally seen. Breaking new

ground began with Mme. de Graaff, whose marriage to King Alfred resulted in Mrs. Ernst H. Krelage, which is still a good garden variety. A grandchild of Mme. de Graaff is Beersheba, a flower of such perfect form and purity of color that it holds its own after 40 years and is the most widely grown of all white trumpets.

Eventually breeders were forced to choose between larger and coarser flowers and smaller but more refined ones. Notable for size, but often rough and badly proportioned, came Roxane, Kanchenjunga, Broughshane, and Mt. Hood. For greater refinement, but more modest size, we may choose among Tain, Ardclinis, Samite, Scapa, Silver Wedding, White Tartar, Fairy Dream, and

Silverdale. Cantatrice is a popular exhibition variety of uncertain disposition. Recent breeding has made progress in combining quality and size in several expensive novelties, such as White Prospect and Rashee.

The absolute whiteness of the poet daffodils is not usually achieved in white trumpets; a comparison will reveal a trace of cream which may bleach out as the flower reaches maturity. Note that the definition of the subdivision contemplates a corona which might be paler than the "white" perianth.

W. P. Milner, an old miniature white trumpet still widely grown is excellent in rockwork or grass.

The chief cultural problem with the white trumpets is their susceptibility to basal rot.

(d) *Any color combination not falling into (a), (b), or (c).*

In the revision of 1950, Divs. 1, 2, and 3 were each given a fourth subdivision lettered (d) to take care of reversed bicolors of which two—Spellbinder (1d) and Binkie (2d)—were in existence at that time.

The familiar bicolor daffodils have white perianths and a colored corona which may be any shade of yellow, pink, or even red. The so-called reversed bicolors, which are appearing in increasing numbers, display a yellow perianth and a lighter corona.

Spellbinder was introduced in 1944 as a 1a and promptly given an Award of Merit as an exhibition flower by the Narcissus and Tulip Committee of the Royal Horticultural Society, although some of the Committee seem to have had misgivings about the odd coloring, since seven of the panel of 21 judges withheld their approval.

Starting with the cross of King of the North  $\times$  Content which gave Guy Wilson Spellbinder, Mitsch quickly ended Spellbinder's solitary reign. In 1954 came Lunar Sea, to be followed four years later by Entrancement and Nampa, then Moonlight Sonata in 1960 and Honeybird in 1965. These are expensive and strong demand will keep the supply down for some time, but they represent a break from conventional coloring in flowers of good quality. Future breeding may overcome the present need to wait several days for the trumpets to bleach until the bicolor effect is achieved.

The only flower in this subdivision from below the Equator is Rus Holland by Hugh Dettman of Australia. It is quite unlike other 2d's, with heavy frills which retain to some extent their original greeny sulphur-lemon, while the inside of the trumpet passes to white.

## DIVISION 2

### LARGE-CUPPED NARCISSUS OF GARDEN ORIGIN

*Distinguishing characters: One flower to a stem; cup or corona more than one-third, but less than equal to the length of the perianth segments.*

(a) *Perianth colored; corona colored, not paler than the perianth.*

In 1950 the more descriptive term "Large-Cupped" replaced the designation "Incomparabilis" formerly applied

to this division. Subdivision 2a now requires only that the corona be colored, whereas the earlier description was

"yellow shades with or without red coloring on the cup." At the same time the dividing line between Divs. 2 and 3 was adjusted so that the flowers in which the cup is exactly one-third the length of the perianth segments were classified as Div. 3 rather than Div. 2, as formerly. No hint was given as to just how this precise measurement of an inconstant flower was to be made. Presumably the answer lies in the fact that it is the privilege of the raiser of a new variety to decree its classification.

All flowers in Div. 2 are of hybrid origin, derived initially from crosses of trumpets and poeticus forms; any growing outside of cultivation must be considered as either natural hybrids—*N. × incomparabilis*, for example—or escapes from cultivation. These facts were not always understood. Prototypes of our large cups were growing in English gardens in the early part of the 17th century, and Parkinson describes several color variations in his *Paradisus*. After Parkinson, little was written about daffodils until in 1812 R. A. Salisbury published a proposed classification and created the genus *Queltia* for Parkinson's flowers, naming it after Nicholas Le Quelt, a French botanist who is said to have found one form. This genus was embraced by A. H. Haworth in 1831 in his elaborate classification, but a few years later William Herbert reduced Haworth's structure of 16 genera to 6, discarding, among others, the genus *Queltia*. Herbert proved by repeating the crosses that the "species" assigned to *Queltia* were merely hybrids between trumpets and poets. However, the terms "Queltia" and "Incomparabilis" continued in use for many years, *Queltia* being dropped in Barr's catalogs, but *Incomparabilis* survived until the revision of the classification in 1950.

Div. 2 is by far the most popular of the eleven divisions. It includes possibly half of all registered varieties and about half of those, or one-quarter of all varieties named in the *Classified List*, are 2a's. While subdivision (a) does not distinguish between self-colored flowers and those with red, orange, or pink cups, some shows provide separate classes for

these when the color of the cup is predominant, and some catalogs segregate the yellow, the orange or red, and the pink cups by adding an additional letter or number to the basic 2a.

In 1884 Sir Watkin appeared out of obscurity, named in memory of Sir Watkin W. Wynne. Still-remembered varieties followed during the next three decades: *Gloria Mundi*, *Frank Miles*, *Killigrew*, *Croesus*, *Helios*, *Hospodar*, and *Yellow Poppy*; still good garden flowers if they can be found, especially for planting in the grass or woods.

The landmark flower of this subdivision is *Fortune*, an early flower of exceptional style and quality with a large orange crown; an aristocrat among the commoners of its day. It was found in 1915 by Walter T. Ware among a batch of mixed seedlings in his nursery near Bath, England. Since his daffodils were afflicted with eelworm, Mr. Ware parted with a few bulbs in 1917, three to The Brodie of Brodie, a circumstance which may have prevented the extinction of this splendid flower since Mr. Ware died later that year. Having the advantage of a large collection of choice varieties, The Brodie was able to start *Fortune* on its long and distinguished career as a flower and a parent.

The red or orange in modern daffodils has been largely derived from a poeticus form known botanically as *N. poeticus* L. subspecies *radiiflorus* (Salisbury) Baker var. *poetarum* (Haworth) Burbidge and Baker, usually referred to, for obvious reasons, as *poetarum*. It has never been found growing in the wild and is rarely seen even in gardens. Its only virtue is a small cup stained deep red.

A number of orange and yellow flowers preceded *Fortune*, notably *Helios* and *Killigrew*, but it was *Fortune* that opened the gates to an unabated stream

PLATE 4

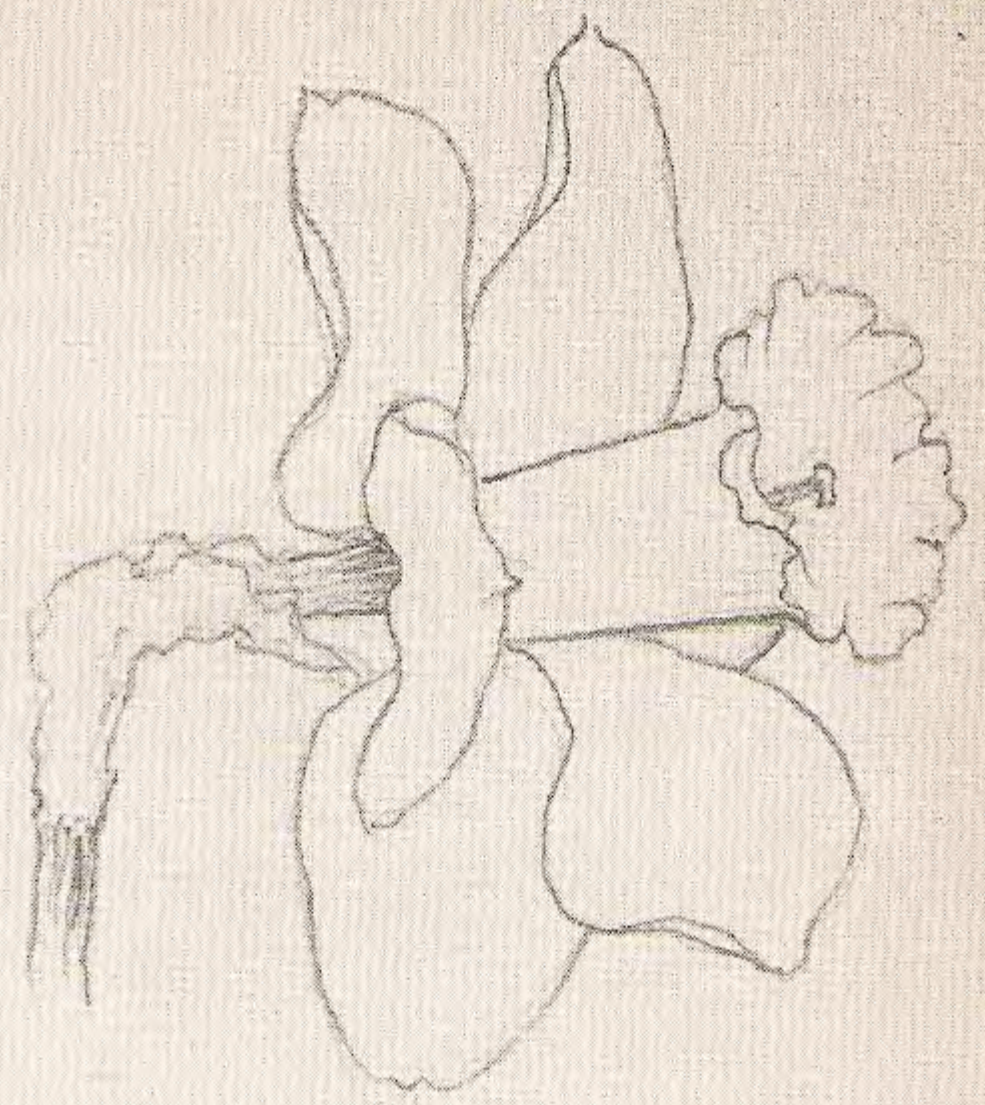
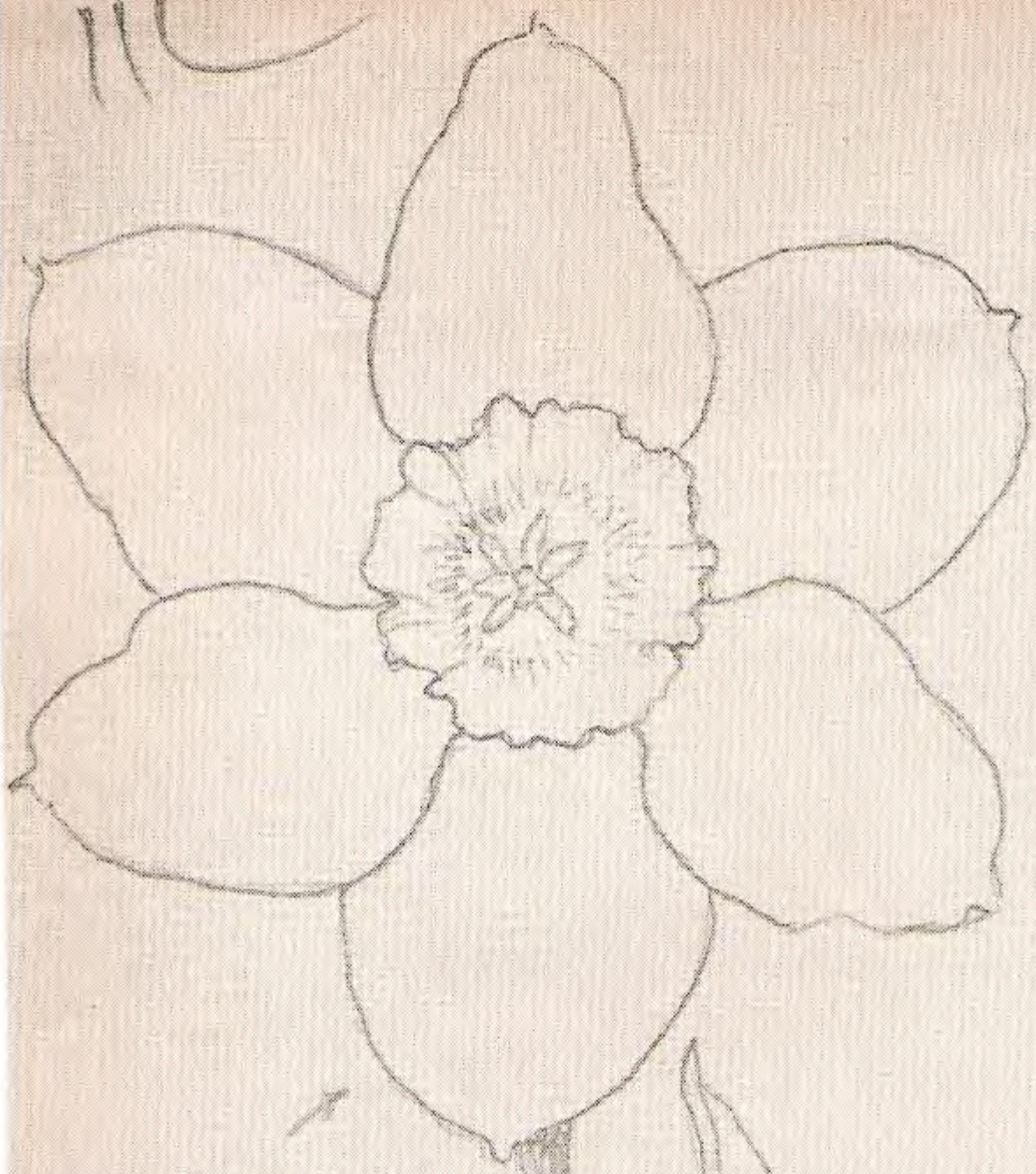
B. Y. MORRISON

## LARGE-CUPPED HYBRIDS

Parkmore (Div. 2c), Carbineer (Div. 2a), Madeira (Div. 2a), Fortune (Div. 2a), and Ceylon (Div. 2a)

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PARKMORE 2c



ARBINEER

2a



MADEIRA 2a



FORTUNE 2a

CEYLON 2a

of orange and red cups. Such is the popularity of these striking flowers that the most minuscule difference is sufficient to bring a new variety to the market with a flurry of drums.

Damson, Porthilly, Penquite, and Trevisky are four reddish varieties introduced between 1925 and 1930 by that master craftsman, P. D. Williams. They may no longer be offered, and it would be unfortunate if such fine garden flowers were to be lost.

A representative collection of quality flowers in the orange to red range which are offered at reasonable prices might include Carbineer, Rustom Pasha, Marksman, Aranjuez, Scarlet Leader, Bahram, Dunkeld, Krakatoa, Red Goblet, Tinker, Armada, Scarlet Elegance, Mary Roozen, Illuminate, Narvik, Ceylon, Mexico, Red Devon, Sun Chariot, Alamein, Magherally, Missouri, Castle-rock, Lizard Light, Revelry, Pleasant, Home Fires, Red Sunrise, and Matlock. Recent novelties which will be found to be more expensive are Kindled, Paricutin, Air Marshal, Border Chief, Foxhunter, Madeira, and Court Martial. Many of the later introductions have come from the nursery of the late J. Lionel Richardson of Waterford, Ireland.

The nearest to a pink in this subdivision is Rouge, an early introduction of

Guy Wilson with a pinkish-buff perianth and a brick-red corona.

In the quest for red, or at least orange, in the corona, the solid yellows have been somewhat neglected. The early breeding for them sought shorter cups of poetic proportions and 1927 was a vintage year, producing Carlton, Havelock, St. Egwin, and St. Issey, all splendid garden flowers. In recent years, cups of almost trumpet proportions have been favored, and we have Crocus, Trenoon, Butterscotch, Golden Torch, Galway, Cargan, Ormeau, and St. Keverne.

Goldsithney and Nor-Nor are of intermediate size and Marionette and Mustard Seed are miniatures.

If the flowers in Div. 2 have faults, the most serious is the tendency of any red in the corona to fade and of the rim of the cup to burn. The extent of such damage depends on the variety itself and the amount of heat, wind, and sunlight to which the open flower is exposed. Colors are invariably richer and deeper in the British Isles and our Pacific Northwest than in the eastern and southern United States, where the reds and pinks are apt to be at their best only in cool, cloudy seasons. Richly colored flowers intended for exhibition or home decoration should be cut shortly after opening and matured indoors.

(b) *Perianth white; corona colored.*

The above brief definition was substituted in 1950 for the older "Bicolor varieties with white or whitish perianth, and self-yellow, red-stained, or red cup." Some of the Leedsii varieties were transferred to this subdivision when the white and pale flowers formerly classified as Div. 4 were dispersed in 1950.

Scarcely less crowded than subdivision 2a, 2b must accommodate more varied types: white and yellow, white and orange or red, and most of the pinks.

There should be a place in the garden for some of the older 2b's: John Evelyn, Nissa, Bodilly, Daisy Schäffer, Gertie Millar, and Tunis among the yellow and whites; Hades, Folly, Red Abbot, and

Red Hackle among the red-cups. These are gradually being dropped from the catalogs.

Varieties free of red whose vigor and quality still earn them a place in dealers' stocks, although each is over 25 years old, are Polindra, Coverack Perfection, Brunswick, Carnlough, Greeting, and Green Island. George L. Lewis of New Zealand is the originator of a number of interesting 2b's: Marie Louise, Papanui Queen, and Satin Queen are obtainable in the United States. The last has a narrow orange frill. If the budget permits and enthusiasm for daffodils is on the rise, one may indulge in Tudor Min-



strel, Festivity, and Woodgreen, or even later and more expensive novelties.

Many years have passed and many daffodils have come and gone since a vase of Dick Wellband, placed against a backdrop of black velvet, was presented to the public at a New York International Flower Show. Disparaged by connoisseurs, it still charms many with its genial behavior and bright splash of color in the garden. Now it is the veteran of a multitude of orange or red cups: Rubra, Flamenco, Fermoy, Kilworth, Buncrana, Kilimanjaro, Leeuwenhorst, Artist's Model, Semper Avanti, Flower Record, Mercato, Selma Lagerlöf, Fairy Mother, Red April, Blarney's Daughter, Royal Orange, and Alicante. From these one may ascend to such blue ribbon winners as Arbar, Daviot, and Signal Light.

"John Evelyn Hybrids" is the collective name of a number of varieties which are classified as 2*b*'s. When the commercial urge is strong, they may be offered as "weatherproof" daffodils. These are of Dutch origin and are characterized by a wide, thick, heavily frilled, colored cup. The fastidious sniff at them, although like most Dutch varieties they are effective garden flowers. It is questionable whether they are more resistant to weather than any other daffodils of good substance. A sampling of them would be Duke of Windsor, Oranje Bruid (Orange Bride), Wodan, High Life, and Brookville. Stadium is a Richardson variety of this type.

At present, the only miniature 2*b* is Tweeny.

The official classification makes no special provision for pink cups or trumpets. They are classified according to their dimensions, but almost without exception they are 2*b*'s and their number is legion. Competition to bring forth a clear, sun-fast pink cup of good form and habits has been going on for over forty years,

but the end may now be in sight. There are contestants from the United States, British Isles, Australia, Tasmania, and New Zealand. While we await the winner, we can gamble on a long list of varieties which reflect the industry, the hopes, and all too frequently the imagination of the numerous hybridizers engaged in the search.

We might start with Mrs. R. O. Backhouse (pronounced Bacchus). It isn't really pink, but neither are many other "pinks." We can get a little closer and still be quite frugal with Rose of Tralee, Pink Rim, Wild Rose, Rosario, Moylena, Interim, Rose Ribbon, Mabel Taylor, Mrs. Oscar Ronalds, and especially Radiation. The price, if not the value, rises steadily past Rose Caprice, Fintona, Carita, Interlude, Passionale, Pink Pearl, Foray, and others. Mitsch's Accent (pictured on the cover) is probably the best pink 2*b* of American breeding, but it is costly.

More work has been done with pinks in Australia, New Zealand, and particularly Tasmania, than elsewhere. Dealers in those countries are listed on a later page and offer a wide selection. The following varieties are now stocked by dealers in this country and Europe: Pink-a-dell, Rosario, Chiffon, Pink Monarch, Mabel Taylor, Mrs. Oscar Ronalds, Stray Pink, and Hugh Dettman.

The pink-cupped Lady Bee is worth growing as the only really small pink daffodil.

As is true of many of the highly colored cups, the performance of pink daffodils is apt to be erratic. Imported bulbs may require a few years before settling down, but even in established plantings the pink will be pinker in some years than others. If the flowers can be sheltered from the midday sun, and the weatherman can be persuaded to postpone heat waves until July, the flowers may approximate the catalog descriptions.

(c) *Perianth white, corona white, not paler than the perianth.*

This subdivision was created in 1950 for certain varieties formerly classified as Div. 4—Leedsii. The latter division which lasted from 1910 to 1950 em-

braced flowers with a white perianth and a cup less than the length of the perianth segments colored "white, cream or pale citron, sometimes tinged with

pink or apricot." A subdivision 4a was created in 1915 for flowers with a cup not less than one-third the length of the perianth segments which were then known as Giant Leedsii. In the revision of 1950, the pure white Giant Leedsii were transferred to the new subdivision 2c, while those with color in the cup were considered bicolors and placed with the 2b's. The Leedsii in subdivision 4b with a cup less than one-third the length of the perianth segments were correspondingly divided between the present subdivisions 3b and 3c.

Edward Leeds was the first of a succession of English gentlemen who have sought to perfect the daffodil as a specimen flower. He began making crosses in 1835 and among the seedlings he sold to Peter Barr and his associates in 1874 were many light-colored ones which, with their descendants, formed the basis, first of the Leedsii division of the original classification established by the Royal Horticultural Society in 1910, and now of the present subdivision 2c.

The story of modern 2c's might begin some forty years ago with White Nile, bred by The Brodie, and Tenedos, by the Rev. George H. Engleheart, a pair of large-cups which still have their good points but are no longer offered. These were quickly followed by two splendid garden varieties—Courage, by The Brodie, and Niphetos, by P. D. Williams. These are still seen frequently in gardens but are being replaced in catalogs.

(d) *Any color combination not falling into (a), (b), or (c).*

In the revision of 1950, Divs. 1, 2, and 3 were each given a fourth subdivision to take care of reversed bicolors which were beginning to attract attention.

The first variety qualifying for this subdivision was Binkie, raised by W. Wolfhagen of Tasmania in 1938. Binkie was not seriously challenged until 1958 when Mitsch introduced Bethany and Nazareth whose breeding was Binkie × (King of the North × Content), this latter the cross which gave Wilson his 1d Spellbinder and which Mitsch repeated to create his own reversed bicolors.

In the following years Mitsch brought

The late Guy Wilson of Broughshane, Northern Ireland, made white daffodils his speciality and during a long life he advanced this form close to perfection as a specimen flower of faultless form and purity of color. His large-cupped whites included Dunlewey, Ave, Zero, Truth, Parkmore, Corby, and a number of current novelties. Wilson felt that the best whites were those with green, rather than yellow bases, and this type may now be found among trumpets and cups of the first three divisions. It was Wilson's belief that the green came originally from *N. hispanicus* which has a green midrib in the backs of its petals. This characteristic was probably transmitted through Naxos, a tall-stemmed 2c raised by Engleheart which has been superseded as a flower, but has proved of value in breeding tall whites of great purity with green bases.

Other growers did not leave the field of white cups entirely to Wilson. Richardson gave us Killaloe, Glendalough, and Namsos; A. M. Wilson left us Ludlow; and W. J. Dunlop, a neighbor of Wilson, has brought out Woodvale and Wedding Bell. White Spire is Mitsch's entry in this class.

White cups have a reputation for lacking vigor and being susceptible to basal rot. These difficulties may be more apparent in some years than others, and more in the warm South than in the cooler North. The typical shortness of stem is gradually being overcome.

out Daydream, Halolight, Limeade, Glee-ful, and Pastorale. Daydream and Bethany are generally considered his most successful 2d's. Pastorale is an unregistered variety and should not be confused with the 2b Pastorale registered by F. E. Board in 1965 and carried in the *Classified List*. It must be expected that prices for these novelties will remain high for some time.

Reversed bicolors usually open a greenish-lemon and growers should bear in mind that the bicolor effect is achieved only after several days during

which the cup bleaches to a more or less pure white. Consequently, the flower must be allowed to mature, preferably on the plant and in a strong light. The

color upon opening is not unattractive, and some breeders are trying to stabilize it, thus creating a 2a flower of unusual coloring.

### DIVISION 3

#### SMALL-CUPPED NARCISSUS OF GARDEN ORIGIN

*Distinguishing characters: One flower to a stem; cup or corona not more than one-third the length of the perianth segments.*

(a) *Perianth colored, corona colored, not paler than the perianth.*

In 1950 the more graphic "Small-cupped" was substituted for "Barrii" which long usage had attached to hybrid daffodils of poeticus proportions. At the same time the restrictive "yellow shades with or without red coloring on the cup" was replaced by the more comprehensive "corona colored." The precise dividing line between Divs. 2 and 3 is described under Div. 2. While the corona or crown in this division is officially called a small cup, in many varieties it is so shallow that the terms "disc," "saucer," or "eye" are more appropriate and will frequently be encountered.

All the flowers in Div. 3 are crosses between large-cupped varieties and forms of *N. poeticus*. As is the case in Div. 2, *N. poetarum* has been dominant in the frequent appearance of red. Sometimes it is modified by first being mated with *N. poeticus exertus* 'Ornatus' (*N. poeticus* subsp. *radiiflorus* var. *exertus*) and occasionally the influence of *N. hellenicus* (*N. poeticus* subsp. *poeticus* var. *hellenicus*) is apparent. In this division the poeticus influence is stronger than it is in Div. 2, and, as a result, the perianth is usually white and there is almost certain to be some red in the cup.

There are a limited number of 3a's with orange or red cups, but self-yellows are almost non-existent. The best of this type—St. Egwin—was transferred to Div.

(b) *Perianth white, corona colored.*

In 1950 the above concise but broader wording replaced the former "Bicolor varieties with white or whitish perianth and self-yellow, red-stained, or red cup." This subdivision also acquired at that time the smaller, light-colored (not white) Leedsii formerly classified as Div. 4b.

2a and the others which have appeared in the past are no longer traded. Richardson introduced Lemonade in 1959 as a 3a because both the perianth and corona are colored, but the color is more green than yellow, and the price is awesome.

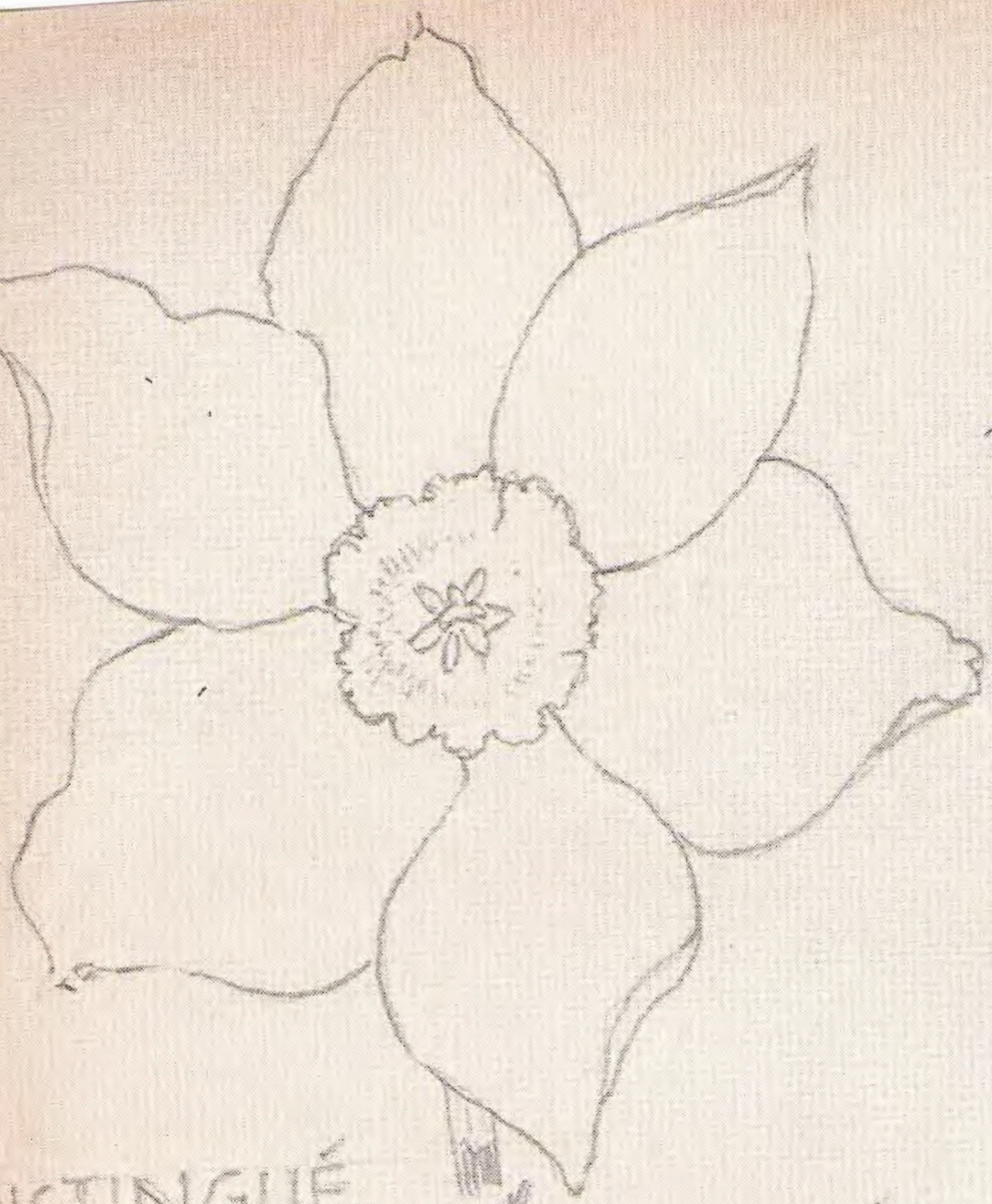
Barrii Conspicuous and Princess Mary were milestones in the breeding of good 3a's with colored cups. The latter, a frail thing of no discernible importance, proved to be a parent of the utmost value and it is found, frequently more than once, in the family trees of numerous small- and large-cupped modern flowers.

A generation ago there were many popular 3a's with yellow perianths and orange or red cups: Seraglio, Diana Kasner, Dinkie, Tredore, Treskerby, Goyescas, and Market Merry, but of these only Dinkie is now likely to be found.

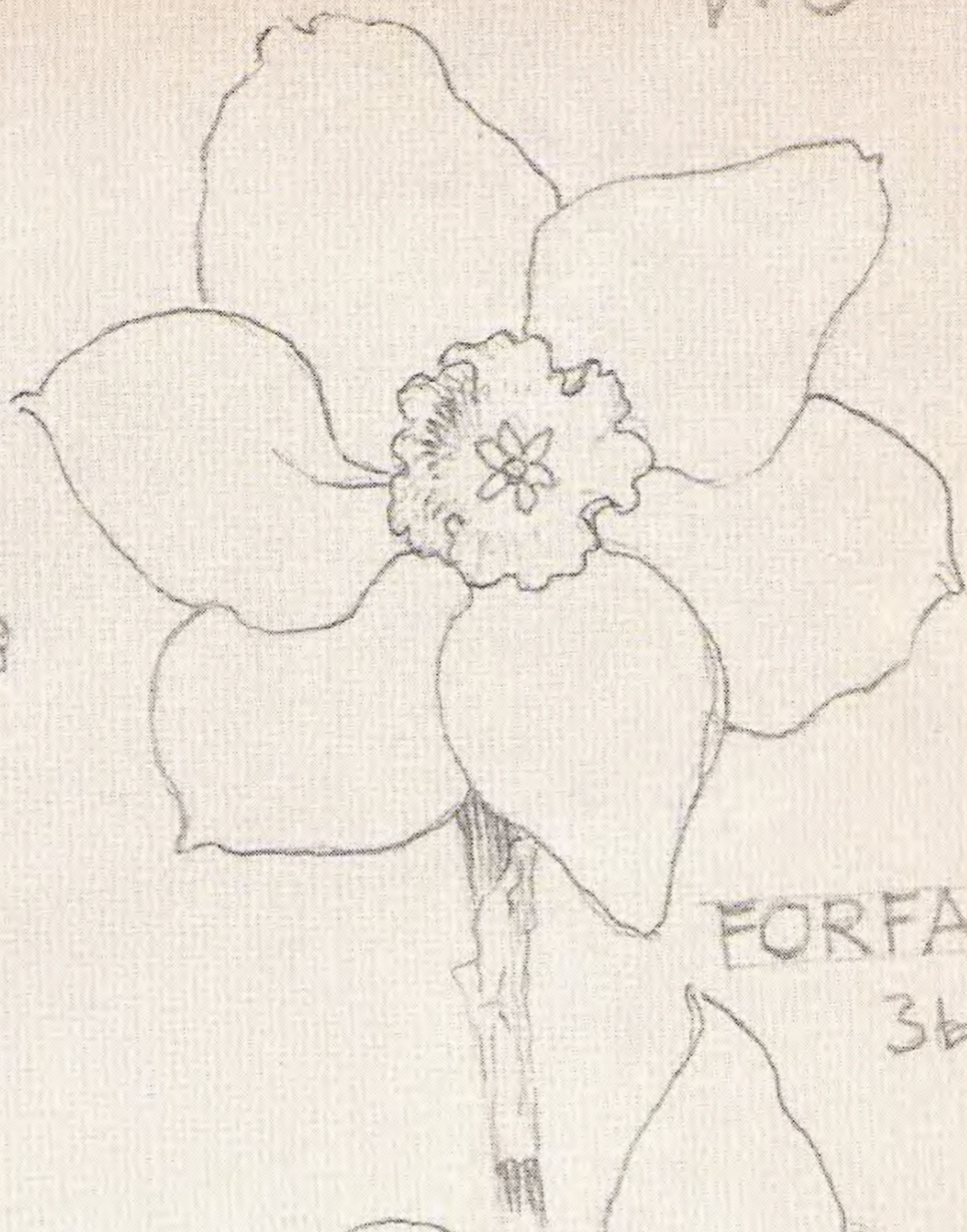
Jezebel (1948) is about the best representative of this subdivision for the garden. It might be joined by Dinkie, Edward Buxton, Mangosteen, Therm, Chungking, Ballysillan, or Russet. Ardour is a show flower; Apricot Distinction has an exotic color that attracts attention. However, all burn in the sun and the best use for the limited garden material is to grow the older varieties where a little burning is unnoticed.

Today Princess Mary and Will Scarlett would be given short shrift, but in their day they had immense influence in breeding brightly colored small cups. About 40 years ago, Mrs. R. O. Backhouse used Will Scarlett to produce a strain of large, white-petalled flowers of fine substance with highly colored eyes

ML



ISTINGUÉ  
3c



FORFAR  
3b



LIMERICK 3b

such as Sunstar, Princess Miriam, and Lidcot. The Rev. Engleheart crossed Princess Mary with numerous poets and brought forth Firebrand and Beacon, two nondescript flowers which proved to have valuable genetic traits. Firebrand, crossed with King Alfred by J. C. Williams, gave us Hospodar from which came a series of vivid red and yellow flowers combining the clear yellow of *hispanicus* with the smooth qualities and color of Princess Mary. The Brodie crossed Beacon with Fortune and seedlings of Will Scarlett, obtaining a number of smooth flowers of good habit.

From such complex ancestries, the 3b's of today have been developed. They are frequently grouped into flowers with 1) the red or orange of the cup predominant, meaning the cup is fully colored orange or red, 2) the red or orange of the cup not predominant, meaning the cup is only rimmed with the warm color, and 3) cups without red, pink, or orange, meaning the cup is rimmed or banded with shades of green, yellow, or grey. Frequently the base of the cup is green.

Among the first group are Verger, Forfar, La Riante, Bravura, Mahmoud, Limerick, Matapan, Tebourba, Barrett

Browning, Corncrake, Enniskillen, and Fair Colleen. Snow Gem is an American flower bred by C. W. Culpepper of Arlington, Va.

Some of the most refined flowers and delicate colors are to be found among the 3b's with just a touch of red or orange on the cup. Many of the endless variations of red, orange, cream, yellow, gold, green, and grey in lines, bands, and overlays were the handiwork of Guy Wilson. The best of these are not for massed effects at a distance, but for close inspection of the blending colors, preferably to be picked and brought into the house soon after opening. Of this description are Dreamlight, Grey Lady, Blarney, Kansas, St. Louis, Corofin, Ballycastle, Carnmoon, Autowin, Winifred van Graven, Coloratura, Bithynia, and Redstart. The last three are Mitsch introductions.

Because of their poeticus heritage, red is usually present in a 3b, but White Lady, Mrs. Nette O'Melveny, Angeline, and Sylvia O'Neill are without it. Aircastle, Noweta, Crepello, and Syracuse are current favorites. Pinkish effects will be found in Mystic, Blush Queen, and Lough Areema.

(c) *Perianth white, corona white, not paler than the perianth.*

This subdivision was created in 1950 to take in the pure white, small-crowned Leedsii left homeless when Div. 4—Leedsii, was broken up. The white Giant Leedsii were transferred to Div. 2c and varieties with traces of color were divided between Divs. 2b and 3b.

Since the flowers are colorless except for the green in the eye, the differences in this subdivision must be concerned with the amount of green, the size of the flower, and the time of flowering. The older varieties are smaller, which in no way detracts from their beauty, and they

come nearer the end of the season. Reflecting the dominance of their poeticus ancestry, these varieties offer the purest whites of any of the hybrids in Divs. 1, 2, and 3. While breeding this type is declining in favor of large show flowers, many are available: Samaria, Distingué, Cushendall, Frigid, Bryher, Foggy Dew, Stardust, Portrush, and Dallas. Some growers find that the flowers in this subdivision lack vigor, a failing of many whites.

It was the appearance of Chinese White that brought to an end the series of small, refined, green-eyed whites. Subsequent breeding has rung the changes on Chinese White, a 4½-inch giant of faultless form and quality. It is a splendid garden as well as show flower, immensely popular, and, fortunately, now

PLATE 5

B. Y. MORRISON

SMALL-CUPPED HYBRIDS

Distingué (Div. 3c), Forfar (Div. 3b),  
and Limerick (Div. 3b.)

moderately priced. From it are being bred a number of novelties whose garden behavior has not yet been fully tested.

Xit is a delightful and easy 3c miniature. Considerable variation exists among the bulbs of Xit which are on the

market, and it is apparent that they represent a hybrid group, i.e., descended from several seed of the same cross, rather than a clone developed vegetatively from a single seed. The typical and most desirable form is considered to be the one with a pure white cup.

(d) Any color combination not falling into (a), (b), or (c).

This subdivision was established in 1950. So far, only one Australian variety, Green Elf, appears to have been

registered. There is doubt as to its value and even whether it is properly classified.

#### DIVISION 4

#### DOUBLE NARCISSUS OF GARDEN ORIGIN

*Distinguishing character: Double flowers.*

Double daffodils are born of single daffodils, and it is possible for any species or garden variety to generate a double form. These may appear by chance among seedlings in connection with the crossing of garden varieties or by mutation, i.e., by the sudden appearance of a sport among the bulbs of a certain species or variety.

There are three forms of doubling. In the first, the corona or crown is completely absent and replaced by additional perianth segments; *Eystettensis* (syn. *capax plenus*) is an example. The second form has a normal perianth, but the trumpet or cup is entirely filled, as in the case of *Hollandia*. Finally, the stamens acquire leaflike excrescences which fill the cup. This aberration gave us the popular *Cheerfulness*, a sport from a long-forgotten *Poetaz*, *Elvira*.

The Royal Horticultural Society ruled in 1965 that double forms of species were not entitled to specific status and transferred all of them from Div. 10 (Species and Wild Forms and Wild Hybrids) to Div. 4. This action united the usual garden doubles and a number of odd flowers which have all the characteristics, both good and bad, of their ancestral species.

There are double forms of three of the trumpet species: *N. pseudo-narcissus* 'Plenus', *N. pseudo-narcissus moschatus* 'Plenus,' and *N. minor pumilus* 'Plenus.' The latter has been aptly described

as resembling a small dandelion with twisted yellow petals tinged green; it also is inclined to go to leaves. Sometimes it masquerades in the trade as *Rip van Winkle* which may help sales, but fails to improve the flower. Just as *pseudo-narcissus* is a polymorphic (several different forms) species, so its double forms appear in variety. As a rule these are rare and difficult to handle, but *Kehelland*, which is considered by some to be one of them, has no contrary traits.

*N. moschatus* 'Plenus' is creamy white and rare, but occasionally is seen in gardens. It is worth growing if it can be found, contented in the rock garden, but increasing slowly. There are at least two forms: one roselike with duplicate perianth segments and shattered corona, the other with all doubling inside the corona.

A double which appeared as long ago as 1601 without its credentials is *Eystettensis* (*capax plenus* of the trade), or *Queen Anne's Double Daffodil*. *Queen Anne of Austria*, that is, and not to be confused with *Queen Anne's* (of England) *Double Jonquil*. The *Classified List* is content to pronounce *Eystettensis* a triandrus hybrid, but it is probably a cross between a triandrus and a double trumpet, possibly *Van Sion*. It is a delightful garden flower of historical interest and well worth the effort to locate it. The corona has been replaced by six layers of soft yellow segments directly

imposed upon the original segments, but diminishing in size, resulting in a three-dimensional, six-pointed star; height about 7 inches. It dislikes being kept out of the ground.

Both *N. jonquilla* and *N. × odorus* have double forms which are easily confused. The former, *N. jonquilla* 'Flore Pleno', is a feathery ball on a 12-inch stem, attractive enough, but the entire stock is said to be infected with stripe. A form only half as tall is in the trade as Pencrebar and believed to be identical with the old Queen Anne's Double Jonquil. Occasionally a stem will bear two of the yellow, roselike flowers. It is an excellent garden variety. The double campernelli, *N. × odorus* 'Plenus' (*rugulosus plenus* of the trade), will reach 15-18 in. and is the tallest of the three double jonquils. Pencrebar and *× odorus* 'Plenus' are suitable for the garden.

Properly classified as Div. 4, but having little in common with other doubles, Daphne is a sport of *poeticus* 'Ornatus.' The flower is pure white and fragrant, while the doubling of the small eye is not conspicuous. Daphne was first noticed in a batch of cut flowers forced for market in 1908. To locate this single mutation, it was necessary to plant the spent bulbs in a field and grow them until the flower reappeared two years later.

*N. poeticus* var. Flore Pleno (Albus Plenus Odoratus of the trade), the Double Pheasant's Eye, is desirable, but it shares with many doubles a penchant for blind flower buds. More than one trial may be needed to satisfy it.

Double daffodils have been in gardens for centuries and were accepted as a legitimate and desirable member of the family until gardeners began to scrutinize the genus a hundred years ago. In 1884, the Royal Horticultural Society held a Conference on Daffodils at which a committee was appointed to revise the classification, J. G. Baker serving as chairman. The committee duly reported, listing under the subdivisions of magnicoronati, mediocoronati, and parvicoronati previously established by Baker, such further refinements as species, garden varieties, and "monstrosi-

ties." All doubles were consigned to the latter class, doubtless testifying to their low estate as well as their unconventional origin.

In the years since, doubles have generally been in disfavor. True, some of the sports which Nature threw often showed contempt for the critical judgments of discriminating gardeners and the early modern forms were inclined to sulk. As a result, the opposition to doubles became so widespread that it took considerable courage to speak on their behalf. This may all be changing now.

We need not linger over doubles prior to 1900. A double tazetta, Double Roman, arrived in Holland from Constantinople prior to 1600. The indestructible Telamonius Plenus (syn. Van Sion) was known to Parkinson in 1629. Early and streaked with green, it grows happily throughout the Northeast, surviving the homes it once surrounded. A number of mutations of the old Incomparabilis (large cup) varieties appeared in the years before 1900; all bore the family name of Phoenix with such given names as Orange, Golden, Yellow, Apricot, Primrose, and Sulphur. Their form distresses some, but they had vigor and were exchanged hospitably by our grandmothers under such bucolic names as Eggs and Bacon, Butter and Eggs, and Codlins & Cream.

The first serious work with doubles was that of W. F. M. Copeland who produced Feu de Joie, Mrs. William Copeland, Irene Copeland, and Mary Copeland, all good flowers still in commerce, the latter the seed parent of the phenomenal Falaise. Nature also relented and gave us better mutations, such as Cheerfulness from Elvira, Yellow Cheerfulness and Primrose Cheerfulness from Cheerfulness, Holland's Glory and Camellia from Emperor, Golden Ducat from King Alfred, and Hollandia from Whiteley Gem.

The Dutch have given us such popular garden varieties as Twink, Snowball (syn. Shirley Temple), and White Lion, while from England came the current exhibition favorite, Swansdown. Grant Mitsch offers two interesting items: Patricia, an improved form of *poeticus*

'Flore Pleno' selected by Murray Evans, and Pink Chiffon, a pink double by A. N. Kanouse. Erlicheer is a small white double tazetta from New Zealand, and White Marvel is a sport of the multi-flowered *triandrus* Tresamble and the only double triandrus. It was encountered in decorating a float and, like Daphne, the stock had to be grown for another year to locate the mutation.

From a fertile sport of Spring Glory, Jan de Graaff (Oregon Bulb Farms) created a number of excellent garden doubles beginning with Riotous whose seed parent was Fortune. Others followed, including Pink Cloud, Windblown, Windswept, Sunburst, Prince Charming, and Enterprise.

Possibly the best from the Antipodes, as yet unregistered, is Eleanor May by H. E. Reeve of Tasmania.

There are several miniature doubles: Kehelland, Pencrebar, Eystettensis, Wren, and Rip van Winkle.

From a chance seedpod on Mary Copeland, J. L. Richardson grew Falaise, a second-rate plant itself but destined to be the landmark flower among the doubles. From it is coming an entirely new line of superb late doubles of which we now have Gay Time, Double Event, and other more recent introductions at higher prices.

Doubles may not be for everyone nor for every location, but they are definitely back in the family fold.

## DIVISION 5

### TRIANDRUS NARCISSUS OF GARDEN ORIGIN

*Distinguishing characters: Characteristics of Narcissus triandrus clearly evident.*

(a) Cup or corona not less than two-thirds of the length of the perianth segments.

Div. 5 has had a continuous existence since 1910. Subdivisions (a) and (b) were established in 1923, and in 1939 the measurement dividing them was shifted from one-third the length of the perianth segments to two-thirds, as it became apparent that few triandrus hybrids would have a corona as short as one-third.

Triandrus means "three anthers," a misnomer applied by Linnaeus to a flower described by Clusius who failed to note three additional shorter stamens within the tube.

This is the first of five divisions closely related to certain species and differing markedly from the preceding divisions. On the whole the flowers are smaller, there may be several florets on a stem, there will be less red and fewer pinks or reversed bicolors, but there may be fragrance. Results are less predictable, the number of varieties in commerce is limited, they are less commonly seen in gardens, but many adventurous gardeners consider these the most interesting and charming members of the genus. There are numerous miniature varieties and all in this division are suit-

able for the rock garden.

Until recently, this and the following divisions were not aggressively promoted by the trade, so that prices were usually reasonable even for the infrequent new introductions. Supply has always been the greater problem; Alec Gray of Cornwall, England, and George Heath of Gloucester, Va., sharing the limited market. The American Daffodil Society in its brief existence has sought greater understanding and appreciation of all forms of daffodils and, while Gray has retired from the retail business to devote himself to hybridizing, Grant E. Mitsch of Canby, Oregon, and Michael Jefferson-Brown of Whitbourne, England, are listing an increasing number of varieties among these long-neglected divisions and prices are beginning to stiffen.

PLATE 6

B. Y. MORRISON

#### TRIANDRUS HYBRIDS

Treskewes (Div. 5a), Tiara (Div. 5a), Samba (Div. 5b), Lemon Drops (Div. 5a), Rosedown, (Div. 5b), and Raindrop (Div. 5b)



TRESKEWES  
5a



TIARA 5a



SAMBA 5b



ROSE DOWN 5

M



EMON DROPS  
5a

RAINDROP 5b

All triandrus hybrids are attractive and graceful. The one to several bell-shaped flowers are more or less pendent with the perianth segments turned back and often slightly twisted. The foliage is slender; the color is usually white or pale sulphur; and, on the whole, triandrus hybrids are late bloomers.

The wild flowers gathered within this division vary widely in color, length and form of the corona, and height, but the cytological studies of Fernandes indicate they are all forms of a single species, *N. triandrus*, although *albus*, *cernuus*, *concolor*, *loiseleurii* (Calathinus of the trade), and *pulchellus* may be distinguished as natural varieties. Auran-tiacus is a common form of uncertain origin.

Most gardeners will have greater difficulty in handling the species and hybrids of this division than those in any other. It sometimes seems as if they scarcely know themselves what they want, but the usual prescription is sharp drainage, poor gritty soil, and a good baking during summer dormancy. Some growers report greater success when the bulbs are planted under thin sod.

Where the parentage of triandrus hybrids is known, it is usually found that either *N. triandrus albus* or *N. triandrus loiseleurii*, both whites, have been

(b) *Cup or corona less than two-thirds the length of the perianth segments.*

Even with the extension of the measurements for this subdivision from one-third to two-thirds, the choice of varieties is limited. Sidhe and Thoughtful are good self-yellows; Rosedown is yellow with an orange cup; Ivory Gate is white;

crossed with a trumpet, large or small cup, tazetta, or poet. While the triandrus influence must be clearly evident in this division by definition, there is considerable latitude for variation in size, form, and pose. Because the triandrus parent is whitish, color is nearly always white or pale yellow, and any trace of red is rare. The older varieties are usually whites; yellow has appeared more recently. Showing some degree of yellow are Stoke, Forty-Niner, Liberty Bells, Yellow Warbler, Lemon Drops, King's Sutton, Honey Bells, and Harmony Bells.

Triandrus hybrids have been considered to be mules genetically, but Matthew Fowlds of Canby, Ore., broke this barrier with his Honey Bells, Silver Bells, and Harmony Bells and from their seed and pollen should come greater variety of form and color among triandrus hybrids.

Among the whites are many familiar names of varieties which perform rather well: Thalia, Moonshine, Tresamble, Phyllida Garth, Niveth, Rippling Waters, Shot Silk, Tiara, and Tristesse. Lemon Heart and Pearly Queen are the only bicolors.

Miniatures are especially charming and there are three: Mary Plumstead, Sennocke, and Shrimp.

Dawn and Oconee are bicolors; and Samba is the only red-cup.

The miniatures comprise April Tears, Arctic Morn, Cobweb, Frosty Morn, Hawera, and Raindrop.

## DIVISION 6

### CYCLAMINEUS NARCISSUS OF GARDEN ORIGIN

*Distinguishing characters: Characteristics of Narcissus cyclamineus clearly evident*

(a) *Cup or corona not less than two-thirds the length of the perianth segments*

This division was established in 1910, but the subdivisions were not created until 1950.

Just one species, *N. cyclamineus*, has been the progenitor of every hybrid in this division which contains some of the most engaging and affable varieties of

PLATE 7

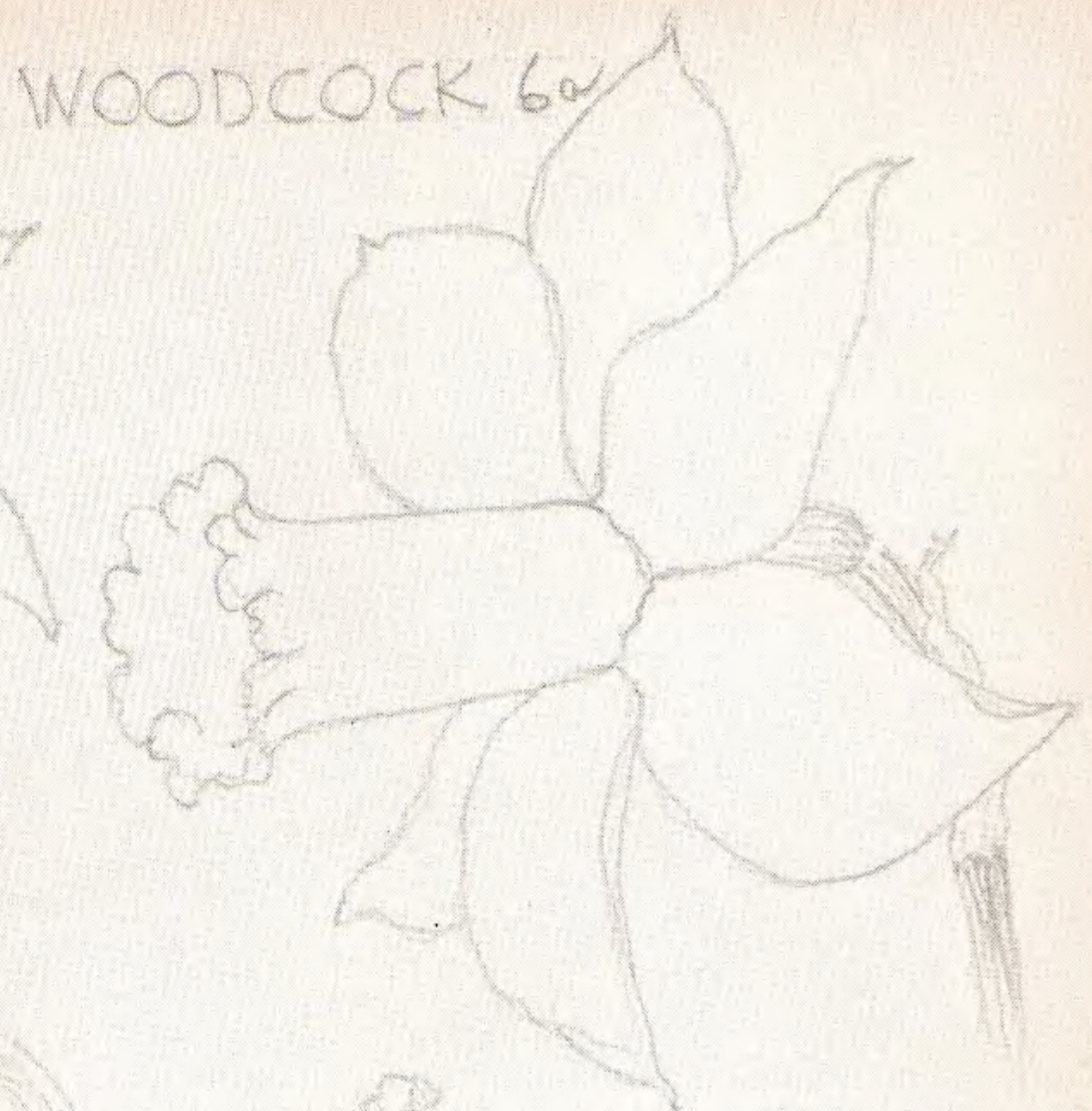
B. Y. MORRISON

#### CYCLAMINEUS HYBRIDS

Cyclades (Div. 6a), Woodcock (Div. 6a), Beryl (Div. 6b), Cornet (Div. 6a), Bushtit (Div. 6a), March Sunshine (Div. 6a), The Knave (Div. 6a), and Quince (Div. 6b.)



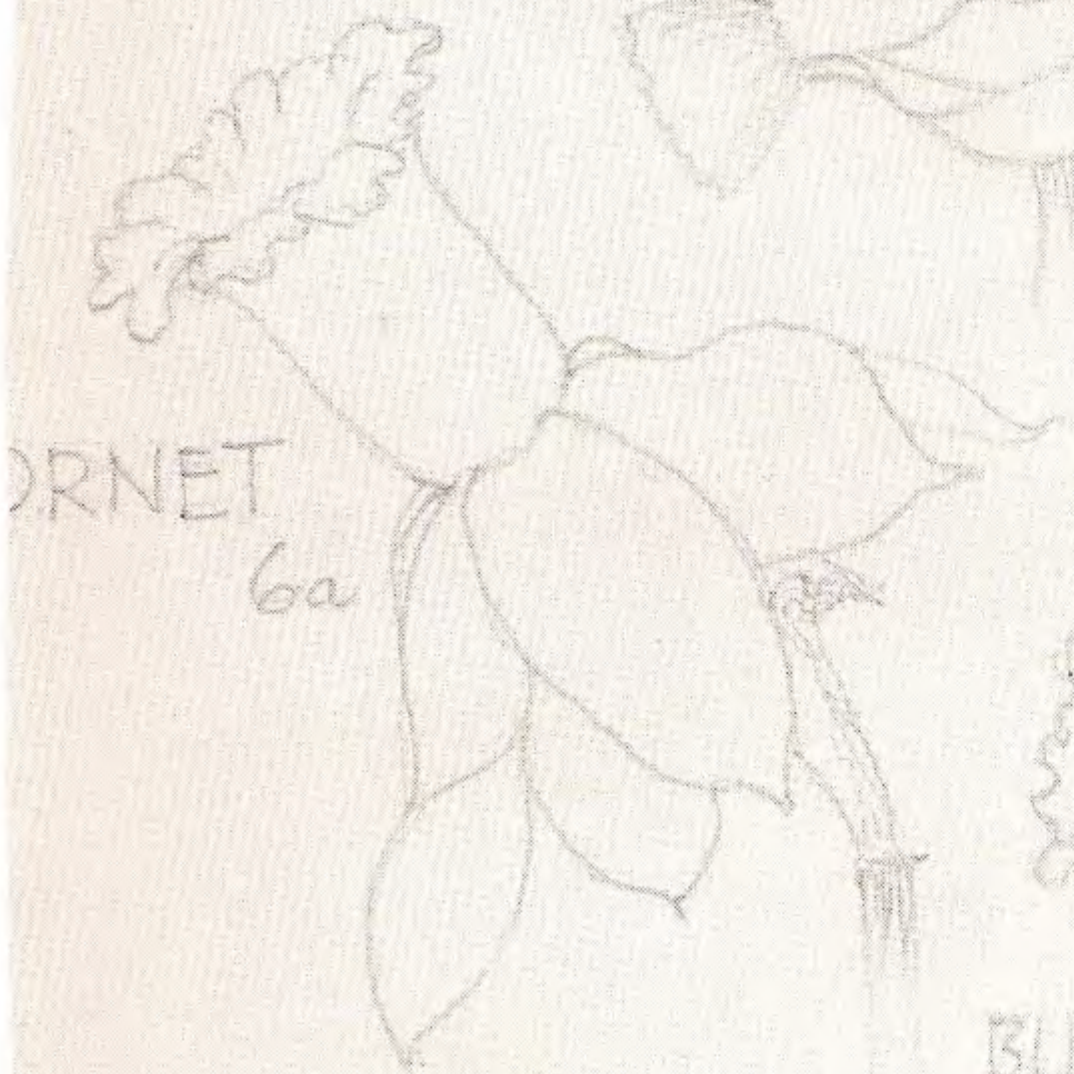
CLADES 6a



WOODCOCK 6a



BERYL 6b



ORNET 6a



BUSHTIT 6a

MARCH SUNSHINE 6a



THE KNAVE 6a



← QUINCE 6b

M

the entire daffodil family. Its perianth, streaming away in the wake of the long, slender trumpet, is unique and gives personality to the species and to all its offspring.

The fact that *cyclamineus* is given its own division should not obscure the fact that botanically it belongs with the large trumpets in Div. 1. In view of that relationship, breeding has tended to be with other trumpets; so cyclamineus hybrids are nearly always yellow and of 6a dimensions.

The most notable event in the story of this division was the crossing of Mitylene  $\times$  *cyclamineus* by C. F. Coleman which gave him the three sisters: Charity May, Dove Wings, and Jenny, all exceptional flowers for the garden. The first is an all-yellow of excellent quality and probably the most desirable flower in this subdivision; the second is a bicolor, the only one of its type; and the third is a trifle less vigorous, but the only white available at a modest cost.

All cyclamineus hybrids are early, but the variety which receives the special benediction bestowed upon the first of the larger flowers to open will in most cases be either Bartley, Cornet, February

Gold, Jana, or Peeping Tom, all 6a's.

Most cyclamineus hybrids are yellow and the list of desirable varieties is lengthy: Golden Cycle, March Sunshine, Le Beau, Trewirgie, Little Witch, Larkelly, Bartley, Woodcock, Cyclades, Estrellita, Caerhays, Baby Doll, and Bush-tit. There are a few with orange in the cup: Roger, March Breeze, and Chickadee. Red-cupped novelties are now being introduced, but their resistance to fading has yet to be proved.

Aside from Dove Wings, other bicolors are February Silver, The Knave, and Jack Snipe; not to be confused with Snipe, a delightful miniature with a long, pencil-like trumpet which fades from cream to white.

Jenny and Titania, the latter a Richardson novelty, are the only pure whites.

*N. cyclamineus* is a miniature itself and from it others have been bred, such as Greenshank, Mini-Cycla, The Little Gentleman, Tête-a-Tête, Mite, Jumblie, Mitzy, and Jetage; all are yellow except Mitzy which is white and Jumblie which has an orange-shaded cup. Tête-a-Tête, Jumblie, and Quince (6b) came from a single seed pod.

(b) *Cup or corona less than two-thirds the length of the perianth segments.*

Since *cyclamineus* has a long trumpet, these specifications exclude almost all hybrids with cyclamineus characteristics. While Beryl, with poeticus blood, is the only variety commonly seen, it is a qual-

ity flower. Quince, from Cyclataz selfed, is a soft yellow miniature with three or four flowers to a stem. Kitten is an expensive novelty with a tangerine cup, from Alight  $\times$  Charity May by Coleman.

## DIVISION 7

### JONQUILLA NARCISSUS OF GARDEN ORIGIN

*Distinguishing characters: Characteristics of any of the Narcissus jonquilla group clearly evident.*

(a) *Cup or corona not less than two-thirds the length of the perianth segments.*

The above wording and the two subdivisions date only from 1950. Prior to that Div. 7 was a single class reading "All varieties obviously derived from Jonquils (e.g., *N. jonquilla*, *N. juncifolius*, etc.) such as Buttercup, odorus, etc." "Jonquil" is derived from the Latin *juncus*, a rush.

While the jonquils in nature are a

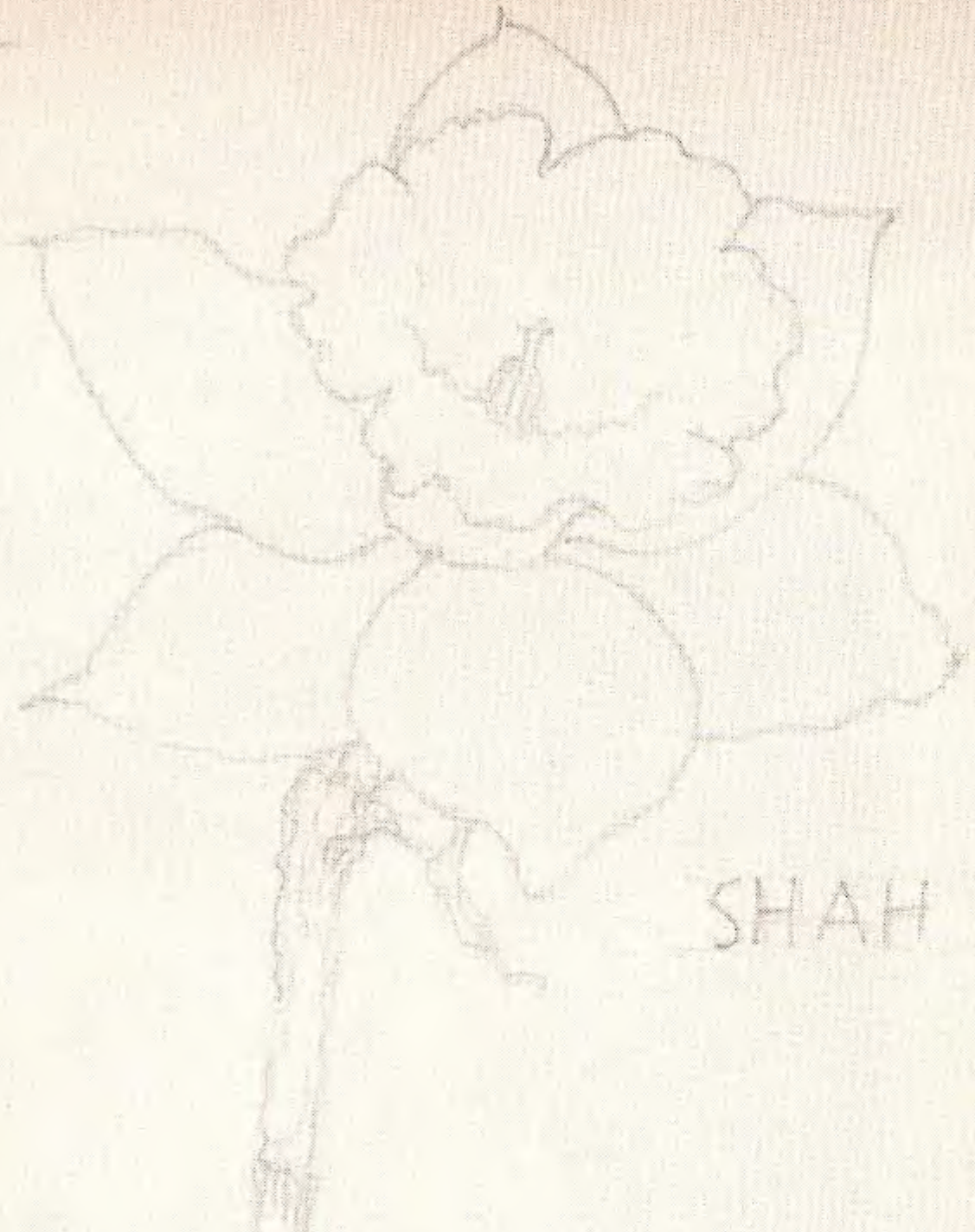
PLATE 8

B. Y. MORRISON

#### JONQUILLA HYBRIDS

Golden Goblet (Div. 7a), Shah (Div. 7a), Sugarbush (Div. 7b), Ripple (Div. 7a), Prisk (Div. 7b), Sundial (Div. 7b), and Nancegollan (Div. 7b.)

GOLDEN GOBLET 7a



W

SHAH 7a



SUGARBUSH 7b

← RIPPLE 7a



RISK 7b



SUNDIAL 7b



NANCEGOLLAN 7b

tangle of true species, wild forms, and natural hybrids, nearly all of the larger hybrids have *N. jonquilla* as a common parent. The miniature hybrids are the result of crosses employing *N. scaberulus*, *N. calcicola*, *N. rupicola*, *N. waltieri*, and *N. juncifolius*, none of which is more than a few inches tall.

The true jonquils are a distinctive group with several well-marked characteristics. The leaves are dark green and rushlike; the scape is tall and slender with from two to six flowers. As a family, the jonquils have good substance, are exceptionally durable, relatively free from disease, and the flowers are the most fragrant of the entire genus.

While most of the cyclamineus hybrids

were 6a's due to the long trumpet of *N. cyclamineus*, most of the jonquil hybrids are 7b's because *N. jonquilla* has a short corona, but in both divisions yellow flowers are the rule.

The de Graaff and Barr families took an early interest in the jonquils, the former giving us Golden Sceptre and White Wedgwood, the latter Fairy Nymph, Ripple, Shah, and Hathor. Sweetness, by Dr. R. V. Favell, is somewhat smaller, but the most popular variety in this class. His Waterperry is no less desirable. Golden Goblet is an old Dutch favorite and Mitsch has introduced all-white Alpine.

There are only two miniatures: Little Prince and Skiffle.

(b) *Cup or corona less than two-thirds the length of the perianth segments.*

The cornerstone of the 7b's, in fact of the entire division, is Trevithian (1927), one of the great flowers of that vintage year from the dean of daffodil breeders, P. D. Williams. It was preceded by his own Hesla and Lanarth and by de Graaff's Golden Perfection. Jefferson-Brown has performed a service in reviving Polnesk and Prisk, yellow; Nancegollan, white; Snow Bunting, bicolor; and Parcpat, a red-yellow; all by P. D. Williams and his son, Michael.

Kasota, with a yellow perianth and orange cup, is one of the few varieties still offered from those bred by the late Edwin C. Powell of Rockville, Md.; Skylon has a red-edged cup, Tittle-Tattle should come with a touch of orange in the cup, but Pipers Barn is deep butter yellow. The darkest flower of all is Orange Queen, believed by some to be none other than *Aurantiacus* (a 7a), the latter being a form of *N. odoratus*, itself a wild hybrid of *pseudo-narcissus* × *jonquilla*. Orange Queen has 2-3 sweetly scented flowers on a 15-in. stem. Cheyenne, Kiowa, and Nirvana are whitish and Chérie has a shell-pink cup and white perianth. Sugarbush has a perianth of ivory and a maple sugary cup.

Grant Mitsch, who is one of the true frontiersmen in daffodil advance, has

made important contributions to the jonquils. The cross of Binkie × *jonquilla* has given him several reversed bicolor jonquil hybrids, the first of which are Dickcissel, Pipit, and Verdin. Bulbs in this series will be very scarce for some years, although they are said to increase rapidly. Orange-red cups are not uncommon, but Mitsch's Kinglet and Bunting are two of the better, and his Vireo is a smallish flower of lemon with a deep green eye.

Dr. Favell has been mentioned as the originator of Sweetness among the 7a's. Two highly colored 7b's of his raising are Sweet Pepper and Susan Pearson, the latter coming with a red cup.

There are numerous miniature jonquils; in shades of yellow are Baby Moon, Baby Star, Kidling, Pease-blossom, Sea Gift, Sun Disc, and Sundial; the latter with a greenish cast. Bebop and Demure are bicolors, and Bobbysoxer, La Belle, Lintie, and Stafford should show some orange. Flomay is the only white.

Pixie (*juncifolius* × *jonquilla*) by Matthew Fowlds is a delightful miniature with 3-5 small, sweetly scented, yellow flowers. Companions for it are promised before long.

## DIVISION 8

TAZETTA NARCISSUS OF  
GARDEN ORIGIN

*Distinguishing characters: Characteristics of any of the Narcissus tazetta group clearly evident.*

Div. 8 has been linked with the tazettas ever since the classification was established in 1910. "Tazetta" is an Italian word meaning "small cup." The tazettas are the most widely distributed and the oldest known forms of the entire genus. They grow well from the Canary Islands, along both shores of the Mediterranean, on through Syria, Persia, India, and as far as China and Japan. There is little doubt that they are the narcissus known to ancient writers.

It takes a sharp blade to cut through the tangled knot of tazettas (see Chapter 12). As one might expect, such a far-reaching plant has evolved many regional forms which were collected for generations and introduced to the gardens of Europe, North America, and Australia. Equally understandable is the fact that numerous local, popular, and pseudo-scientific names have become attached to these forms or clones with the inevitable result that what appears to be the same clone is known under several names and the same name is applied to what are obviously different clones.

Introduced forms of tazettas have become naturalized in this country along the South Atlantic and Gulf Coast states and are known by such delightful names as Christmas Star, Seventeen Sisters, Golden Dollars, Twin Sisters, and Pearl. Other equally uncertain forms are found in California and came from China.

While stout hearts and curious minds search out the answers, the rest of us may accept the verdict of the Royal Horticultural Society as expressed in its *Classified List* that there is one species, *N. tazetta*, with numerous subspecies and wild, or presumably wild, varieties known only in gardens. It will also resolve many uncertainties to assume that any tazetta blood in hybrids is derived from *tazetta*, a single species with many regional variants.

It was by the tazettas that daffodils were first known away from their natural homes. The daffodil literature and catalogs of the nineteenth century list dozens of tazettas, known collectively as polyanthus, or cluster-flowered, narcissus. J. G. Baker eventually classified them in three series: 1) perianth white, corona colored; 2) perianth and corona both white; 3) perianth and corona both yellow; a grouping which still has horticultural, if not taxonomic, value.

Unfortunately, the early tazettas proved to be rather tender in Northern Europe and they languished following the ravages of war and the rising popularity of the trumpets and large cups. This reaction has gone so far that hybridizing has almost ceased and a dozen varieties is the most that can be found in any current catalog. Many dealers completely ignore the division.

Hardiness is always the uncertain factor with hybrid tazettas which are usually referred to as the Poetaz varieties, and the only safe statement which can be made is that there are varieties which are reliably hardy even below zero, that most varieties are probably hardier than is generally thought, and that no one should hesitate to try out the limited varieties available. They are inexpensive and, where hardy, their bold, multi-flowered scapes, vigor, fragrance, and reliability make them ideal garden material. Occasionally varieties will prove to be hardier in sod than in a garden bed.

The first Poetaz were the work of Dutch growers, especially R. van der Schoot. Geranium, Orange Wonder, and Laurens Koster are the most widely grown, but Laetitia, Aspasia, Mrs. Alfred Pearson, Pride of Holland, Early Splendour, and Canarybird are still offered. P. D. Williams and other English breeders also tried their hands and produced Scarlet Gem, Red Guard,

COMPRESSUS



MATADOR



CRAFORD



HALINGY



ANGIE

W



Glorious, and St. Agnes. In the United States, the Oregon Bulb Farms introduced two excellent varieties in Matador and Golden Dawn. Martha Washington, one of a series which Adrian Frylink developed by mating the Poetaz with the small cups, stands so far apart from all other Poetaz in size that it is scarcely to be recognized as one.

Silver Chimes, which is half tazetta and half triandrus, was classified as 5b from 1916 to 1965 when its tazetta characteristics were conceded and its was transferred to Div. 8. An excellent flower where it can be grown, but it is not fully

hardy in the North.

The best daffodils for forcing are found among the tazettas and Poetaz. Cragford, Paper White, Scilly White, Sacred Chinese Lily, and Soleil d'Or are popular for this purpose. Not hardy, of course, in the North.

Pango, with the odd parentage of *N. × dubius* × John Evelyn, spent some years in Div. 11, but the tazetta blood in *× dubius* finally won it lodging with the other tazettas.

There are several miniature tazettas: Cyclataz, Angie, Halingy, Hors d'Oeuvre, and Shrew.

## DIVISION 9

### POETICUS NARCISSUS OF GARDEN ORIGIN

*Distinguishing characters: Characteristics of the Narcissus poeticus group without admixture of any other.*

Div. 9 has been devoted to the poet daffodils since the inception of the classification in 1910. Why the word "poeticus" was considered appropriate is unknown, but according to E. A. Bowles it was first used by Lobel in *Stirpium Adversaria Nova* in 1570. At one time the poets were considered to be the only true *Narcissus*.

In his monograph *Narcissus poeticus and its Allies*, H. W. Pugsley recognized nine species divided between two series, *Poetici* and *Radiiflori*, but modern taxonomy considers these to be two subspecies of *N. poeticus* and gives Pugsley's nine species variety status only.

The influence of *N. poeticus* and its variations has been enormous in building up the present wide range of form and color now found in all daffodils. The three principal varieties used in breeding have been *N. poeticus* subsp. *poeticus* var. *recurvus*, the familiar Pheasant's Eye; *N. poeticus* subsp. *radiiflorus* var. *poetarum*; and the form of *N. poeticus* subsp. *radiiflorus* var. *exertus* known as Ornatus. The deep red cup of var. *poetarum* has been the source of nearly all the pink and red

now appearing in other divisions; var. *recurvus* has contributed sparkling, alabaster whiteness; a flat perianth; green eye; strong scent; and lateness. Ornatus offers earliness in a group that usually ends the season.

Perhaps the tallest figures in the daffodil world have been the Rev. George H. Engleheart and P. D. Williams. They were of the same generation, but Williams worked chiefly with the red-cups and jonquil hybrids, while Engleheart's first love was undoubtedly the poets. Numerous varieties bear his mark, but Horace was his greatest triumph. It was bred from Ornatus × *poetarum* and first exhibited in 1907. A friend purchased the entire stock and within ten years it was a leading market variety yielding one grower on a single day a check for over \$4,000 for a shipment of nearly 150,000 cut flowers. Horace inherited the best features of its parents: earliness, a snowy-white perianth, and a red-edged cup. Today it would be difficult to purchase a bulb.

Such is the quality of the wild poeticus forms that only minor improvements are possible in garden hybrids. Engleheart did far more than anyone to better them, using the cross which produced Horace. He created a large group of seedlings and from the blending of those and the oc-

casional infusion of wild forms has come the present rather limited number of garden varieties.

Breeding offers scant hope of progress or profit, and years may pass without a new introduction in this division. Nevertheless, the poets are a distinctive and useful type of daffodil. Some have persisted in gardens or grass with little attention for generations. They have a wide appeal and are universally recognized and admired for their whiteness and bright eye. The flowers have a strong nutmeg-like fragrance, although to some it is less appealing than the scent of the jonquils.

Nearly all the varieties offered date

back to the 1920's and 30's. The subtle differences concern the amount of red, green, and yellow in the tiny corona or eye. Actaea is by far the most widely grown variety, but other varieties available and grown to some extent are Dactyl, Red Rim, Smyrna, Sea Green, Milan, King of Diamonds, and Shanach. Cantabile is widely known and an excellent, but temperamental, exhibition flower. There are no miniature poets.

As a class, the poets bring a season to its close, but Actaea is comparatively early and usually represents the poets at shows.

The principal criticism of this division is the similarity of all varieties.

## DIVISION 10

### SPECIES AND WILD FORMS AND WILD HYBRIDS\*

*All species and wild, or reputedly wild, forms and hybrids.*

In the reshuffling of 1950, Div. 10 was vacated by the transfer of double daffodils to Div. 4, and all species or wild forms, hitherto included in other divisions, were brought together here.

This division is a showcase for what Nature can achieve, working with the dull tools of evolution or the sudden impact of mutation, natural hybridization, polyploidy, or chromosome changes. It contains a large assortment of material suitable for gardens, ranging from small to large, early to late, easy to difficult, tender to hardy, common to scarce, and fragrant to scentless.

In considering the species and wild forms as garden subjects, certain changes will have to be made in the ground rules which have been observed in discussing other divisions. Mentioning a species here does not mean that bulbs can be obtained without difficulty. It may mean no more than that they are, or have been, in the gardens of persevering growers. A few are regularly listed in the catalogs; others only occasionally. Commercial growers, especially those engaged in hybridizing, often have species

which they do not list, but which they might be persuaded to share with a good customer.

Some bulbs are nursery-grown; most are collected, although wild sources of some species are rapidly being depleted. Nursery-grown bulbs are usually identified and are likely to command higher prices, because it is more expensive to grow them than to collect them, and they should be of flowering size and correctly named. Collected bulbs may or may not be of flowering size, and the bulbs received have a disconcerting way of not being what was ordered. The nomenclature is quite confused; long-established trade names continue to be published although no longer approved by the taxonomists. In this discussion, the accepted botanical names will be used, but synonyms which may be encountered in daffodil literature and catalogs will be given in parentheses. The parents of wild hybrids will also be stated as far as known or suspected.

#### TRUMPETS

The bellwether of the yellow trumpet species is *N. pseudo-narcissus*, the Lent Lily, which is naturalized, if not native, in England. It varies in color, size, and

\*Detailed descriptions of all the species and wild hybrids may be found in Chapter 4.

form, but at its best is not an impressive garden flower, being more at home in grass, meadows, or near the edge of open woods. *N. pseudo-narcissus* subsp. *pallidiflorus* is a straw-colored form grown in England with some success. Also similar, but rarely to be found, is *N. pseudo-narcissus* subsp. *major* (*N. hispanicus* or *Maximus Superbus*). In any event, it should not be forgotten that its better qualities are present in almost every yellow trumpet in the garden. *N. pseudo-narcissus* subsp. *obvallaris* (*N. obvallaris*), the Tenby Daffodil, belongs with the foregoing. It is an excellent flower of deep yellow, dwarf, and very early. Fortunately, it is undemanding, so it is available and widely grown. *N. pseudo-narcissus* subsp. *gayi* (*N. gayi* or *Princeps*) is also notable for its good manners, if little else. It resembles *pseudo-narcissus* but is larger, has an unpleasant scent, and is lacking in substance; however, it is early and can provide a colorful massed effect as well as take care of itself.

Both *pseudo-narcissus* and *gayi* have perianths which are lighter than their trumpets, the contrast creating a bicolor effect in some forms, but the most distinctive species of this type is *N. pseudo-narcissus* subsp. *bicolor* (*N. bicolor*). It is a sturdy plant which presents no problems and is often listed. The garden which has *Empress* has a reasonable facsimile of *bicolor*.

For garden purposes there is only one white trumpet, *N. pseudo-narcissus* subsp. *moschatus* (*N. moschatus*) of Linnaeus, sometimes sold as *N. cernuus*. There are two other whites—*N. pseudo-narcissus* subsp. *alpestris* Pugsley (*N. alpestris* or *N. moschatus* of Haworth) and *N. pseudo-narcissus* subsp. *albescens* Pugsley (*N. albescens*)—but the latter is not obtainable and the former dies out under cultivation. *N. moschatus* L. is about 10 inches high; the corona hangs its head surrounded by a drooping perianth of twisted segments, but it may be expected to perform well.

Among the above, *alpestris*, *bicolor*, *moschatus*, and *obvallaris* are considered to be miniatures, but the term is comparative and there are smaller minia-

tures. *N. asturiensis* (*N. minimus* Hort.), for example, is the smallest and usually the earliest of all species. It is scarcely 3 inches high and its determination to flower in the face of lingering winter wins it universal admiration. The yellow trumpet nods almost to the ground, but a mulch of pine needles will keep it clean. It increases slowly, but sets seed which grow readily. It will do well in poor, stony soil in full sun.

A bit taller and later, but long confused with *asturiensis*, is *N. minor* L. (*N. nanus* Hort.) and its satellites, var. *conspicuus* Haworth (*N. nanus* Spach or *N. lobularis* Hort.) and var. *pumilus* Salisbury (*N. pumilus* or *N. minor* Hort.). *N. minor* keeps its flowers out of the mud and increases steadily. The corona is deep yellow, the perianth a soft yellow. The two varieties are about 6 inches tall; *pumilus* solid yellow and early, *conspicuus* close to a bicolor and later. These three, especially *minor*, have a tendency to divide rapidly and produce a mass of foliage, but few flowers. All are stocked and have no special requirements.

#### CYCLAMINEUS

Although grouped apart from the trumpets, *N. cyclamineus* is of trumpet proportions and probably stands first among the species in the affection of gardeners. It is a jaunty, first-early flower with a streaming perianth that stirs disbelief. In fact, so singular is this species that when two drawings were the only evidence of its reality for an incredible period of 263 years, its very existence was disputed. Finally, in the spring of 1885 the species was again encountered.

It is fortunate that *cyclamineus* escaped attention for so long, because its range is limited and once found it was collected so heedlessly that it is now close to extinction. While bulbs are usually short-lived, the species grows readily from seed and self-perpetuating colonies have been established in protected spots in England and Portugal. Most dealers stock collected bulbs, but a few grow it from seed which seems to be Nature's method of propagation. Unlike most wild daffodils, *cyclamineus* will flourish

only in damp soil; other than that it seems quite tolerant where it spends its brief life.

*N. × johnstonii* is another Ajax variety found in Portugal by A. W. Tait in 1885 and believed to be a wild hybrid of *pseudo-narcissus* and *triandrus*. The true form is extremely rare, apparently completely lost in the wild and now growing only in a few gardens in Portugal and England. It is a delightful flower, pale sulphur yellow in color, with a long, slender corona. The perianth segments point forward. A few years later Peter Barr found a similar wild form in northwestern Spain which is now known as Queen of Spain. It is distinguished from *johnstonii* by reflexing perianth segments. Queen of Spain persists in a few gardens in the United States. Neither can be considered easy, either here or abroad, but scarcity of bulbs is the greater problem. There is another form known as King of Spain which has a slightly rolled rim, but it is believed to be no more than a seasonal variation of Queen of Spain.

*N. × macleayi* is a small flower which has lost its passport, but is generally thought to be a wild hybrid, possibly *poeticus × pseudo-narcissus*. However, Bowles considered it to be a hybrid of *poeticus* and *× abscissus*, the latter being *poeticus × pseudo-narcissus*. The bulbs offered by specialists from time to time show little evidence of such a large infusion of *poeticus*, and Dean Herbert may have been nearer the truth when he said there was tazetta in its background. It is a bicolor of small-cup proportions, the flower a couple of inches wide with a bright yellow corona half an inch long.

#### TRIANDRUS

While the taxonomists recognize only a single species, *N. triandrus*, among all the triandrus forms which range from white to yellow with from 1 to 6 pendent flowers, and from a bulbous to a long, vase-shaped corona, several varieties are distinguished and in the trade. Most often seen is *N. triandrus albus*, the well-known Angel's Tears which can vary considerably, but typically has a cluster of elegant little bell-like, droop-

ing flowers of creamy white on a short stem, the perianths reflexed. It is not difficult to manage. Var. *concolor* is a golden Angel's Tears. *Calathinus* is a form of *N. triandrus loiseleurii* which is larger and whiter than *loiseleurii* with exceptional substance and 2 or 3 flowers on a stem; the foliage is nearly prostrate and oddly twisted. It is said to be short-lived in the garden, but can be grown from seed which is freely set.

*N. triandrus 'Aurantiacus'* (Hort.), not to be confused with *Aurantiacus* (Hort.), a form of *× odorus*, seems to be a darker colored form of *concolor*, but it also blooms earlier and has a darker bulb. Like *concolor*, it is slow to increase. It is regarded with skepticism by taxonomists, but it exists in gardens and in the trade; in the opinion of gardeners, it is the loveliest and most tractable of the group.

While many gardeners find the triandrus difficult to handle, just what pleases—or displeases—them is not clear. They are all miniatures and thus belong in the rock garden. It seems certain that they prefer a damp soil, but one which has very sharp drainage, considerable sun, and there are reports of good performance in a thin sod. They are probably not fully hardy across the northern United States and they are also plagued somewhat by disease; certainly they are reluctant to increase. If they do offer a bit of a challenge, success with them is generously rewarded.

#### JONQUILLA

The largest, one of the earliest, and surely the most fascinating of all the groups of species are the jonquils. Here are the jewellike miniatures, that shade of yellow which the textile trade is pleased to borrow, and the fragrance

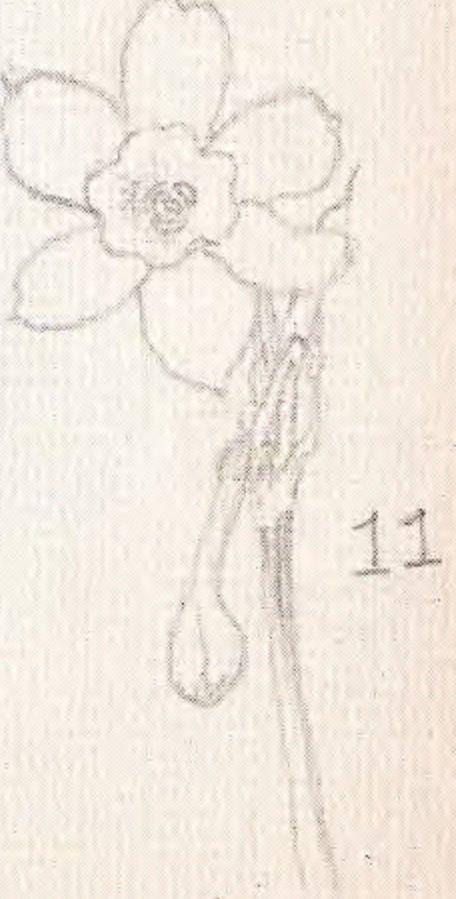
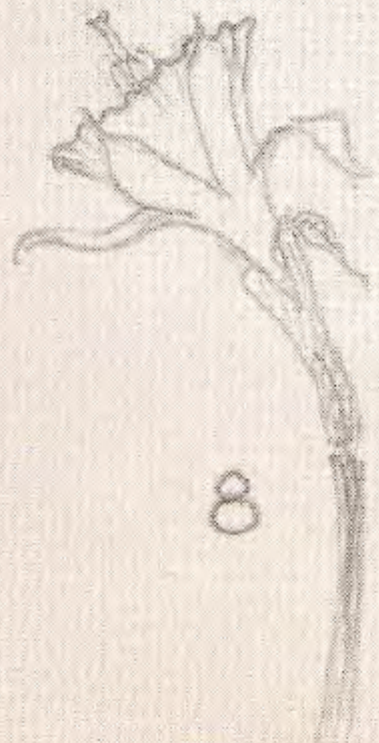
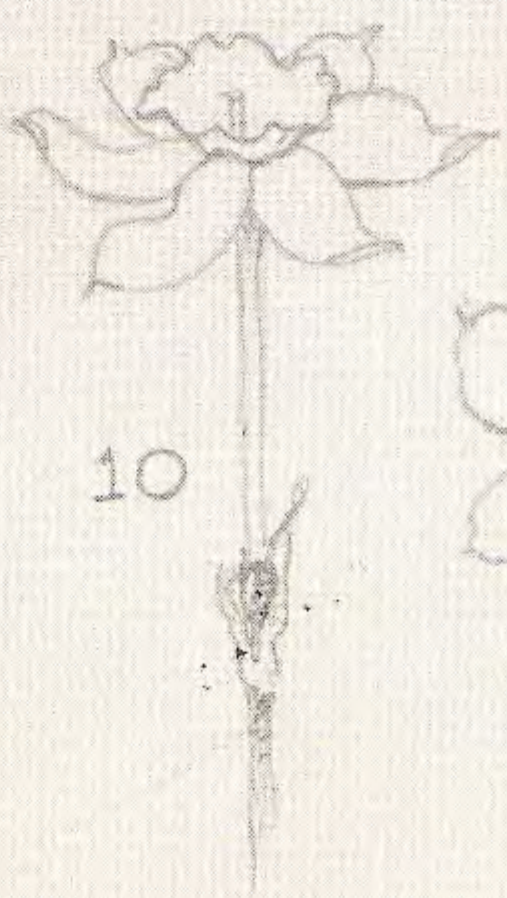
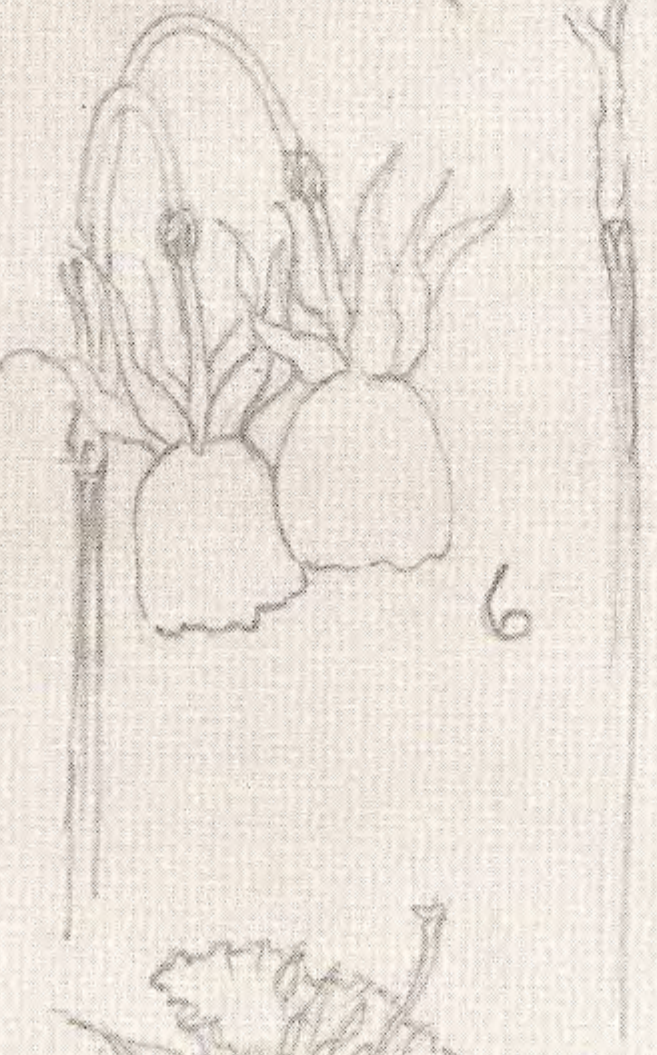
PLATE 10

B. Y. MORRISON

#### SPECIES, WILD FORMS, AND WILD HYBRIDS

1. *× intermedius* 2. *× odorus* 3. *pseudo-narcissus* subsp. *moschatus* 4. *jonquilla*
5. *bulbocodium* subsp. *vulgaris* var. *citrinus* 6. *triandrus* 7. *gaditanus* 8. *hedrae-anthus* 9. *cantabricus* 10. *rupicola* 11. *× dubius* (all Div. 10)

W



which can scent a room. The head of the family is *N. jonquilla* (erroneously, but persistently, called *simplex* by the trade) with several strongly scented, deep golden yellow flowers on a tall, cylindrical stem. The corona is small and the perianth segments broad and pointed. It is about a foot tall, but there is a delicacy and grace about it which makes it suitable for the rock garden where it should do well in a sunny spot. *N. jonquilla* var. *minor* is slightly smaller and has a longer corona. *N. jonquilloides* is smaller in all its parts than *jonquilla*. There is some opinion that *minor* and *jonquilloides* are wild hybrids, but the question is academic as far as gardeners are concerned, since both send up masses of leaves but rarely flower. *N. jonquilla* var. *henriquesii* is said to be an exceptionally good form of *jonquilla*.

The campernelli jonquils have been in gardens for a very long time, but their lineage is uncertain and the terminology adopted by the trade only compounds the confusion. Linnaeus started it all by giving specific status as *N. odorus* to a flower which is now believed to be a wild hybrid of *pseudonarcissus*  $\times$  *jonquilla*, so that the correct designation is *N.*  $\times$  *odorus* (campernelli jonquil or *odorus campernelli* of the trade). It is often confused with *jonquilla*, but there are obvious differences. Both are fragrant and similar in color, but  $\times$  *odorus* is taller to 18 in. and has much larger flowers with broader segments and a larger lobed cup. *N.*  $\times$  *odorus* 'Rugulosus' Hort. (*campernelli rugulosus*) is the largest of all. Typically it is a soft yellow, but it sometimes appears in an orange-yellow form known as Maximus.

What are believed to be natural crosses of *jonquilla* and *poeticus* have given us *N.*  $\times$  *gracilis* and *N.*  $\times$  *tenuior*, a pair of wild hybrids of garden value. While related,  $\times$  *tenuior* is somewhat smaller with 1-3 straw-colored flowers which bleach to nearly white, carried on a weak 6-inch stem; the cup is sulphur yellow. Its performance is uncertain, but it may respond in a dry rock garden. *N.*  $\times$  *gracilis* is twice as

tall as  $\times$  *tenuior*, pale yellow with a darker cup, and shows its jonquil ancestry in its slender foliage. Each stem carries 3-5 jonquil-like, sweetly scented flowers. It comes into bloom later than  $\times$  *tenuior*; only the latest poets keep it company.

*N. calcicola* is the earliest and tallest of the small jonquils; the foliage rising to 6 inches and topping the flower scapes which carry half a dozen butter-yellow flowers with a cuplike corona and a characteristic scent. The foliage is gray green and erect; the bulbs dark brown and comparatively large.

*N. scaberulus* resembles *calcicola*, but is an inch or two shorter, not quite so early, has fewer flowers on a scape, and is scentless. The corona is shallower and almost orange; noticeably darker than the perianth. The two leaves are prostrate and curled; enclosed in a white sheath which rises well above the ground.

*N. rupicola* is the most widely distributed of the small jonquils and, unlike *calcicola* and *scaberulus*, it varies widely. The typical flower is 3-4 in. tall, clear yellow with a slight contrast between the corona and perianth, a flat corona, and overlapping segments. The leaves are gray green and 3-4 in number. However, the corona may be slightly or deeply divided into three lobes, the corona orange, the segments narrow and overlapping, the entire flower dwarfer and paler, or even twin-flowered. The bulbs are pale brown and there may or may not be any scent. The only one of these variants to have variety status is *marvieri*. It is somewhat larger with white tips to the outer perianth segments and the leaves are prostrate, but not curled.

Scapes of the jonquil species may be expected to carry from 2 to 6 flowers; the exceptions are *rupicola*, *marvieri*, *watieri*, and *atlanticus*. A single flower is the rule with these.

*N. watieri* is a pure white *rupicola*, but a less vigorous grower. The leaves are erect and the rather large bulb is white. It is sparing of its lovely, scentless, Tom Thumb flowers, a fault for which the best antidote is a good baking during summer dormancy.

*N. atlanticus* is a rarity, having first been collected in 1936 in the Atlas Mountains of Africa. It differs from *watieri* in having a cup-shaped corona and by being slightly taller, sweet-scented, and creamy white. It differs from *rupicola* in the creamy white color of the flower, broader leaves, and larger bulb.

*N. juncifolius* is no taller than the other small jonquils, but it may be distinguished by its foliage which is dark green, rather than pale. There are several deep yellow flowers to a stem; the corona is larger and somewhat darker than the perianth; the fragrance is rather pleasant. This is a late-flowering species which is easy in the dry rock garden. *N. fernandesii* is closely related, but of deeper coloring and heavier substance. It has been known only since 1948 and there is still some question as to its status, but so far it has proved to be a satisfactory garden flower. Other satellites of *juncifolius* are *N. gaditanus* and *N. minutiflorus*, both so rare and difficult that it is sufficient just to mention them.

#### TAZETTA

The tazettas can be considered for growing outdoors only in the cotton and tobacco states; most of them are suitable only for the Gulf Coast and Southern California. The identification of such bulbs as can be obtained baffles even the experts (see Chapter 12). However, where the tazetta species will grow, they lose none of their charm through loss of their family tree, and they are unrivaled in the garden. Most of the wild forms are considered to be subspecies of *N. tazetta*: *bertolonii*, *papyraceus*, *panizzianus*, and *italicus*. *Canaliculatus*, a trade name, is a form of subsp. *lacticolor*. In addition, there are two wild hybrids: *N. × dubius* (*juncifolius* × *tazetta*) and *N. × intermedius* (*jonquilla* × *tazetta*).

Standing between the tazetta and poeticus species is *N. × biflorus*, a spontaneous cross which may occur wherever stations of the two species are neighboring. It might be described as a yellow-cupped poet with two flowers on a scape and is a congenial garden plant. Naturally, with such a background, it is fragrant.

#### POETICUS

Only one of the poeticus species needs to be considered for the garden. The ever-popular Pheasant's Eye, *N. poeticus* var. *recurvus*, is one of the primary flowers of the genus. Its slightly reflexed perianth sets the standard for whiteness in a daffodil and frames a sparkling green and yellow eye rimmed with red. It is a most vigorous grower, strongly scented, and a fitting flower to close the season.

#### BULBOCODIUMS

The bulbocodiums, or Hoop Petticoats, are the despair of all. The taxonomists are uncertain how to classify them, few gardeners can bring them into bloom, and the uninitiated find it hard to believe they are daffodils. Prof. Dr. Abilio Fernandes, their ablest student, has found no less than 12 different chromosome numbers among the wild plants and considers they are a recent development, still in Nature's workshop. A number of forms or clones have been selected and named, but the differences are not great and there is little to choose among them as to performance and quality. Perhaps the most distinctive are *N. bulbocodium* subsp. *obesus* and *N. bulbocodium* subsp. *vulgaris* vars. *conspicuous*, *citrinus*, and *nivalis*, all natives of Europe. Recently, a group formerly classified as *N. bulbocodium monophyllum* (*clusii*) was detached and given species status as *N. cantabricus*. The clones usually seen are the temperamental *monophyllum* and the more tolerant *foliosus*, both whites which desire to flower during our winters. These two, along with *N. bulbocodium romieuxii*, a pale lemon, are natives of North Africa.

The bulbocodiums are in active growth a large part of the year, and this fact, as well as a degree of tenderness in all forms, makes them useless for growing outdoors where winters are long. They prefer a damp, gritty soil in the sun, but to be dried off during the summer. A piece of glass laid on the ground over them will accomplish this. As a whole, they are best suited to growing in a greenhouse or coldframe, especially *romieuxii* and the two forms of *cantabricus*.

Quaint is the word usually applied to the Hoop Petticoats; appropriate enough in view of their diminutive size, bulging coronas, and rudimentary perianths. The named forms, as well as mixed seedlings, are in good supply and inexpensive; facts which may justify trying them if the grower is prepared for disappointment.

*N. hedraeanthus* is similar to the bulbocodiums. It is scarcely 2 inches tall, pale yellow, and requires the protection of a greenhouse.

At the bottom of the barrel of wild daffodils are three autumn-flowering species: *N. elegans*, *N. serotinus*, and *N. viridiflorus*; they start the season, if fall may be said to precede spring. All are rare, and flowering them places one in a special class among the experts. They are of interest only as primitive forms with curiosity value. The fact that the first two may be found both north and south of the Mediterranean is presumptive evidence of an ancient land bridge between Europe and Africa.

## DIVISION 11 MISCELLANEOUS NARCISSUS

*All narcissus not falling into any of the foregoing divisions.*

This division was created in 1950 as a concession to Nature's refusal to be completely and permanently codified. At that time it was largely a gesture, since the only oddments were a few bulbocodium hybrids, but creation of the division has since been justified by a growing number of entries. In fact, Div. 11 may prove to be a way station where new forms gather strength before moving on to a place of their own.

At present, Div. 11 is the refuge of such an unlikely combination as the bulbocodium hybrids and a new tribe known as the split-corona daffodils. A name so pallid for such singular flowers is apt to be challenged before long by a more sales-provoking trade name.

Crossing bulbocodium species has thus far been an enterprise in which only D. Blanchard of Blandford, England, and, to a lesser extent, Alec Gray of Camborne, Cornwall, have engaged. Working with the cross *cantabricus foliosus* × *bulbocodium romieuxii* made both ways, Mr. Blanchard produced Nylon, Tarlatan, Taffeta, Muslin, and Jessamy. His objectives were an early flowering plant with the wide corona of *romieuxii* and an early yellow. He was successful in his first goal, but the white of *foliosus* proved to be dominant in his quest for a yellow. Poplin and Tiffany are second-generation hybrids. All these are

small plants, but larger and more vigorous than their miniature parents. Since they are disposed to flower in November and December, most gardeners will have to provide shelter for them.

Alec Gray has registered Elfhorn, a later-flowering hybrid which seems not to be offered any longer; Marychild, a blending of *triandrus* and *bulbocodium* which resulted in a bright yellow flower; and Kenellis, a bulbocodium hybrid formerly classified as 5a.

The split-corona daffodils did not begin to appear in the *Classified List* until about ten years ago, although work on them began in the 1920's. At present there are some 30 registered varieties about equally divided between J. Gerritsen & Son of Voorschoten, Holland, and J. W. A. Lefeber of Lisse, Holland. For the full story of these, see Chapter 15.

Considering the chilly reception which the split-corona daffodils have been given by daffodil enthusiasts, it is surprising that many carry a substantial price tag. However, venturesome gardeners who choose to form their own judgments will find Gold Collar, Evolution, Split, Elisabeth Bas, Baccarat, Estella de Mol, and Mol's Hobby available at reasonable prices. There are also varieties on the market which have never been registered, including Artist and the ubiquitous Hillbilly and Hillbilly's Sister.



## LISTS OF DAFFODILS

A. The current *Classified List* contains the names of some 12,000 species and garden varieties of daffodils; of these possibly 2,000 are carried by retail dealers from Holland to New Zealand. Prices per bulb will range from 15c to, at times, several hundred dollars. Catalog dealers tend to favor their own creations—on which they briefly hold a monopoly—and to exclude many interesting forms and varieties which they feel may be less profitable.

Small wonder that the home gardener buys rather blindly, assuming that the offerings of a nearby source of supply or of whatever dealer's catalog may come his way include all that is worthwhile in the genus. It may be some years before experience and curiosity open doors to the lesser known, and often more interesting, material.

Lists of daffodils are of limited value and that value is to speed the process of becoming acquainted with all daffodils. Having sampled the clan, the independent gardener will soon learn what aspects of gardening with daffodils most appeal to him: decoration, hybridizing, exhibiting, forcing; and what forms of the genus win his particular interest: pinks, miniatures, novelties, tazettas, etc.

To speed the novice on his way, a representative collection of 100 daffodils is offered below. It does not attempt the impossible task of naming the 100 "best" daffodils. Its modest goal is to present in capsule the full range of the daffodil family, considering variation in time of flowering, size, color, and form. All divisions and subdivisions are represented, none is expensive, all have a record of good garden performance, and all are listed in current catalogs. Nearly all are of show caliber.

- |                  |                     |
|------------------|---------------------|
| 1a. Bastion      | Killaloe            |
| Kingscourt       | Ludlow              |
| Moonstruck       | Parkmore            |
| Mulatto          | Truth               |
| Ulster Prince    | 2d. Binkie          |
| Wee Bee (M)      | 3a. Ardour          |
| 1b. Bambi (M)    | Ballysillan         |
| Content          | Chungking           |
| Effective        | Edward Buxton       |
| Preamble         | Russet              |
| Trousseau        | Therm               |
| 1c. Ardclinis    | 3b. Angeline        |
| Beersheba        | Bithynia            |
| Mt. Hood         | Blarney             |
| W. P. Milner (M) | Corncrake           |
| White Tartar     | Dreamlight          |
| 1d. Spellbinder  | La Riante           |
| 2a. Armada       | Limerick            |
| Carbinceer       | Vergier             |
| Carlton          | 3c. Bryher          |
| Ceylon           | Chinese White       |
| Fortune          | Cushendall          |
| Galway           | Frigid              |
| Golden Torch     | Xit (M)             |
| Goldsithney      | 4. Gay Time         |
| Rouge            | Golden Ducat        |
| Rustom Pasha     | Mary Copeland       |
| 2b. Brunswick    | White Lion          |
| Daisy Schäffer   | Yellow Cheerfulness |
| Duke of Windsor  | 5a. Liberty Bells   |
| Flamenco         | Moonshine           |
| Kilworth         | Rippling Waters     |
| Mabel Taylor     | Thalia              |
| Polindra         | Tresamble           |
| Rose of Tralee   | 5b. Dawn            |
| Selma Lagerlöf   | Hawera (M)          |
| 2c. Dunlewey     | Ocone               |

Thoughtful	Trevithian
6a. Charity May	8. Cragford
Dove Wings	Geranium
February Gold	Martha Washington
Little Witch	Matador
Peeping Tom	Scarlet Gem
6b. Beryl	9. Actaea
7a. Golden Sceptre	Cantabile
Sweetness	10. <i>asturiensis</i> (M)
7b. Bobbysoxer (M)	<i>cyclamineus</i> (M)
Kidling (M)	<i>jonquilla</i> (M)
Lintie (M)	<i>rupicola</i> (M)
Sugarbush	11. Split
Tittle-Tattle	(M) = Miniature

B. Periodically the Royal Horticultural Society polls a number of daffodil specialists for the varieties they favor for garden decoration which are listed in a current catalog at a price not exceeding 5s. (70¢). The last balloting which was held in 1963 with 18 specialists participating resulted as follows:

NAME	POSITION	NO. OF VOTES	NAME	POSITION	NO. OF VOTES
Kilworth (2b)	1	14	Blarney (3b)	15	4
Ceylon (2a)	2	13	Carlton (2a)	20	3
Carbineer (2a)	3	8	Goldcourt (1a)	20	3
Galway (2a)	3	8	Stadium (2b)	20	3
Armada (2a)	3	8	Garron (1a)	20	3
Narvik (2a)	6	7	Preamble (1b)	20	3
Polindra (2b)	6	7	Trevithian (7b)	25	2
Limerick (3b)	6	7	Charity May (6a)	25	2
Brunswick (2b)	6	7	Adamant (2a)	25	2
Flamenco (2b)	6	7	Cardigan (2b)	25	2
Kingscourt (1a)	11	6	Golden Harvest (1a)	25	2
Ludlow (2c)	11	6	Spellbinder (1d)	25	2
Trousseau (1b)	13	5	Dove Wings (6a)	25	2
Mount Hood (1c)	13	5	Revelry (2a)	25	2
Rustom Pasha (2a)	15	4	Bastion (1a)	25	2
Cromarty (1a)	15	4	Frigid [3c]	25	2
Fortune (2a)	15	4	Firemaster (2a)	25	2
Golden Torch (2a)	15	4	Red Hackle [2b]	25	2

C. While daffodils are natives of the Northern Hemisphere, growing and hybridizing them in Australia, New Zealand, and Tasmania keeps pace with, and sometimes surpasses, activity in the British Isles and United States. The best of the British novelties are promptly imported, acclimated, and shortly appear at shows and in the family trees of domestic hybrids. The reverse movement of introductions from the Antipodes to the Northern Hemisphere is more random, possibly because the British have a longer tradition and a sense of leadership in the field, while growing modern hybrids in the United States is a recent activity which began on the East Coast where ties to British growers were natural. However, Pacific Coast gardeners have been importing bulbs from Australia and New Zealand for some years, and there is a small but regular traffic across the Pacific.

There is no question of the high quality of the varieties being produced in Australia and New Zealand, and it is generally agreed that Tasmania holds the lead in breeding pinks. The problems which have tended to restrict the exchange of varieties are those of adjusting to the difference in seasons, import regulations, and ignorance of the names of dealers willing to serve American customers. These obstacles are resolved elsewhere in the Handbook, (see Chapter 2) so there are no sound reasons why American gardeners should not enjoy the creations of outstanding hybridizers half a world away.

A generation ago, no particular effort was made by hybridizers in the far reaches of

empire to register their creations with the Royal Horticultural Society, but faster transportation, which facilitated the exchange of mail and bulbs, and the selection of the Royal Horticultural Society as the International Registration Authority for daffodils, brought changes. About ten years ago, the Royal Horticultural Society undertook to list varieties long in cultivation in Australia, New Zealand, and Tasmania; to locate and eliminate duplicate or similar names; to ascertain the approximate dates of introduction; and, in general, to improve the housekeeping in the daffodil world. However, much remains to be done, and the result must be imperfect. Many facts have been lost, some raisers are indifferent to whether their introductions are registered, and varieties offered for sale or taking prizes at shows will frequently not be found in the *Classified List*.

One of the leading breeders and dealers in Australia is J. N. Hancock of Kalorama, Victoria. For American gardens, Hancock recommends the following varieties which "have distinction and perform well in the garden and which I believe will be in Australian catalogues many years hence."

1a. Candlelight, Cider, Dandenong, Hillston, Latrobe, Much Binding, Trawalla.

1b. Bessie Scott, Caramel\*, Chiltern, Dederang, Hoyle, Murchison, Windsor.

1c. Josephine, Sunwhite.

2a. Adornment, Elaborate, Euroa, Golden Mantle, Kindershot, Marshall Tweedie, Sunpool.

2b. Brilliant Lights\*, Chartwell, Harry Brown, Japaddy, Lily Ronalds, Royal Robe, Walter J. Smith.

2c. Apex, First Frost, Nautilus, Show Glow, White Xmas.

3b. Nevoze, Vibella

6a. The Little Gentleman.

Pinks. Bon Rose\* (1b), Rostella, Fairy's Flight, Kortright, Mabel Taylor, Longeray, Pink Pearl, Roseport, Rose Song, Tarago Pink, The Bride (all 2b's).

Early Varieties. Titch\* (1a), Wandin Glory (1a), Tecoma\* (2a), Toorak Gold (2a), Vainqueur\* (2a).

D. David Bell is a large catalog dealer and hybridizer near Christchurch, New Zealand. Among varieties of his own raising, he suggests the following:

1b. Outward Bound

2a. Dominion Monarch, Monte Bello, Red Mars, Sarcelle, Stella Maris.

2b. Barbara Allen, Marilyn Monroe, Mas-

querade, Mooncrest, Sleepy Lagoon, Vanity Fair, Witchcraft.

3b. Anacapri, Kindergarten.

4. Temple Bells.

E. E. W. Cotter is another catalog dealer near Christchurch who lists the introductions of all breeders. He recommends for American gardens:

1a. Kanga, Ohakea, Palmino;

1b. Leeston\*, Outward Bound, Panama\*.

1c. Lily White\*, Lochin.

2a. Encore, Gold Script, Golden Acre, Golden Treasure\*, Lucky Charm, Tangiers, Woodside\*, Volcanic Action.

2b. Ballet Dancer, Bazaar\*, Cobden\*,

Glentui\*, Heathcote\*, Little Echo, Mandrake, Merton, Satin Queen.

2c. Jean Anderson

3b. Dresden, Hampstead, Salvador.

6a. Richmond Gem\*.

\*Not registered

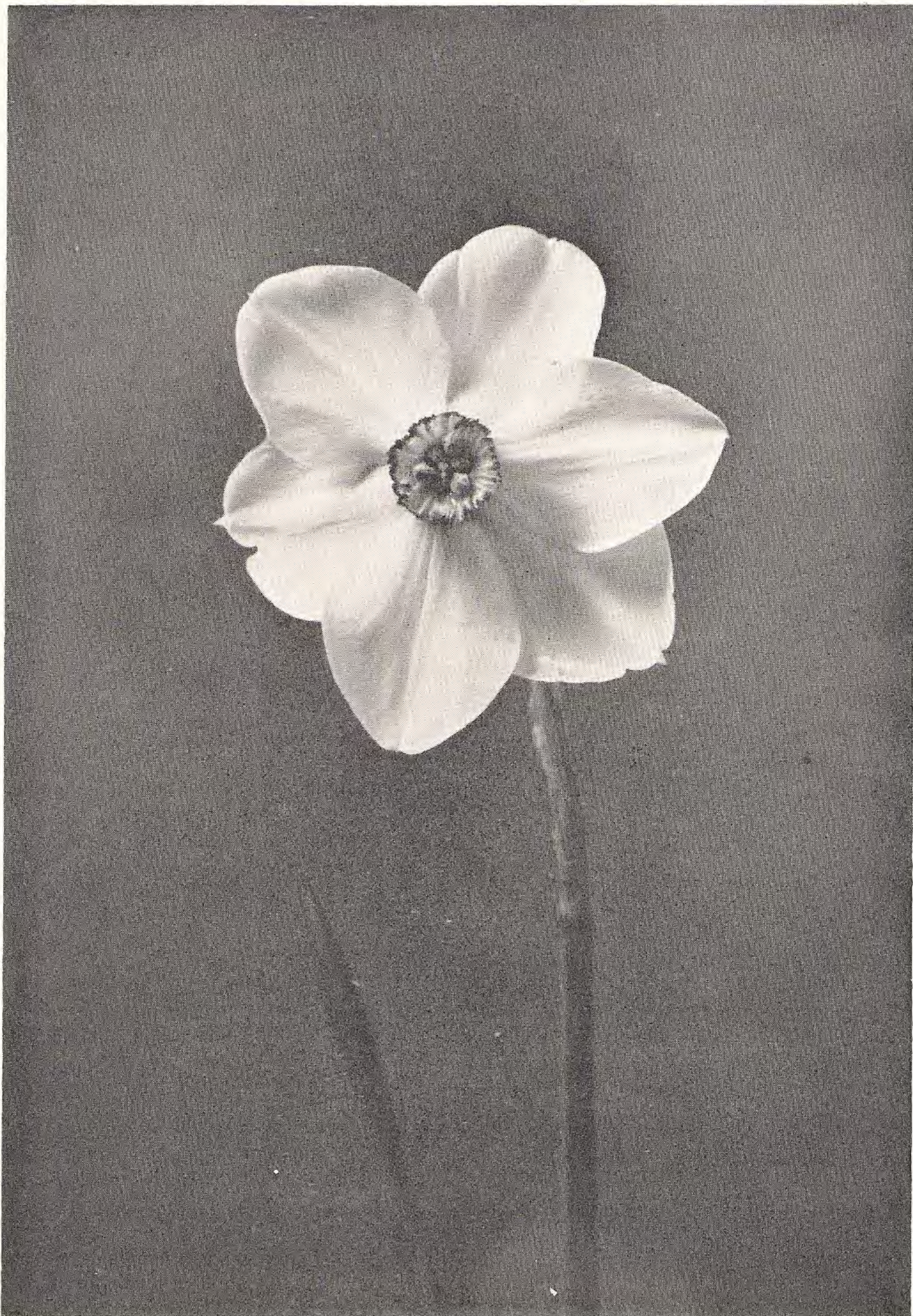


PLATE II

ACTAEA  
Poeticus Hybrid (Div. 9)