

American Narcissism

A passion for Yankee bulbs

Allen Lacy



In 1981, Americans imported more than 34 million daffodil bulbs from Holland. According to my son, who is an engineer, that is enough to girdle the earth with bulbs spaced four feet apart along the equator. The idea of circling the earth with daffodils appeals to me. I confess I am obsessed by these bright spring flowers.

It all began harmlessly enough some ten years ago. My wife and I had bought an old house surrounded by a large yard but nothing you could really call a garden. I sent for a catalog from a mail-order firm specializing in Dutch bulbs. When the catalog arrived I made a list of everything I wanted: crocuses, grape hyacinths, tulips, and a great many daffodils. I knew that 'King Alfred', which has been around for more than eighty years,

had been superseded, but I included a dozen anyway in deference to childhood memories of my mother's garden, in Texas, where hundreds of them gleamed a rich golden yellow every March. But most of the daffodils I wanted were those touted by the catalog as "new and modern": 'Carlton', 'Cheerfulness', 'Dutch Master', 'Golden Harvest', 'Selma Lagerhof', and especially 'Unsurpassable', whose mere name promised it to be the daffodil equivalent of a Rolls-Royce Silver Cloud.

My list came to \$985.67, plus shipping. I pruned it severely and sent off an order for 100 daffodils instead of 750. Next spring when they bloomed it was appallingly clear that I'd been far too stingy with daffodils, so that fall I ordered 200 more, and another 200 the fall after that. Thus on an April day six years ago when our postman, Serge, came up the walk and handed me a catalog from Oregon,

I was feeling pretty smug about the 500 daffodils blooming in my front garden.

"Nice flowers," Serge said.

I nodded modestly, but privately felt that Serge was indulging in understatement. To my eye, they were easily the finest daffodils in town. Finally, there were almost enough of them. We could cut as many as we needed for the house and for friends without making an appreciable dent in the garden display. I suspected that I was probably growing about half of the named daffodil cultivars in existence: 'Beersheba' and 'Binkie', 'Dick Wellband' and 'Duke of Windsor', 'Flower Record' and 'Fortune', and so on through a litany of daffodil names.

I was proud of my daffodils, and that's as much a statement about me as it is about them. Gardening is often described as highly labor-intensive, meaning that it's a lot of work. It's also highly ego-intensive,

'Festivity', an American daffodil bred by Grant Mitsch.

meaning that the pride theologians deplore as Original Sin and novelists revel in as their richest source of material is not unknown among gardeners. Some gardeners may be selfless enough to gladden the heart of a Saint Francis of Assisi, but I suspect that most of us, if we take gardening seriously, must confess to a touch of horticultural elitism, no matter how egalitarian our political sentiments. To want the best and only the best in your garden strikes me as an unimpeachably correct principle: anything less is a waste of time. And elitism may merge imperceptibly into snobism: the pleasure of having something owned by very few others—the rarest orchid, the last word in tree peonies, the lily that seems worth committing mayhem to acquire.

And—until that day when I went inside to look at the catalog Serge brought—I thought I knew just about everything anyone needed to know about daffodils. They come from Holland, along with tulips, round cheese, and strong-flavored, almost undrinkable, green gin. English poets from Shakespeare to Wordsworth to Masefield extol them. Daffodils might not be “forever,” like diamonds, but they’re much more dependable than tulips, which tend to disappear after their first season. A daffodil bulb will increase year after year until eventually there’s a thick clump that must be divided to insure continued bloom.

I also knew that I had been mistaken in my childhood, when, like everyone else in my tribe, I had called daffodils “jonquils.” Jonquils are one section of the genus *Narcissus*, so that all jonquils are narcissuses, but not the other way around. Daffodil is the common English name, and it is perfectly interchangeable with narcissus, which is both a common name and the botanical name for the genus.

I understood enough about the culture of daffodils to meet their uncomplicated requirements. In my sandy soil I planted the bulbs fairly deep, about eight inches. In the spring I gave them a light top-dressing of Milorganite, and after they finished blooming I refrained from cutting back the foliage or braiding it; unsightly, sprawling

daffodil leaves in May and June are the price paid for next year’s bloom.

However, there had been that troubling conversation on an airplane, which had led to the appearance of the catalog from Oregon. I was seated next to an Anglican priest who matched me martini for martini between Philadelphia and Dallas. We had, it turned out, something in common besides faith in a little gin to lessen the terrors of flying: we were both gardeners. Inevitably, the conversation turned from kale and delphiniums to daffodils. My companion asked me what cultivars I raised. He grew quiet as I listed them—‘February Gold’, ‘Mary Copeland’, and, oh yes, ‘Unsurpassable’. He mentioned mildly that he was a member of the American Daffodil Society (an organization I’d never heard of) and changed the subject to politics. But as the plane landed he scribbled an address on a scrap of paper and handed it to me.

“You should try some American daffodils,” he said. “Write Grant Mitsch’s Daffodil Haven, in Oregon, and ask for their catalog.”



When it came, I glanced at the picture on the cover, a handsome clump of a cultivar called ‘Impresario’, and flipped through glossy pages filled with color photographs of daffodils with unfamiliar names. No ‘Carlton’. No ‘Selma Lagerhof’. No ‘Unsurpassable’. Names like ‘Dickcissel’, ‘Oryx’, and ‘Cotinga’ instead.

I went into my front garden to brood a bit. The daffodils there hadn’t changed. Nice flowers, Serge had called them. But something had happened to me. I had experienced what Paul Tillich called a “shaking of the foundations.” It is only human to resist as long as possible a piece of informa-

tion that does not fit comfortably within the system of things we think we know. It really isn’t at all surprising that Galileo got into trouble for suggesting that Joshua, Ptolemy, and Aquinas had their celestial mechanics dead wrong. Learning to enjoy being corrected is distinctly an acquired taste. My daffodils still looked “nice,” but only that. And clearly if the photographs in the Mitsch catalog were accurate, whoever named ‘Unsurpassable’ had badly jumped the gun. I was smitten by Grant Mitsch’s daffodils.

I finished brooding, went inside, and turned to the catalog description of ‘Impresario’, a flower completely unlike anything in my front garden. The description read:

IMPRESARIO (Mitsch) 1975 EM 2d 16" (W12/1[P5/8 × Lunar Sea] × Salem) F88/2. The quite narrow crown makes this appear to be a trumpet, but measurement indicates otherwise. Perianth opens pale yellow and deepens in color as it ages, reflexing somewhat in maturing. The crown opens lemon, fading out to nearly white, with a little gold rim. One of the best reverses we have raised. \$50 each.

The detailed language of the description was a bit baffling; most bulb catalogs are much terser: “golden yellow,” “pure white,” “soft creamy ivory” is as far as they go. But after consulting the key to the symbols in the Mitsch catalog, I was able to decipher it. ‘Impresario’, hybridized by Grant Mitsch from the numbered seedling and named cultivars in parentheses, was introduced in 1975, blooms in early mid-season, and stands 16 inches high. Its crown or cup is not quite long enough for it to be classified as a trumpet daffodil (Division 1 in the classification scheme of the Royal Horticultural Society), so officially it belongs in Division 2—“Large-Cupped *Narcissus* of Garden Origin,” the last three words meaning that it’s not a species daffodil or a naturally occurring hybrid collected in the wild.

My immediate inclination was to order 100 bulbs of ‘Impresario’. My wife had been saying that we had enough daffodils out front and that it was time to put a few in the back, where we could see them

from the kitchen windows. But although \$5,000 worth of 'Impresario' would no doubt be a fine and splendid sight on an April afternoon, I knew it was not meant to be; nor even \$50 worth of 'Impresario'. Our old station wagon, afflicted with terminal rust and a mysterious habit of dying suddenly at rush hour in the middle of intersections, needed to be replaced. College-tuition payments loomed ahead. A decent respect for the neighborhood suggested a new coat of paint on the house.



I put the Mitsch catalog in the drawer next to my side of the bed, for late-night reading. I mulled over the probable merits of 'Butterflower', 'Eclat', and 'Silken Sails'. I discovered 'Lyrebird', at \$100 a bulb. I read about crowns that were crinkled and fluted, ruffled and frilled, shaped like bells or saucers or bowls; about such improbable colors in daffodils as brilliant plum-rose, deep salmon-pink suffused with lavender, and soft beige-yellow. The lavish language of the catalog suggested that Mr. Mitsch loved colorful English prose no less than daffodils. He was also extremely precise in describing the transformations the blossoms undergo from their first opening. Thus the perianth of 'Aircastle' "opens milk white but in a few days turns to greenish beige," and 'Rima' has a trumpet "opening creamy yellow but soon developing to a rich salmon pink with a hint of lilac in its composition."

Of course, I've often been seduced by improbable claims. Perhaps Grant Mitsch had a way with words, but did his daffodils match his prose?

I couldn't work myself into a skeptical frame of mind. I'd learned about the Mitsch catalog from a priest. Mitsch described the shortcomings of certain cultivars

with appealing candor: the deep, orange red cups of 'Ardour' "will burn if left in the sun"; 'El Capitán' and 'Yellowthroat' are "inconsistent performers"; 'Daydream' is "difficult to grow in many areas." The plain words of greeting on the first page of the catalog, where Mr. Mitsch wrote of his fifty years in the bulb-growing and daffodil-breeding business, inspired confidence.

Before long, I had the catalog nearly memorized. I could shut my eyes and see 'Impresario' as it might look from our kitchen window. Finally I broached the subject with my wife.

"I've got this daffodil catalog from Oregon," I said casually, hoping not to betray mania, obsession, or grave infatuation. "Did you know there's a daffodil called 'Lyrebird' that costs \$100 for just one bulb? What kind of damned fool would pay that sort of money for one daffodil bulb?"

"Be careful now," she said. It was clear she suspected that I might be precisely the sort of damned fool I referred to.

"What do you mean, 'Be careful'?" I asked.

"You know your tendency to go to extremes," she replied.

She had me cold. I once bought the same shirt in eight different colors, and I had just shaken a mania for day lilies. The perennial border out front was mostly a day-lily border, and the side yard was cluttered with some very undistinguished, almost aggressively ugly seedlings of my own creation. The previous fall I had imposed a moratorium on acquiring additional day lilies after spending fifty dollars on a purple tetraploid because of some glowing words in a seductive catalog. That love affair over, I was in danger of embarking on another. I had no intention of buying 'Lyrebird', but by dwelling on its outrageous price I would soon convince myself that at only fifty dollars a bulb 'Impresario' was an outright steal. Furthermore, it would multiply. In a few years I would have, say, two hundred bulbs. What's forty cents for a daffodil bulb? A mere trifle, less than a pack of cigarettes or a doughnut and a cup of coffee.

I decided to be sensible, to subli-

mate my unspoken lechery for a fifty-dollar daffodil. I carefully went through the Mitsch catalog, making a list of every cultivar selling at \$1.25 or less, twenty-four in all. I then cut the list down to ten and ordered a single bulb of eight cultivars and three each of two reasonably priced cultivars for which the Mitsch catalog had especially kind words: 'Accent' (a white with a large pink cup) and 'Festivity' (a "magnificent giant flower with very wide spread, broad, flat, smooth perianth of beautiful texture and finish, and a rather long but well-balanced clear yellow crown. . . . one of the best flowers we have raised"). For good measure I threw in two daffodils by other hybridizers but listed in the Mitsch catalog with high praise, A. N. Kanouse's 'Inca Gold' and Guy L. Wilson's 'Empress of Ireland'. I also ordered two dozen bulbs of a seedling mixture—Mitsch hybrids not distinctive enough in his judgment to be named but still a good value in the garden. The forty bulbs came to twenty-eight dollars, or seventy cents a bulb.



In September the bulbs arrived, beautiful, firm, and fat. There was a free bulb of 'Jetfire' (worth \$7.50). I planted them in a bed I had

prepared by spading it eighteen inches deep and forking in a generous measure of well-rotted manure. I set the bulbs at least a foot apart, somewhat irregularly, to avoid the parade-ground effect of straight rows. I planted clumps of hemerocallis here and there to provide summer color and to conceal the sprawling foliage of the daffodils after they finished blooming. I made a careful map so that next spring I would know which was 'Jetfire' and which 'Accent'.

The daffodil season got underway as usual with the appearance of 'February Gold', a perky little thing that despite its name always

Three Mitsch cultivars (clockwise from left): 'Audubon', 'Vireo', and 'Accent'.

blooms for me in early March. Soon the front yard was bright with my older daffodils—the “nice flowers.” The Mitsch cultivars, planted in a slightly shadier location, were slower to appear, so that it was early April before I could look at all my daffodils with a sharp and comparative eye. As each new blossom appeared out back, it became clearer and clearer that Grant Mitsch did have the daffodils to match his prose. The pink-cupped ones really were pink. (With every other “pink daffodil” I had ever run across, it seemed to me that the pink was mostly in the eye of the beholder.) Even the unnamed seedlings were superior to any daffodil I had ever grown.

I was hooked. Another order went off to Oregon that summer and another the following summer. ‘Impresario’ is still on my mind, but it will be a while before it costs two dollars—when I will snatch it up. I now grow more than thirty named Mitsch daffodils and a hundred unnamed seedlings. When people admire the daffodils out front, I invite them to the back garden and bask a bit in their nearly universal verdict: “I never dreamed there were daffodils like that? Where can I get some?”

This question reveals a problem. The Mitsch farm—now run by Grant’s son-in-law and daughter, R. D. and Elise Havens—is small, under five acres. Although a few Mitsch cultivars are offered by the Daffodil Mart, in Virginia, which lists 250 new and old cultivars as well as 15 of the wild or species forms, the bulbs are not available in large enough numbers to meet the potential demand. Only the large-scale bulb farms of Holland can produce enough daffodils and other spring bulbs to meet the needs of American gardeners. If a hundred thousand people in this country should suddenly decide to grow dozens of Grant Mitsch daffodils, the bulbs would clearly have to come from Holland. But the Dutch aren’t growing ‘Accent’ and ‘Festivity’; they’re growing ‘Carlton’ and ‘Unsurpassable’.

Last spring, I was overcome by a sudden feeling of guilt about my daffodils. Somehow my elitist feelings seemed, well, pardon me, but a bit too narcissistic. I wanted to know if Dutch growers planned to do anything about Grant Mitsch’s superior cultivars. And I wanted to talk daffodils with someone, to escape the solitude of

my own backyard for the fellowship of a like-minded soul. (I wished I’d gotten the name and address of that priest.) So I did two things. I wrote a letter to the Netherlands Flower Bulb Institute, in New York, asking a number of questions, including whether they had ever grown, were now growing, or intended to grow and market Mitsch daffodils. And I called Brent Heath, the present owner of the Daffodil Mart, in Gloucester, Virginia, asking if I might pay him a visit.

Mr. Heath agreed, and so a few weeks later I was in the Tidewater area of Virginia, heading south on Route 17. There was little traffic, and the road dipped and rolled with the contour of the land, plunging into cool glens smelling of honeysuckle and then rising to hilltops planted in corn or soybeans.

I arrived at the Daffodil Mart at noon and met Brent Heath at his packing shed. He introduced me to his wife, Becky, and then the three of us drove to the river-front cabin they were living in temporarily while building a passive-solar house several hundred yards away. Brent said we could have either crabs or trout for lunch. I said that



‘Ceylon’, bred in Ireland by J. L. Richardson, is available at Brent Heath’s Daffodil Mart.

crabs sounded just fine. The two of us climbed into a canoe, paddled out to a couple of crab traps just offshore, and quickly hauled up more than enough for lunch. While the crabs cooked, Brent told me about his family.

Brent's grandfather, Charles Heath, the dilettante son of a prominent Brookline, Massachusetts, family, lived in New York around the turn of the century. One morning Charles ate a cantaloupe so sweet and delicious that he asked his grocer to trace its origins so he could order a case each week during the season from the grower. The grower turned out to be Thomas Dixon, a wealthy gentleman farmer from Gloucester County, Virginia, and the author of a popular novel, *The Clansman*, on which D. W. Griffith based *Birth of a Nation*. When he heard of Heath's love of his melons, Dixon invited him down for a visit. Heath liked the area so much that he immediately bought 600 acres and an antebellum mansion.

When Charles Heath moved to Gloucester County, there was a primitive local trade in daffodils that had naturalized along the edges of woodlands. Every spring farmers picked the blooms and took them to a nearby wharf for shipment by steamboat to Baltimore. Suspecting that there might be a profit in growing modern cultivars for the florist trade in the East, Heath began importing bulbs from Holland and Great Britain and encouraged many of his neighbors to join him in making Gloucester and adjacent Mathews counties major producers of daffodils.

In the early 1920s, proud that the bulbs he grew seemed to be of higher quality than those he had imported from Holland, he wrote some Dutch growers to brag a bit. A little later, when it seemed certain that a quarantine would be imposed on Dutch bulbs because of daffodil-fly and eelworm infestations, the Dutch firm of M. van Waveren & Sons remembered Heath's claims and moved part of its operations to Gloucester County. But the Dutch managers and their American field-workers didn't get along, so van Waveren hired Charles Heath's son George to run

Europe's Secret To Bigger, Better Tomatoes

It's the revolutionary Fabro Expanding Tomato Cover . . .

. . . a plant-sized tube of thin yet durable polyethylene film with thousands of tiny slits.

Slitted Film Controls Plant's Environment

The principle is so simple that like all good ideas it makes you wonder why no one thought of it before.

By an ingenious manufacturing method, the film is slitted at regular intervals so that when the material is stretched the slits open — unstretched they close back again!

The result? Warmth and moisture stay in, cold stays out producing bigger tomatoes sooner.

The Expanding Tomato Cover will give these incomparable benefits:

- plants can be put outside earlier
- harvest up to 39% more tomatoes
- tomatoes are ready to pick up to 3 weeks earlier
- plants are protected from light frost and garden pests

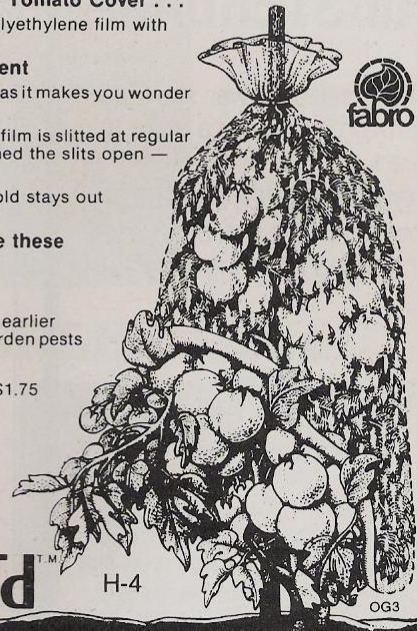
Order now in time for early spring planting!

15 ft. roll (covers 4-5 plants) \$9.95 ea. plus \$1.75 shipping/handling. Instructions included.

Send check or MC/VISA number today. satisfaction guaranteed.

New color brochure \$1.00 (Refundable with order)

GARDENTECH LTD.
1150 Gt. Plain Av., Box 612
Needham, MA 02192



14 Ways Better Than A Wheelbarrow Easier And More Enjoyable To Use.

Mail us the coupon below to receive all the exciting news about our famous Vermont-Ware carts, our special free premium offer, our two styles, five models and special build-it-yourself kit.

Learn why more than 80,000 satisfied customers all over the world say they don't know how they ever got along without it. Send for our FREE catalog today.

VERMONT-WARE

Dept. 1804-2
Hinesburg, Vermont 05461

Name

Address

City State Zip

FLORIADE 82 in AMSTERDAM

The greatest flower show on earth organized once every 10 years.

DEPARTURE EVERY SATURDAY
From April 10 to October 2, 1982
(returning following Sunday)



From New York **\$950*** per person
in double occupancy

*Supplement for departure between
May 15 and Sept. 14: \$130 per person
Single supplement: \$110 per person

Departures available on the same dates from Los Angeles, Chicago, Houston and Atlanta.

Price includes: 7 nights at the Hotel Schiller (first class) or similar with breakfast daily, 2 full days at the FLORIADE, half day sight-seeing tour of Amsterdam with a canal cruise, half day to a fishing village and a half day to the FLOWER AUCTION MARKET. Transportation on KLM Royal Dutch Airlines by Boeing 747, in economy class.

First class seats available on KLM, ie, from New York supplement of \$1740 per person round trip

Reduction for groups over 10 passengers.

For brochure and additional information write or call:

**AmericaScope
Tour Services**

14 East 28th St., NY, NY 10016
Tel.: (212) 684-7610

the farm. When the quarantine was lifted in 1939, George Heath bought van Waveren's land and stock and founded the Daffodil Mart. It was a large operation, both in acreage and in the great number of cultivars grown. Because European bulbs were unavailable during World War II, Heath's business flourished—as did the commercial raising of daffodils for cut flowers in the area. Every spring tourists flocked to the Tidewater Peninsula to see hundreds of acres of daffodils in bloom and to visit the Heaths' large display garden.

But in the middle 1960s the bottom dropped out of the Virginia daffodil business. It was a time of affluence, and people who might have bought daffodils bought roses instead. West Coast bulb cooperatives offered serious competition for the northeastern markets. Their blossoms, raised under cooler conditions, were longer lasting, and it was less expensive to air-freight daffodils from Washington State to New York and Boston than to truck them up from Virginia. Virginia growers resorted to refrigeration to hold flowers in bud. It was an unfortunate practice, because when retail buyers brought them home they lasted only a day. Virginia daffodils became anathema to florists, and area bulb farmers plowed under almost a thousand acres of daffodils to plant soybeans.

In concluding the saga of his family's century-long association with the daffodil, Brent Heath mentioned that in recent years he's cut back on his own operation. He grows only what he can harvest, store, clean, and ship with the assistance of his wife, his mother, a few teenagers during the busy season, and some very sophisticated digging and sorting equipment capable of being operated by one person. For the naturalizing mixtures that provide the bulk of his business, he contracts with local farmers to raise bulbs and buys the rest from growers in western Washington and in Holland. On his own land, he specializes in novelties—the best new hybrids from England, Ireland, New Zealand, and Tasmania. (Bulbs from the Southern Hemisphere arrive in the

spring, but he holds them for fall planting, since many would otherwise bloom in October.) And he's now begun his own program of hybridization.

The crab shells dumped on the compost heap, Brent and I nursed our beers on the grassy riverbank. "What do you think of Grant Mitsch?" I asked.

"There are other hybridizers," he replied, "some in this country, like Murray Evans and Tom Throckmorton, some in Britain and Ireland, some in Australia and New Zealand. But I think I'd have to say that Grant Mitsch is the dean of American hybridizers. He's given us the American daffodil, and it's a damned beautiful thing."

In the barn that serves as the Daffodil Mart's office, Brent rummaged around on a shelf, found a small vial of daffodil seeds, and gave it to me. "Here, try your luck," he said. "Four years from now you might even have something worth looking at." Then he wrote an address on a scrap of paper. "If you want to know a lot more about daffodils, you should join the American Daffodil Society. They publish a great deal of literature."

Two weeks later I became a member of the society and was confronted with a thick stack of printed matter: the *Daffodil Handbook*, published in 1966 by the American Horticultural Society in cooperation with A.D.S.; several annual *Daffodil Yearbooks* from the Royal Horticultural Society; *Daffodils to Show and Grow*, a computer printout of names, hybridizers, and characteristics of a vast number of daffodils kept under electronic surveillance by the Daffodil Data Bank, in Des Moines, Iowa (there are more than eleven thousand cultivars); and a great many back issues of the *Daffodil Journal*, the official publication of the A.D.S., an organization of 1,600 members.

I was soon suffering from an overload of daffodil information, much of it surprising and difficult to assimilate. Although my mind turns naturally to Holland when I think of daffodils, it might just as well turn to Great Britain, and not just because of William Words-

worth. The British raise far more daffodils than the Dutch; in 1965, the last year for which comparable figures are available, 4,159 acres in England were planted in daffodils for the cut-flower trade, 3,226 acres for the bulb trade. The same year, the Dutch had a combined total of 3,268 acres. It is doubtful that daffodils would be so popular a garden flower and so important to the Dutch economy were it not for the passionate labors of several generations of amateur English and Irish hybridizers—many of them clergymen, and some of them eccentric—to develop superior cultivars. In the early nineteenth century they collected several species from the wild and began to cross them and intercross their progeny.

Although one daffodil, *Narcissus Pseudonarcissus* (the trumpet daffodil or Lent lily), grows naturally in the British Isles, most species (at least twenty-five of them, many with several subspecies) are natives of the lands surrounding the Mediterranean. Considerable variation of color, form, and plant habit is found among members of the genus. *Narcissus asturiensis* (a yellow trumpet sometimes listed in catalogs as *N. minimus*) is extremely diminutive, growing only three to five inches high. *Narcissus serotinus*, *N. elegans*, and *N. viridiflorus* all bloom in the fall; *viridiflorus*, as its Latin name indicates, has green flowers. Besides *N. Pseudonarcissus*, the species most significant in the pedigree of modern garden daffodils are *N. cyclamineus*, a graceful, small plant so named because its sharply swept-back petals and sepals give it something of the appearance of a cyclamen; the intensely fragrant *N. Jonquilla* and its various subspecies; *N. poeticus* (the poet's daffodil), a flower noteworthy for its mythological associations (apparently it was Narcissus' narcissus) and for its red-rimmed white cup, which may be the progenitor of today's pink-and-red-cupped cultivars; *N. Tazetta*, a tender species whose jasmine-scented flowers are borne in clusters, as exemplified by the familiar cultivars 'Paper-white' and 'Grand Soleil d'Or'; and *N. triandrus* (angel's-tears), which bears several nodding flowers, usually

NEW SUNROOM—40% TAX CREDIT!

(For qualified applications)



- ☐ New System 3 — "Brookhaven" Model
- ☐ Heats Your Home
- ☐ G.E. Lexan® Panels
- ☐ 40% Tax Credits & State Credits
- ☐ D.I.Y. Prefab Kit
- ☐ Freight Prepaid
- ☐ Lean-To, Free Stdg. and Window Units
- ☐ Curved Eaves, Bronzefine Finish
- ☐ Factory Insulated Double & Triple Glazing
- ☐ Increases Living Space for Gardening, Solar Collection, Hot Tub Enclosure, etc.

and PASSIVE SOLAR GREENHOUSE

COLOR CATALOG and TAX CREDIT GUIDE: Enclose \$1. for our catalog and price list, plus our guide to the latest federal and state passive solar tax credits and qualifications. All kits shipped Freight Prepaid.

SAMPLE WINDOW KIT: Enclose \$5. for catalog and tax guide above, plus actual samples of greenhouse alum. frames, G.E. Lexan® glazing, assembly manual and heating guide.



FOUR SEASONS GREENHOUSES

910 Route 110, Dept. T-204
Farmingdale, N.Y. 11735
Phone: (516) 694-4400

Div. Four Seasons Solar Products, Corp.
(Custom Built & Standard Sizes)



Here's all you need to garden—and more!

A Small Wonder.

The Masport Home Gardener™

is so light and versatile you'll probably want to use it for most of your gardening chores. In fact, 79% of Masport owners we surveyed use their Home Gardeners at least every 2 weeks—not once or twice a year like most tillers! Here's why:

- **Lightweight.** One-third the weight of big reartine tillers, just 76 pounds. So, you can handle it easily. No extra muscle needed.
- **Tills, Cultivates, Weeds.** Just adjust the working head to fit the job.

Use it all season long—not just Spring and Fall.

- **Easy to Handle.** Anyone can use it—from older folks to youngsters. It's small and light so it won't bounce and shake you to death! Enjoy easy control.
- **Affordable.** Half to one-third the cost of big reartine tillers—with four times the uses!

For complete information, return this coupon or call **1-800-227-2864** (in California, **1-800-772-3589**).



Send to: Masport America Inc.
Dept HCH-24S3, 200 Gate 5 Rd.
Sausalito, CA 94965

Name _____

Address _____

City _____

State _____

Zip _____

Phone (____) _____

©1982 Masport America Inc.



SOLAR GEOMETRY SUNPLACE™ TECHNICAL SERIES

GET IT RIGHT THE FIRST TIME.

How much solar energy a sunspace captures in winter and reflects in summer is, to a large extent, determined by the geometry of the structure.

The two manufactured structures below intercept the sun quite differently in summer and winter.

Winter - Month of February Boston, Massachusetts

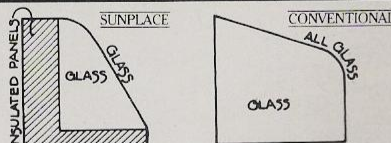
Sunplace Solar System	Item	Conventional Greenhouse*
24 ft. long x 10 ft. deep	Size	Same
342 sq. ft.	Total double glazed area	555 sq. ft.
17%	Ratio of endwall glazing to total	28%
171 sq. ft.	Solar Aperture	193 sq. ft.
4,308,100	BTU's transmitted in month	4,861,366

*Average of typical products. Specifics will vary slightly.

In Technical Series #2 we showed how less surface area and superior insulation resulted in the Sunplace having 55% less heat loss for the same conditions. In order to find the *Net Energy Gain* to make these structures usable, we must now subtract their heat loss.

Sunplace Solar System	Item	Conventional Greenhouse
4,308,100	BTU's gained	4,861,366
3,699,475	BTU's for heat loss Minimum interior temp. 40°F.	5,532,575
◆608,625	Net Heat for Home	◆671,209

In any location in the contiguous U.S., the Sunplace Solar System



will show a net winter gain and performance far superior to a conventional greenhouse.

What about summer and the swing months? Overheating has always been a big problem in conventional greenhouses.

Summer - Month of June Boston, Massachusetts

Sunplace Solar System	Item	Conventional Greenhouse
24 ft. long x 10 ft. deep	Size	Same
9%	% of glazing within 20° normal of summer sun	47%
2,651,428	BTU's transmitted in month	7,883,184

The reason for this difference is simple; you can't point all that glass in a conventional greenhouse at the sky without having a great summer heater.

It's no accident that the Sunplace Solar System produces infinitely more energy in February and 66% less in June... it's just good design.

SUNPLACE Corporation
The Total Passive Solar System
P.O. Box 237B
Hinesburg, VT 05461
802/482-2163
Dealer inquiries welcome

creamy white, to a stem.

The first serious British hybridizers to work with daffodils were Dean Herbert, Edward Leeds, and William Backhouse, but the crucial figure in the emergence of modern daffodils and their rise to popularity and commercial importance was Peter Barr, a professional plantsman. In 1874 he purchased a large collection of seedlings hybridized by Edward Leeds, who was in failing health. Barr kept half the seedlings for his own firm, selling the rest to British breeders and to a Dutch syndicate. Ten years later he persuaded the Royal Horticultural Society to convene an international conference on daffodils, which adopted the practice of giving hybrids simple vernacular names rather than Latin ones—for example, 'Emperor' instead of 'Barrii Conspicuous'.

The *Daffodil Handbook* points out that after this conference Dutch and English growers began to move in quite different directions. The English (and their followers in the English-speaking world) concentrated on breeding flowers for exhibition and sought innovations in color and form. The Dutch turned to large-scale cultivation of a small number of cultivars known to be reliable and consistent performers in the cut-flower trade as well as in the home garden. And although some Dutch firms have bred their own daffodils, including 'Flower Record', 'Golden Harvest', and 'Unsurpassable', Dutch fields have continued to be dominated by such British cultivars as John Kendall's 'King Alfred' (first registered in 1899 and extremely popular through much of this century, though it now makes up only one percent of the daffodil fields in Holland), Guy L. Wilson's 'Broughshane', and Percival D. Williams's 'Carlton'. (In 1975, 1,397 acres of the more than 3,600 acres devoted to daffodils in Holland were planted with 'Carlton', which was registered in 1927.)

Pondering the confusing material accumulating in my study, I began to see that the daffodil world was highly fragmented, actually several different worlds, with limited communication among them. The devoted hobbyist who



QUALITY DOMESTIC

DAHLIAS

from the WILLAMETTE VALLEY, OREGON

Send \$2 for 36 page COLOR CATALOG
(refunded with first Tuber Purchase)

SWAN ISLAND DAHLIAS

P.O. Box 800 HD CANBY, OR 97013

Phone (503) 266-7711

SWAN ISLAND DAHLIAS

raises daffodils for exhibition is not the same as the gardener who just likes to have them around in the yard. A wide gulf separates the person who belongs to the American Daffodil Society and buys daffodils from specialty nurseries handling mostly novelty cultivars from the person who relies on large mail-order firms dealing in imported bulbs. Perhaps Grant Mitsch's daffodils will never be common in American gardens. Perhaps the Dutch simply aren't interested.

In late August a letter arrived, forwarded to me from the Flower Bulb Information Center in Lisse, Holland, by the Netherlands Flower Bulb Institute in New York. The English was occasionally a little perplexing, but the letter explained that "up till now a new variety takes 20 to 25 years to grow from seedling to a commercially interesting quantity." There are, however, recently developed methods of rapid propagation that may reduce this time to five or seven years. American daffodils are not yet a significant part of propagation efforts in Holland, but expectations are high for several Mitsch cultivars: 'Accent', 'Dickcissel', 'Daydream', 'Jetfire', and 'Petrel'.

The letter was vague about these methods of rapid propagation, but it sent me back to browse through recent issues of the *Daffodil Journal* to read several articles I'd missed. Some dealt with a method of propagation called twin-scaling, which involves dissecting a bulb into several fragments and then treating them to encourage each scale to form bulblets. But much more exciting was a 1976 article by Professors Janet E. A. Seabrook and Bruce G. Cumming, two biologists at the University of New Brunswick, in Canada, describing their success in adapting tissue-culture techniques of propagation (which have already proved useful with sugarcane, gladioli, orchids, and other commercially important plants) to daffodils. Twin-scaling produces at best fifty bulbs in two years. In tissue-culture, sterile daffodil tissue is dissected into extremely small pieces and cultured in jars of agar enriched with nutrients, hormones, minerals, sugars, and trace elements until small

AT LAST! An affordable, compact, rear-tine tiller and cultivator . . . **YELLOWBIRD**

This versatile, compact gardening machine is a tiller, cultivator, composter. This work-saving machine maneuvers in small spaces and is tough enough to do with ease the real backbreaking work of gardening — turning up sod; weeding and hoeing; shredding corn stalks and vines; and composting the residue.

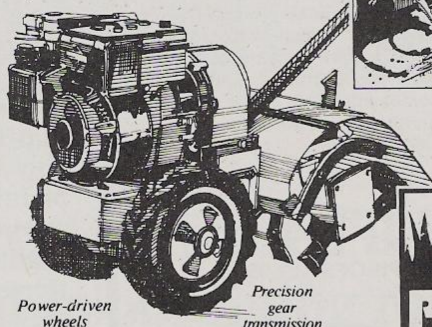
Now get rear-tine comfort and performance at a reasonable price. The compact **YELLOWBIRD** tills as quickly and as deeply as machines twice its size and weight.

Eliminate weeding and hoeing with the patented Power Cultivator. It attaches easily and makes quick work of garden maintenance. Spring steel tines oscillate back and forth at 500 strokes per minute at a controlled depth. Removes weeds and aerates soil. Does not tangle vines or throw dirt.

Easy to handle; turns with a touch! The **YELLOWBIRD** is small and powerful, yet the weight is so well balanced **you can guide it with one hand.** Cultivates easily between narrow rows. You won't have to plant your garden to fit your tiller with a **YELLOWBIRD**. It is sized for compact storage and transport in the back of a car.

New for home gardeners !

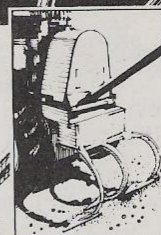
Easy-to-start
Briggs & Stratton
engine



Power-driven
wheels

Precision
gear
transmission

Converts in minutes
to power cultivator;
no tools required.



Available at factory-direct prices

NO-RISK GUARANTEE includes lifetime warranty on materials and workmanship.

Money-back return privilege if you are not completely satisfied with your **YELLOWBIRD**.

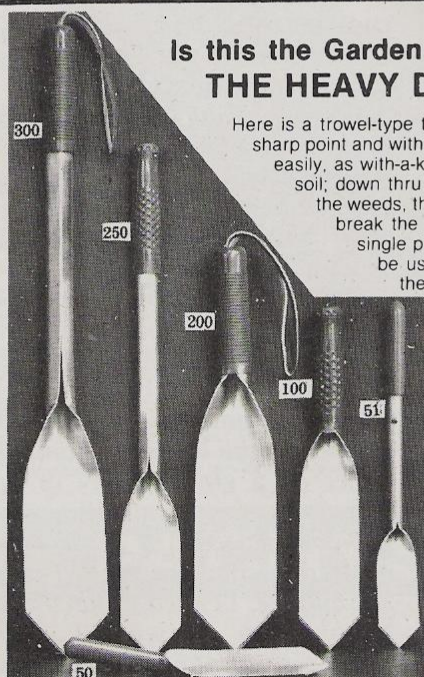
FREE

INFORMATION color portfolio on the 2-in-1 **YELLOWBIRD**. Send coupon today!

NAME _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____

Precision Valley Manufacturing Co.

Rt 4, Box 2230, Woodstock, VT 05091 (802)672-5136



Is this the Garden Tool you are looking for???

THE HEAVY DUTY DIGGER TROWEL

Here is a trowel-type tool that digs like a small spade. Made with a sharp point and with sharpened edges on the working end, you can easily, as with a knife, push the Digger-Trowel into the toughest soil; down thru sod, and under stubborn weeds. Then pry up the weeds, the sod, and the tough soil . . . you won't bend or break the Digger-Trowel. This tool is fashioned out of a single piece of heavy gauge steel and it will endure to be used by your great grandchildren. You can use them to pound in tent stakes and then to trench around the tent; to chip ice; to dig in clay, loam, and stony soils; to dig up plants for transplanting; to plant bulbs; and to easily do the jobs that you expect from an ordinary trowel.

The handles are bent to be at a slight angle to the trowel end. Nos. 50 & 51 are for light work in planters, pots, and tight close areas. Nos. 200 & 300 have leather thongs. Digger-Trowels are all basically the same design made under one Patent No. 211242. Just note the dimensions and select the ones you need . . . The prices are very fair.

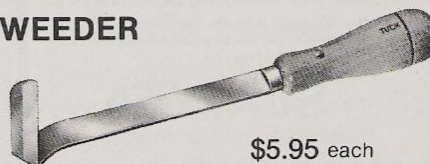
#50	9" x 1 1/2"	\$2.25
#51	12" x 1 1/2"	\$2.95
#100	12" x 2"	\$3.95
#200	14" x 3"	\$6.95
#250	18" x 2"	\$6.95
#300	22" x 3"	\$7.95

A GREAT GIFT

SHIPPING CHARGE \$1.00 per order

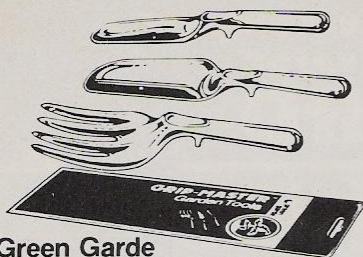
THE FAMOUS CAPE COD WEEDER

The Cape Cod Weeder, still made in Massachusetts, has served many generations of home gardeners. Use the knife-like angle and the pointed tip to weed & cultivate. The heavy steel blade is pin-locked to a hardwood handle.



\$5.95 each

WALT NICKE, BOX 667H, HUDSON, N. Y. 12534



Green Garde GRIP-MASTER TOOLS

Rusty tools will never again be a worry. Strong lightweight and dependable, these highly polished, superb English tools are cast from high tensile aluminum alloy. Each tool comes in its own heavy duty vinyl wallet. Buy them separately, or all at an affordable price.

Trowel	\$7.98
Fork	\$8.49
Transplanter	\$7.49

ALL THREE PIECES \$22.95

Florian 3/4" CUT RATCHET CUT HAND PRUNER RP701

Cut branches up to 3/4" thick with the Florian Ratchet Cut Hand Pruner. Mar tempered steel blade is Teflon coated to reduce friction, and prevent rusting. Feather light fiberglass handles are reinforced with nylon, for strength and durability.

\$14.95

25,000 WILDFLOWER SEEDS FOR MASS PLANTING

New: Wildflower package for dry area. (10 to 30 inches of rainfall/year) Imagine, a beautiful, colorful garden filled with Baby's Breath, Chicory, Coneflower, Wild Blue Flax, Gaillardina, Penstemon, California Poppy, and Prairie Aster.

1 oz size (covers 250 sq. ft.)	\$4.98
2 oz size (covers 500 sq. ft.)	\$9.95

**ASK FOR OUR NEW
"BACKYARD FANTASIES"
FREE OF CHARGE.**

Please send me

☐ Visa ☐ MasterCard ☐ Personal Check

Charge Acct No.

Expires

NAME

ADDRESS

CITY STATE ZIP

Please include \$1.50 for shipping and handling

Mass. residents add 5% sales tax

Return To:

SLAINTA
65 South Main Street
P.O. Box 1015
Attleboro, MA 02703

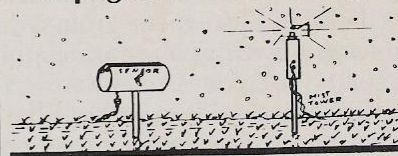


buds appear on the fragments of tissue. It is effective in turning one daffodil into a great many, because the material can be dissected repeatedly and recultured before the resulting plantlets need be placed in a different nutrient medium in which they can form roots and move out of the laboratory. Professors Seabrook and Cumming reported that in five months of culturing, they produced more than two thousand plantlets of one daffodil cultivar. They estimate that in six months they can probably obtain twenty-five thousand plantlets from one bulb. Understating the matter more than slightly, they observe, "This is a tremendous increase over our present propagation methods." The only thing that gives me pause in the Seabrook-Cumming article is that they are working with cultivars like 'Carlton', 'King Alfred', and 'Unsurpassable', not 'Impresario'.

Tissue culture of daffodils is an exciting prospect, something that might well bring the fragmented daffodil world together, as it has not been since that conference of 1884. It can shorten the time between the appearance of something rare and lovely in the daffodil-seedling patch of a Grant Mitsch or a Brent Heath and its appearance in the garden of a mild narcissomaniac like me. It can do away with the \$100 daffodil—though that may be a disadvantage, because anyone who pays that much money for one flower will probably have high standards about its merits. It brings together science, commerce, and the beauty sought by the ordinary home gardener on a glorious day in April when something more than "nice flowers" is needed.

After reading the article on tissue culture, I called Professor Seabrook. No answer. I called Professor Cumming to congratulate him on the greatest promise in the world of daffodils since Peter Barr bought those seedlings from ailing Edward Leeds or perhaps since Grant Mitsch decided to spread a little pollen to see what might happen. "You must spend half your time in Holland these days," I said. There was a some-

Propagation Breakthrough



Nothing comes even close to the propagation yields, convenience and versatility of Aquamonitor Mist Controls

1. AQUAMONITOR's sensor is placed in the cutting seed bed. Its automatic multi-level mist is unique and unequaled.
2. All system adjustments are at the sensor, handy for "hardening off." You save time, steps and avoid moving plants.
3. Mist blasts can be set for 1/10 second up to 100 and more.
4. AQUAMONITOR is exceedingly stable and reliable in or outdoors. The sensor is self cleaned automatically.
5. It costs nothing to install or move. It is pre-wired, pre-plumbed, plug in, pull out, hand fitted and portable.
6. It is amazingly easy to operate and adjust. Once set, it can be left pretty much alone until "hardening off."
7. One kit can operate a single nozzle or as many as 150. Power is less than two watts. Multi-kit installations cost less and provide better control.
8. It is rugged, durable, trouble free, safe, dependable, solid state and has little wear or upkeep. The first kits sold 11 years ago are operating today.

**WRITE FOR OUR FREE LITERATURE
AQUAMONITOR**

Box 327-H Huntington, N.Y. 11743



FREE

**GARDEN
MUM
CATALOG**
IN FULL COLOR

**NEW & POPULAR
GARDEN VARIETIES**

**INCLUDES
EXHIBITION,
FOOTBALL & SPIDERS**

(Chrysanthemum Specialists)



**THON'S
GARDEN MUMS**

**Dept. H 4811 Oak St.
Crystal Lake, IL 60014**

what philosophical sigh from the other end of the line in Nova Scotia. "It's been several years since our research was published, not only in the *Daffodil Journal* but also in several scientific periodicals," he said. "I still haven't heard the slightest expression of interest from a single commercial grower." Then, after a pause, he asked, "Do you know of anyone who deals with daffodils who might have some interest in this work?"

I gave him Brent Heath's address and went outside to brood about my hemerocallis seedlings, wondering if perhaps the Salvation Army might not take them off my hands. ❖

When not dreaming up new schemes for his garden, Allen Lacy teaches philosophy at Stockton State College, in New Jersey.

Where to Buy American Daffodils

The best source for Grant Mitsch's introductions is the nursery run by his daughter and son-in-law. Write R. D. Havens, P.O. Box 218, Hubbard, Oregon 97032. Their color catalog, available in April, costs \$2.50.

The extensive and varied list of the Daffodil Mart, whose fields are not open to the public, is free. The address is Route 3, Box 208R, Gloucester, Virginia 23061.

Daffodils and other spring bulbs are listed in a free catalog by Charles H. Mueller, River Road, New Hope, Pennsylvania 18938. Mr. Mueller grows over 562 varieties of daffodils in display gardens that open to the public on April 1 and remain open for several weeks.

American Daffodil Society

The society is an excellent source of additional information. Dues are \$10 per year, payable to William O. Ticknor, Executive Director, Tyner, North Carolina 27980. Membership includes a subscription to the *Daffodil Journal*, a quarterly. The society also sells a number of other publications about daffodils from the Royal Horticultural Society.

"Finally, a fireplace stove I'll let my husband put in our living room."

You've seen them all — the tube grates, glass doors and fancy andirons that seem to promise much but deliver only modest fireplace heat savings. You've looked at sheet-metal inserts, one uglier than the next. And you wonder why on earth hasn't someone come up with a truly efficient fireplace heat reclaimer that you'd really like to live with?

Finally, someone has. The Shelburne Fireplace Stove can transform your fireplace from a heat waster into an incredibly efficient heat producer — without compromising the visual and soul-warming pleasures it provides.

Initial tests in the calorimeter room of an independent research lab produced a plus-50% percent-

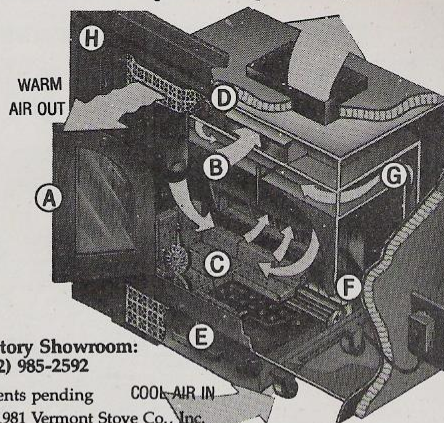
tage efficiency rating, dramatically higher than ordinary non-airtight inserts, very close to that of the best woodstoves. But the Shelburne *enhances* rather than hides your fireplace, complements rather than insults your room decor.

Stretch out and relax before the fire, flickering behind safe Corning Pyroceram glass. The extraordinary flame pattern you see is proof of the Shelburne's amazing efficiency, as its downdraft preheated-air system creates a vortex of burning wood gases.

Efficiency on wheels

The Shelburne fits snugly into your fireplace yet rolls out easily on concealed wheels for chimney inspection and cleaning. A thin blanket of space-capsule insulation and extensive baffling minimize heat loss up your chimney, while its quiet fan delivers gentle convection warmth for hours to your rooms.

The Shelburne is totally in a class by itself. Let us prove it to you, with color photos and complete details. Please use the coupon below.



Factory Showroom:
(802) 985-2592

Patents pending COOL-AIR IN
© 1981 Vermont Stove Co., Inc.

(A) Doors may be opened to view the fire (B) Air is preheated as it enters downdraft and secondary air tubes (C) Firebrick-lined 1/4" steel firebox (D) Automatic thermostat (E) Pull-out ash pan (F) Fan with speed control (G) 40" baffling system (H) Flanges in choice of 3 widths permit installation in over 80% of all fireplaces.

The Shelburne Fireplace Stove

Rush me your FREE Information Portfolio including full details on the new Shelburne Fireplace Stove, plus exciting news about OFF-SEASON SAVINGS now in effect!

Name _____

Address _____

Zip _____

The Vermont Stove Company

Dept. 2524, Rte. 7, Shelburne, VT 05482
802-985-2592

PACHYSANDRA

Terminalis (Japanese Spurge)

The ideal permanent evergreen ground cover plant to grow in sunny as well as shady locations where grass fails. Grows at even height of about 8 inches. Plant 6 in. apart. Sturdy, well-rooted plants, postpaid: 50—\$13.50, 100—\$22.95, 500—\$85.95, 1000—\$145.00. Finest quality stock. Postpaid and expertly packed. Guaranteed to live or we'll replace up to 1 year. Prompt shipment. ★ Order direct from ad or send for plant folder.

PEEKSKILL NURSERIES Box B4, Shrub Oak, NY 10588