

# forcing bulbs indoors

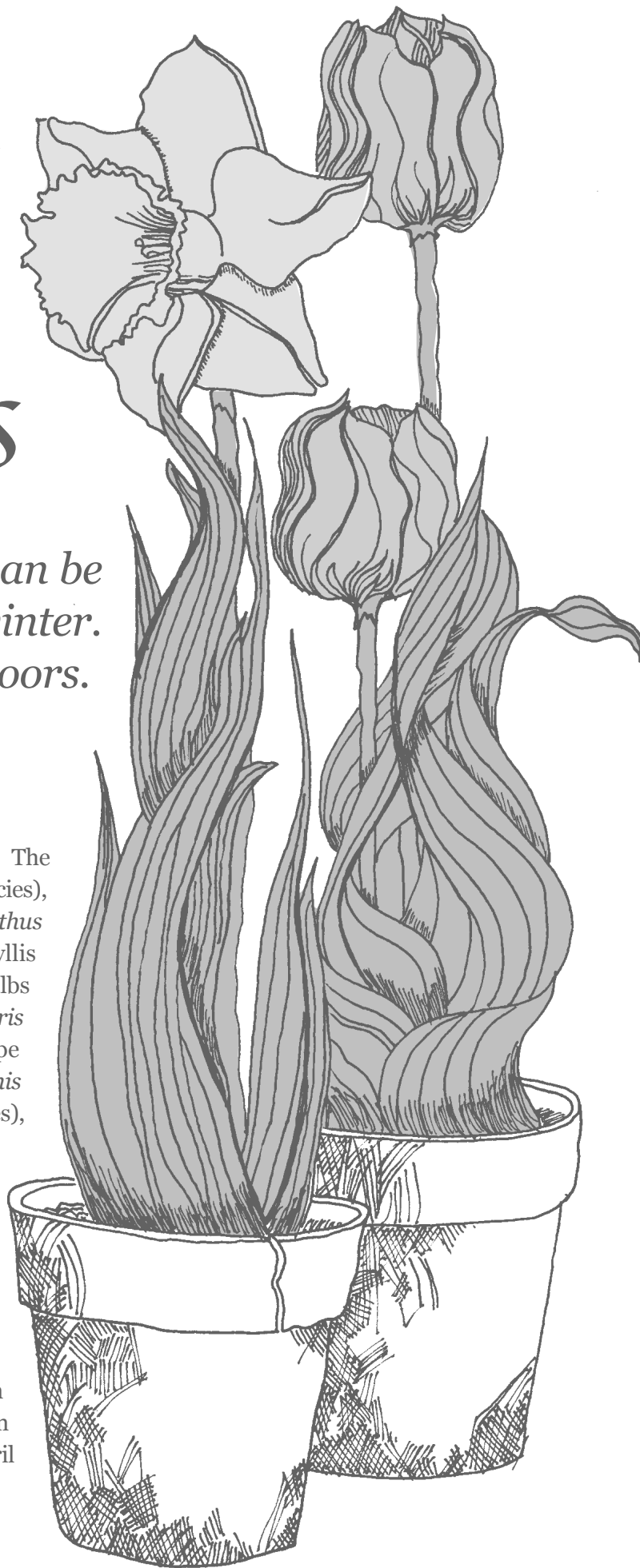
*The beauty of spring can be yours in the middle of winter. How? By forcing bulbs indoors.*

## *bulbs for forcing*

Not all flowering bulbs are suitable for forcing. The most common bulbs used are crocuses (*Crocus* species), daffodils (*Narcissus* species), hyacinths (*Hyacinthus* species), tulips (*Tulipa* species), and amaryllis (*Hippeastrum* species). Other easily forced bulbs include Dutch iris (*Iris x hollandica*) netted iris (*Iris reticulata*), snowdrop (*Galanthus* species), grape hyacinth (*Muscari* species), winter aconite (*Eranthis* species), Star-of-Bethlehem (*Ornithogalum* species), and *Brodiaea* species. Use these or bulbs recommended in bulb catalogs or at garden centers. Bulbs that are difficult to force include *Allium*, *Camassia*, *Lilium*, and *Scilla* species.

## *planting*

The first step in forcing bulbs is planting. Bulbs should be planted in September to have them in flower in December, mid-October for flowers in February, and in mid-November for March and April flowers.



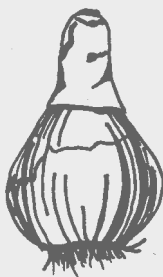
### correct planting depths

The planting depth depends on the size of the bulb. Use the height of the bulb as a rough guide and plant the bulb three to five times deeper than its height.



### correct placement of bulb

When planting, place the bulbs in the soil with the pointed end facing upward.



The size pot to use depends on several factors. If a single large daffodil, hyacinth, or tulip is to be forced, a four- to five-inch pot is adequate. For several large bulbs, use a 6- to 10-inch pot. The ideal container, such as a bulb pan, should be shallow; that is, larger in diameter than in depth. The container must have holes for drainage. The growing medium must be well draining, retain adequate moisture, and be able to anchor the bulbs. A growing mixture of equal parts potting soil, sphagnum peat moss, and perlite is recommended.

When potting, space bulbs one-half to one inch apart and place them in the pot so they are covered with one-half inch of soil. Leave tulips, hyacinths, and daffodils with the tips of their bulbs showing; crocus, snowdrop and grape hyacinth bulbs should be completely covered. With tulips, the flat side of the bulb should face the outside of the pot. It is this side from which the first leaf appears. If you place the bulbs this way, this leaf will grow gracefully over the edge of the pot. After setting the bulbs in the pot, fill the pot to within one-half inch of the rim. After potting, water the bulbs thoroughly. Label each pot with the type of bulb planted, the planting date, and the date to bring the pot indoors.

It is not necessary to fertilize the bulbs at this time since they have enough food reserves for flowering.

### cooling

The next step in forcing bulbs is cooling. Bulbs must be cooled for a given period of time so they will develop an extensive root system. Bulbs should be stored in a place that will be 35° to 55 °F for 12 to 16 weeks. Ideally, utility rooms, unheated garages, or cold frames are good places to store the pots during the cooling period. However, in many parts of Mississippi, the temperature range is not this low for a given time

period. In parts of the state without this range of temperature and time period, it will be necessary to place pots in an old refrigerator. Leave bulbs in the cool location until a root system is formed and the leaves begin to push upward.

### forcing

To start forcing the bulbs into flower, bring the pots indoors to a cool (55° to 70 °F), sunny location and keep the soil moist. Within a few weeks the flower will appear. The flowers will last longer if kept in a cool location. After the flower appears, remove the flower but not the foliage. Place plants in a sunny area for the foliage to mature. Bulbs forced this way can be stored during the summer and placed in the garden in the fall.

Hyacinth bulbs are commonly forced in hyacinth glasses or jars. Fill the jar to a point where the bottom of the bulb just touches the water. Place in a dark, cool area of 40° to 50 °F for four to eight weeks until the roots develop and the stem starts to elongate. Move the vase to a sunny location of 60° to 70 °F. Change the water every one to two weeks. Bulbs forced in water this way expend all their stored food reserves, and you should discard them after flowering.

Paper white narcissus (*Narcissus tazetta* 'Paper White'), the yellow cultivar Soleil d'Or, and the Chinese sacred lily (*N. tazetta* var. *orientalis*) can be forced without cooling. Fill a shallow bowl or pot with two to three inches of pebbles, pea gravel, coarse sand, or pearl chips to within one inch of the rim. Add water until it barely reaches the top of the gravel. Set the bulbs on top of the gravel and hold in by filling with enough gravel to cover the bottom quarter of each bulb. The water level should be constantly maintained. Keep the bulbs in a cool (55° to 60 °F), low-light area until they are well rooted and shoots start to appear. Then bring the bulbs into a sunny, warm location. Discard these bulbs after flowering, since all of their stored food is used.

Amaryllis (*Hippeastrum* cultivars) can be forced inside without cooling as well. Plant the bulb in a container that is one to two inches larger in diameter than the base of the bulb. The top one-third to one-half of the bulb should be above the growing medium. Place the pot in a sunny (four hours of sun a day) and warm (70° to 75 °F) location. Keep the soil moist until flowering and water frequently once flowering begins.

**Do not** fertilize the amaryllis bulb until after the plant begins to grow. Doing so could damage the roots. After growth occurs, fertilize at regular intervals with a balanced houseplant fertilizer. To ensure repeat blooms year after year, keep the plant actively growing even after it has finished blooming. Once the flower begins to fade, cut the flower stem to just above the bulb. Do not remove the leaves. Letting the leaves grow over the next several months will give the bulb time to build up its food reserves for the next flowering cycle. To get your amaryllis to reflower, stop watering and fertilizing it for 8 to 10 weeks; the leaves will yellow and die back. After a dormant period of 8 to 12 weeks, bring the bulb back out and start the process again.

You can grow your amaryllis outside after it has flowered. Most species are hardy to zone 7b; make sure you check to see if your specific plant is hardy to your area. Amaryllis grown indoors during the holidays can be moved outdoors in the spring. Gradually acclimate the plant to the site it is to be planted so it can adjust to the brighter light and different temperatures. A location with light shade is the ideal spot for amaryllis bulbs. Make sure the area has well-drained soil high in organic matter. Space bulbs about a foot apart. Water is crucial during growth and flowering; make sure the soil stays moist. Apply mulch in the fall and winter months. Fertilize bulbs with a fertilizer low in nitrogen such as a 5-10-10 or 6-12-12. You may also use a "bulb booster" type fertilizer. Make the first application once new growth appears and then a second application after the flower stalk is six to eight inches tall.

### *disorders, diseases, and insects*

You may run into a few problems in forcing bulbs. Flower bulbs may fail to open if you let the soil mix become very dry after the bulb starts growing. When selecting bulbs for indoor forcing, be sure they are disease free. Discard bulbs that have visible decay. Choose a soil that drains well. Bulbs will develop rot if the soil is heavy and becomes waterlogged. Discard any plants that develop virus-like symptoms such as breaking flowers and streaking or blotches in leaves.

Tulip, crocus, and hyacinth bulbs are subject to bulb mite infestation in the field. These infestations can be carried over in storage. When buying bulbs, select only those of high quality and insect free.

## *suggested varieties for forcing*

### **TULIPS**

Apricot Beauty, Bing Crosby, Edith Eddy, Mirjorma, Yokohama, Jingle Bells, Attila, White Dream, Princess Victoria, White Swallow, Estella Rijnveld

### **CROCUS**

Pickwick, Remembrance, Flower Record, Perter Pan, Purpurea Grandiflora

### **HYACINTHS**

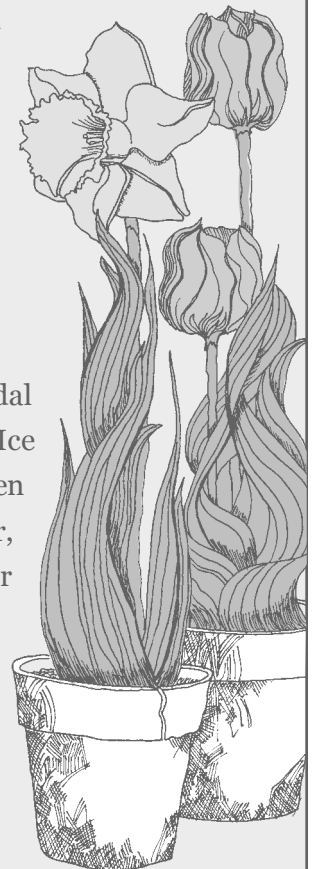
Amethyst, Blue Jacket, Jan Bros, L'Innocence, Pink Pearl, Delft Blue, Hollyhock, Anna Marie, Violet Pearl, Gypsy Queen, Carnegie

### **MUSCARI**

Blue Spike, Early Giant

### **DAFFODIL AND NARCISSI**

Barrett Browning, Bridal Crown, Dutch Master, Ice Follies, Paperwhites, Golden Harvest, Spell Binder, Salome, Pink Charm, Flower Record, Louis Armstrong, Unsurpassable, Tete-a-Tete, Jenny, Cheerfulness





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