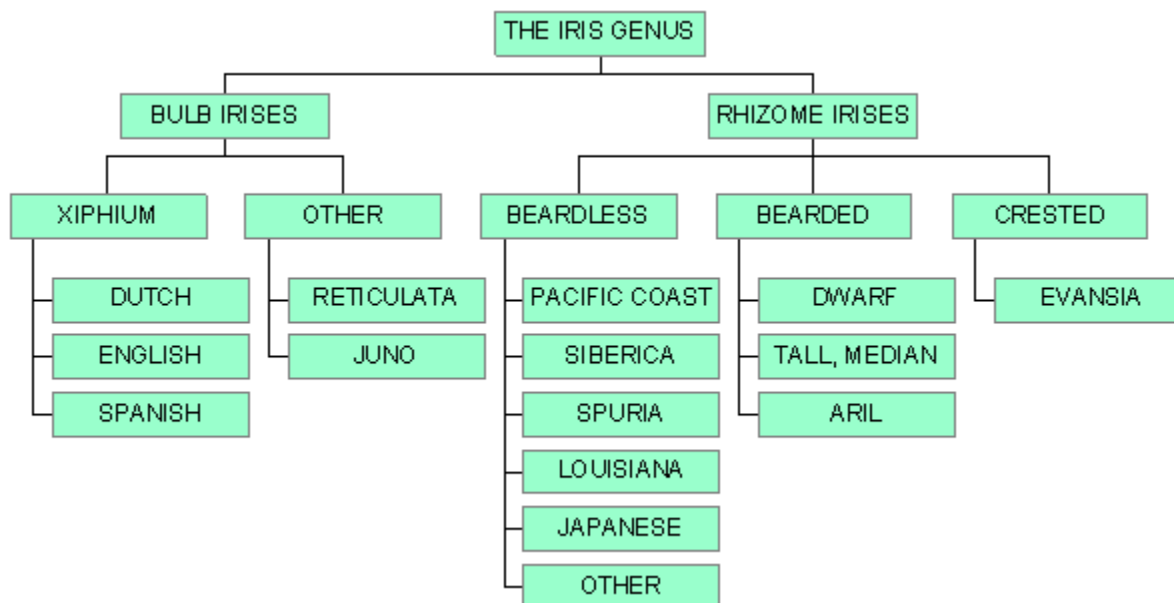


# Types of Iris



## Vegetative Propagation of Irises

There are two main ways to increase the numbers of plants: sexually and asexually. In sexual reproduction, you get a mixing of genetic material with half coming from each of two parents. That is how new cultivars of irises are made. The advantage of sexual reproduction is that breeders can develop new genetic identities that may bring new colors, new flower patterns, greater beauty, increased disease resistance, new forms or other characteristics.

The breeder artificially crosses the two desired parent plants, then grows the seeds. There is also open pollination, also known as open breeding or bee pollination, in which the sexual crosses take place naturally with the help of bees or other insects without any interference from plant breeders.

Asexual propagation of plants includes divisions, cuttings and layering. Cuttings may be leaves, parts of leaves, stems or roots. Most recently, tissue culture has been added to the palette of plant propagation but, as this is a highly technical laboratory procedure, it is not of concern to most gardeners. Tissue culture involves taking undifferentiated tissue, such as found in root tips, growing tips and plant embryos, and culturing it in special media so that the resulting mass of cells produces tiny new plants. Each new plant is a clone, that is, it is genetically identical to the plant from which the tissue culture was made.

The advantage of asexual propagation is that you can genetically duplicate plants. New iris cultivars are developed through sexual propagation, then they are replicated by asexual reproduction so that many gardeners can enjoy the new creation.

In the case of irises, the main way to increase the number of plants asexually is by division. When you propagate plants by division, you also get clones of the original plant. Again, the important factor is that each of the new plants is exactly the same genetically as its common ancestor. Any differences that may occur in gardens will be due to the care they receive. In order to have consistent plants that all can be called by a certain cultivar name, you must propagate the plants asexually thus, the plants of any cultivar all should be clones of one another and have exactly the same genetic makeup.

## Bearded irises

Rhizomatous bearded irises should be divided every three to five years for them to be most productive. In some regions, growers divide them even more often. After they've been in the ground for more than three years, they may begin to become overcrowded and have fewer flowers. The rhizomes increase and eventually become tangled in a thick mass covering the iris bed. Some kinds are more vigorous and will probably need dividing more often.

Although you can dig and divide bearded irises anytime you can work the ground, the best time for transplanting is when the rhizomes have reached their maximum growth and are semi-dormant - in July, August and early September in most parts of the United States. The point is to divide the rhizomes and transplant them in time for them to grow new roots during fall months.

If you divide bearded irises in the spring, the plants will probably be fine, but you probably will sacrifice the current year's flowers. If you divide and transplant bearded irises too late in the fall, the plants won't have time to develop new roots and become reanchored in the soil. The result may be that freeze-thaw cycles will heave them out of the ground. Knowing the growing cycles of bearded irises explains the timing of transplanting.

When the soil warms up in the spring, irises begin growing aboveground, developing this year's foliage, buds and flowers. The roots on last year's old rhizomes decay and disappear during this period. At the same time, the new iris roots on this year's productive rhizomes are growing, supplying nutrients and water to the foliage. Once the plants have flowered, rhizome and root growth continue for about two months in this year's blooming rhizomes.

During this stage, nutrients are being stored in the rhizomes for the following season's growth. At this time, the rhizomes develop the new rhizomatous growing ends from which next year's foliage fans and flower buds will arise. The growing productive parts of the rhizomes look like a Y. The leg of the Y is the older part of the rhizome and the arms are the newer parts where next year's growth will take place.

Once this growing period is over, most of the bearded irises rest until the late-summer rains arrive. The irises are semi-dormant during these weeks. The exceptions are the reblooming irises that grow continuously throughout the summer and so must constantly gather moisture and nutrients for repeated buds, stalks and flowers. The late-summer rains and slightly cooler weather trigger a new round of root growth. Extra water during hot, dry summer months will cause these irises to begin their late-season period of root growth sooner.

The block of time between the period of spring growth and the late-summer period of root growth is optimum for dividing and transplanting bearded irises. During this time, you can work at a leisurely pace on digging the irises, trimming the rhizomes and replanting them, because it will be good for the rhizomes to dry out for a few days. It is best to spread the rhizomes out on newspapers in a dry, shady spot for several days so that they can dry out. Any soft or cut places will develop a corky surface as they dry - this is called callusing.

When digging the iris clumps, make sure you keep them separated correctly according to species or cultivar. Some find it easier to keep the clumps of each variety of bearded iris on separate newspapers together with their labels from the garden bed. Separate the rhizomes and examine them carefully. You may have to cut or break the rhizomes apart. Use a sharp knife to remove soft and diseased parts. Clean the knife after each cut to avoid spreading disease. An easy way to do that is to wipe the blade, then put it into household chlorine solution for a few seconds.

To make it easier to handle and replant them, cut the foliage fans back to a length of 6 to 8 inches from the rhizome. Trim back the smaller bearded irises proportionately. At this point, write the species or variety on the remaining leaves with a dark indelible marker so that identification will not be a problem while you are making new garden labels. Trim up the separate divisions, making sure that each fan of leaves has a short piece of rhizome with healthy, strong feeder roots. Some growers like to make divisions that are Y-shaped so that there are two fans per division, each on a smaller arm of the Y, and sharing the leg of the Y.

When you replant the divisions, make sure that the growing ends of the rhizomes don't face each other. Face them outward so that the plants don't become crowded as fast. When your divisions have been made, trimmed and marked, be sure to let them dry and callus in the sun for a few days. If you do that, you don't need to dip them in fungicide or any other drying or rooting substance.

Prepare the new iris beds well, amending the soil with compost, well rotted cow manure or equivalents. Be sure to prepare the soil to a depth of at least a foot, preferably more if your soil is poor. Although iris rhizomes prefer sitting within view in the top inch of soil, their feeder roots will go much deeper. These irises will tolerate soils that range from sandy loam to heavy clay soils. They also will grow in soils with a [pH](#) that ranges from slightly acid to slightly basic.

When replanting the iris divisions, barely cover the upper part of the rhizome with about a half-inch of soil. Smaller rhizomes will need less of a covering. If the rhizomes are left totally uncovered, they may get sunscald. Planting iris rhizomes deeply will encourage fungal [diseases](#), especially root rots. Once the new plants become established, the rhizomes will grow to the level they prefer. Make a planting hole big enough to spread the feeding roots out and downward. Firm the soil around the roots and rhizomes, then water in. The smaller dwarf types of irises can be planted just 5 or 6 inches apart to give a nice immediate effect. The larger intermediate and tall bearded varieties should be planted 1 to 1 1/2 feet apart.

If you want an iris bed that looks established more quickly, you can plant the large rhizomes closer together, but then you will have to divide them sooner. Remember that if you make sure the growing ends of the rhizomes point away from the center of the clump, the irises will not get crowded quite so fast.

Most bearded irises will produce the best bloom in the second, third and fourth years after dividing them. Once they have been in place for five or more years, the centers of the clumps begin to be very crowded and the center rhizomes become less and less productive, with less and less foliage.

## Beardless

### Siberian irises

Late summer and early fall (late August to September) is the best times for dividing and transplanting Siberian irises. Your chances for success will not be as great if you transplant them right after they bloom or in early spring. Siberian and Japanese irises can be treated similarly in making divisions of their clumps.

Long-established clumps of Siberian irises will be hard to divide because of the snarl of roots they will have developed. Make note of when you divided Siberians and plan to divide them again in another three to four years. You may need to pull apart the clumps of slender rhizomes and roots using two garden forks as levers, just as you do with daylilies. Place the forks into the clumps facing away from each other, then pry the handles apart. The resulting leverage should help loosen the Siberian iris root clump.

Each new division should contain about a half dozen of the slim rhizomes. Do not make divisions with fewer than three rhizomes or you will have to wait a longer time to get the typical clumpy look so prized by Siberian iris-lovers. Single rhizomes look very skimpy in garden beds so you would be better off aesthetically to plant several of the same kind together. After digging up the clumps, cut back the foliage to about 4 to 6 inches so that top growth will be minimal while roots grow and are established.

Replant Siberian iris divisions with the rhizomes at a depth of 2 inches and plan to place the divisions 1 to 1 1/2 feet apart. Be sure the planting hole has room for spreading out the long fibrous feeder roots. For the best results, soil for the Siberians should be fertile and moist with a pH on the acid side, about 6.0 or slightly less. Siberian cultivars differ in their tolerance for dry conditions, so you should ask for specific care when you're buying them or at least keep a careful eye on them in your garden. Siberian irises do require good drainage and thrive on even moisture throughout the growing season. If rains don't supply the moisture, be sure to water well whenever soil moisture gets low.

### Pacific Coast irises

Divisions of Pacific Coast irises should only be made when there is new root growth that has not reached 2 inches or so in length. The season when this occurs will vary depending on the climate, sometimes early spring but more often the fall or winter. For mild climates, the time for Pacific coast roots to initiate growth is from late fall through early winter. Check around the base of the plant carefully with your hands or a trowel used gently-look for the fresh white roots that signal that it is time to lift, divide and transplant.

Wash the soil from the roots and divide clumps into separate fans. Trimming back the foliage by one-half will make them easier to handle. Each division should have one or more new roots. Plant the divisions in containers and hold them until new growth appears before putting them in the garden once again. Soil should be highly organic and slightly acid.

Cal-Sibe irises, crosses between some of the Pacific Coast native irises and Siberian irises., can be divided and replanted in spring or early fall. Success will probably be greater if you divide them in late summer to early fall.

## **Louisiana irises**

Louisiana irises should be divided and reset every three years if they are to perform at their maximum. Plan to do this in late summer through mid-fall (August through October) in order for the new divisions to become established before winter cold sets in. These irises grow fast and become crowded quickly. Under good growing conditions, different varieties can grow into each other in a tangled mess of rhizomes faster than you could have imagined.

These are bog plants, so lifting and dividing them from their highly organic, damp soil will be a messy job. Dig up the clump with a garden fork and wash the soil from the roots so they will be easier to separate. Examine the rhizomes carefully, trimming away any dead or diseased areas. Replant divisions, making sure that each fan has good new roots. Replant them at the same depth they were before—since the foliage of Louisiana irises may grow to be 2 to 4 feet tall, there should probably be about 1 to 1 1/2 inches of soil over the rhizomes. Plant so that the growing end of the rhizome is aimed toward the outside of the planting site to lessen crowding. If you leave at least 1 1/2 feet between Louisiana irises, this will defer their invasions of one another's territories. An acid, constantly moist soil that is high in organic matter will suit Louisiana irises.

## **Spuria irises**

Spuria irises are easy to divide, although it may take them up to two years to become established and bloom once again. Moisture-retentive fertile soils will encourage these beardless irises to mature and bloom again. The clumps, which can reach 5 to 6 feet in height, can be left in place for well over a decade if regularly fertilized.

Dig the clump and separate the rhizomes and roots. Examine carefully and remove any dead or diseased parts or rhizomes that are less than vigorous. Trim the foliage to 6 inches or less and mark the variety on a leaf with an indelible marker so you can make a label for it after planting, or note on your garden plan where the new divisions are located. Replant the rhizomes at the same depth they were before in very fertile soil that is neutral to slightly alkaline (a pH of 7.0 or slightly higher). The rhizomes should have about an inch of soil over them.

## **Japanese irises**

It is necessary to divide these beautiful irises every three years. The best time for dividing and replanting Japanese irises is, like many other kinds of irises, in the late summer to early fall. When you divide the older clumps during these months, the new divisions will have time to establish and begin growing new roots before winter weather arrives. If you try to divide Japanese iris clumps in the spring, some of the divisions may die and others may fail to bloom during the following season.

Cut back the foliage to about 5 inches to make the plants easier to handle. Dig up an entire clump and use two garden forks as suggested above to pry and lever apart the thick, rhizomatous root mass. From the original clump, separate out some large chunks. New divisions for garden beds should have at least three fans, although single fans will quickly increase if it is numbers you want. Set the new divisions about 3 inches (deep in rich, highly organic soil that has an acid soil (pH of about 5.5). Never let the rhizomes dry out while dividing and transplanting them.

## Bulbous irises

### Xiphium

Dig the bulbous irises during their dormant season, anytime after they have bloomed and the foliage has ripened and turned yellow. Separate the small offshoots from the old bulbs and plant them. Discard the old bulbs. Try to avoid nicking and cutting the bulbs as you work with them; ideally, you should plant these irises 4 inches deep, depending on the species, in sandy loam. Plant larger bulbs about 6 inches deep, a depth of about three times the height of the bulb. They require much the same culture as tulips or daffodils.

### Reticulata (Dwarf)

Grow these irises in a sandy or gravelly soil. They are good subjects for rock gardening. The reticulated irises will thrive on sites that are open, sunny and well draining.

Plant the small bulbs in the fall along paths or in rock gardens. Plant them in masses or large groupings so that the small flowers can make a statement when seen from afar. Up close, they are exquisite, rivaling [orchids](#) in their beauty.

If your spring climate is cold and rough, you may prefer to grow the reticulated irises in pots, where they will flower when provided with cool temperatures. Plant several bulbs to a pot. Use a well-draining gravelly or sandy mix, but do not use pure sand or gravel because it will not retain moisture at all.

The reticulated irises can be shy bloomers and may produce many small non-flowering bulblets after the first season in the ground. Normally, the rule of thumb is to plant bulbs at a depth of about three times their height. If you plant the reticulated iris bulbs deeper than that, about 4 to 5 inches deep, the individual bulbs will be more inclined to remain of blooming size.