

Ferns

Ferns and the south are synonymous -- large containers or hanging baskets of Boston ferns have graced front porches for years. But growing Boston ferns -- those Yankee ferns, means winter protection, and constant vacuuming all winter long to clean up the dropping leaflets. It's time to look around us and see what grows well year after year, that gives us that ferny growth we long for, comes back year after year, and we don't have to vacuum up under every week. Look no further than native or hardy ferns.



In 1981 there were 74 different kinds of ferns identified, growing naturally in Arkansas. Today we have identified 92 kinds, with a total 2300 record sightings throughout the state. Plants range in size from small moss like mosquito fern, which floats on quiet waters, to the climbing fern with fronds 30 feet or longer. (Incidentally, this is the longest leaf of any plant in Arkansas.) Many of our native ferns are two to three feet in height, but some have fronds up to five or six feet in height, especially in moist, shaded woodland gardens.

When we think of ferns we think of moist wooded settings. And while there are many ferns for the shades from moist areas, to drier hillsides, there are even ferns that will grow in full sun. According to Dr. Peck the "Fern Man of Arkansas", there is a fern for every habitat in Arkansas, and a fern for every season. There are ferns that can grow on rocks, in sand, or totally submerged in water. All types can be found commercially, but you may have to search for them. In the past ten years, hardy ferns have become much more available.

There is a nationwide resurgence of growing hardy ferns, and the commercial suppliers are trying to meet this need, using advanced propagation procedures with tissue culture production. Instead of growing hundreds of plants for sale, they can now grow millions of plants. The supply is now getting into all arenas of sale.

Shade Ferns

Shade ferns for the garden are a diverse mix, including hundreds of species. Some good starter small ferns include: Maidenhair fern: *Adiantum pedatum* -- this fern has fronds which hang down like locks of damsels tresses, thereby its name. It has a bluish green foliage, and will add delicate texture to your garden. Another small fern which is also evergreen, and is the most hardy native fern, both in shade and drought tolerance, is the Christmas fern: *Polystichum acrostichoides*. This fern has a more upright growth. It is named Christmas fern because its green foliage was gathered and brought indoors during the holidays and made into wreaths and garlands during the Civil War era, up through the early 1920's. Sensitive fern: *Onoclea sensibilis* is another interesting low growing fern. This fern changes its form when disturbed by early frosts or by hot weather in spring. This leads to various leaf forms. In the fall, this fern is one of the first to lose its leaves. It also prefers a moist environment.

Shield Ferns

Moving up the scale, (three to six feet in height) are the shield ferns: *Thelypteris* spp. Shield ferns will generally tolerate more drought and have a more lacy appearance to the leaf. Shield ferns are what define our definition of a fern leaf or frond. There are more than 100 varieties of shield ferns in the commercial trade, ranging in height from two feet to four feet. The leaf color is generally a lighter green to hunter green, and tends to grow in a vase shape of fronds. Log ferns: *Dryopteris* spp. tends to be larger -- up to six feet in height, and a darker green in color. They have a fuller, coarser leaf, with less cutting in the fronds. There are several hundred varieties in the commercial trade, and six native species.

Cinnamon and Royal Ferns

Cinnamon and royal ferns: *Osmunda* spp. are common throughout Arkansas and were one of the first ferns that homeowners began finding in garden centers. Royal ferns can grow up to six feet in height, and generate many fronds. In time they form dense colonies of plants, giving a bushlike appearance in the landscape. They will die back completely to the ground in the winter. The cinnamon ferns new fronds emerge covered in a reddish hair, and are called fiddleheads. This is not the edible fiddlehead of commerce -- don't eat the Arkansas natives. As the fronds age, the red hairs drop off, but a few are retained where the little leaflets join the main stem of the leaf. The spore bearing leaves come up first and are quite red in color. The sterile persistent green leaves follow, and are also covered with reddish hairs initially. The spore bearing fronds only last a few weeks, and will wither away, leaving behind the large green bushy leaves.

Sun-loving Ferns

If you are a fern lover, but don't have shade, don't despair. There are sun-loving ferns. It is even possible to grow some of the shade lovers in the sun, but soil preparation and water are crucial to survival. An easy family of ferns to grow is the Lady ferns: *Athyrium* spp. There are two native species and several hundred cultivars in the trade. They differ by the amount of cutting in the leaves, with colors ranging from reds to greens. Some cultivars are dwarves -- no taller than a foot, with other varieties growing upwards of six feet. The southern lady fern is supremely adapted to a wide range of sun and soil characters. They can be quite drought tolerant, after they are established. These plants will grow in both full sun to total shade, but will require more water, and a more organic soil in the sun.

Bracken Fern *Pteridium aquilinum*

Another sun lover. Give it space, for it is aggressive. It will tolerate the shade, but prefers the sun -- growing three to four feet in height. It tends to kill out other plant species in its shade, so give it its own space, and let it grow -- and more importantly give it room to grow.

Mosquito Fern *Azolla* spp

An aquatic sun-lover. This diminutive fern turns bright red in the fall, then dies back and settles to the bottom of the pond, and waits for the warmer water of spring. This species is common in the waterways of Arkansas. It is a fern of true global economic importance--it is the green manure crop grown in Asia which is plowed under to fertilize the rice crop. It is not invasive in Arkansas rice fields, but it can be aggressive in home water gardens. Fish, such as the ornamental Koi tend to harvest it in your water features and keep it under control.

There are some other fern allies -- not technically ferns, but like ferns, they reproduce by spores versus seeds. These spore bearing plants include: Scouringrush and Horsetail: *Equisetum* spp. They are striking plants, resembling bamboo, and are found native along the major rivers in Arkansas. They will grow in full sun or shade, as long as they have a moist environment. In a drier environment they will not grow as rapidly as in the wet soils, but they will survive. They are winter hardy and evergreen. The difference between the two is that scouringrush has unbranched stems, while the horsetail has whorls of branches.

Care

As with any group of plants, culture and care will vary by species. Some general guidelines for all ferns: prepare the soil carefully. Loosen the soil and add in well-aged compost or leaf mold. Avoid tight, heavy soils. Have your soil tested, if the pH is below 5.5 add some pelletized lime. Most ferns prefer a soil pH between 6.0 - 7.0. Raised beds make for excellent fern displays but will need extra winter protection -- with mulching. Raised beds have lower winter soil temperatures which can be harder on the ferns. Container gardening of these ferns can be difficult both in summer temperatures and winter lows. Wrapping of the pots or using larger containers may help. Container production of hardy ferns should be limited to some of the smaller ferns, which don't produce as large of a rhizome and root system.

While many of the ferns can be drought tolerant once established, most ferns will benefit from supplemental watering. Ferns appreciate an occasional leaf mold or aged compost supplement, but don't respond well to commercial fertilizer. For the most part, if proper soil preparation was done, they should do fine on their own.

Ferns prefer to be left alone to multiply -- they like benign neglect -- and don't like to be divided on a regular basis. So allow room for them to mature and spread. Division is a method of propagation, but will set back their growth for a year or more.

There are more hardy fern varieties available today than ever before. Throw away your Yankee Boston ferns, and start planting the hardy southerners. It will be less work for you and more enjoyment of your garden.