

# LANDSCAPE DESIGNS NURSERY

3290 Elvehjem Rd.  
McFarland, WI 53558  
Nursery: 608-490-1820 Office: 608-233-4215  
[www.landscapedesigns.bz](http://www.landscapedesigns.bz)

## Ferns for Southern Wisconsin Gardens

All ferns belong to the Class **Polypodiopsida** of which there are 7 Orders. For this discussion, Osmundaceae & Polypodiales will be discussed, as these 2 represent the true ferns found in our Midwest gardens. There are about 11,000 species native to every continent except Antarctica.

### **Foliage:**

The vast majority of ferns for our area have simple lobed – pinnatifid, once-pinnate, twice-bipinnate, tripinnate & quadripinnate compound leaves. Stipe is the basal stem of a fern frond. The blade is the portion with the ‘leaves’ and the rachis which holds the pinnae or ‘leaves’. The frond is the combination of the stipe and blade. New growth is called a crosier, as it resembles a shepherd’s staff.



### **Soil:**

Ferns occupy many different types of soils ranging from rocky crevices, tree bark, moss covered porous rock, sandy, loamy, gravely, humusy and even swampy ones. One soil they don’t particularly care for is dense compacted wet clay.

### **Lighting:**

Most of our hardy ferns are native to deciduous medium to light shade forest environments similar to naturalized or formal gardens. I would avoid planting most any of them in hot afternoon direct sun.

### **Mulching:**

When mulching, I recommend very little mulch if any over the crowns of the evergreen types.

When mulching the garden, I recommend flagging their locations before mulching, to prevent covering the crowns with excessive mulch as well to prevent stepping on the crowns and damaging them. Other types may be aggressively mulched.

### **Cut foliage:**

Some species make wonderful cut foliage and the floral industry uses the fronds by the billions. Those will be noted in the following descriptions.

### **Winter:**

Most ferns may be cut to the ground in the very late autumn. However, we do have hardy evergreen ferns that should not be cut down. On the evergreen types, you may carefully cut off the old foliage once they begin to show spring growth, but I would not recommend doing so.

### **Fertilization:**

Ferns respond to a good quality time release fertilizer, especially when applied in the late autumn or very early in the spring. I recommend our PLGF – Perennial Landscape and Garden Fertilizer.

### **Planting:**

When planting the types with erect rhizome crowns, be careful not to cover the tops of crowns with soil.

When planting the rhizomatous forms, cover with only about 1" of very loose humusy soil.

Smaller forms should be laid on the soil and then covered with a bit of humus.

Until established, keep all ferns moist.

Ground cover type ferns should be covered with a wire mesh, pinned to the ground, to prevent vermin damage.

### **Propagation:**

If you must divide them, do it in the spring as soon as the earth is thawed.

The very aggressive spreading forms may be divided most anytime, but I recommend cutting the foliage back by about 50% when doing so when they are in frond.

### **Hardiness:**

All of the following ferns are Hardy in Zone 4b-5.

*Adiantum pedatum* – Maidenhair Fern is native to the Midwest and is one of our most beautiful ferns.

Delicate black stems arise from slowly spready rhizomes and are topped with a near circle of bipinnate compound leaves are a must for the shady to light shade garden.

Mature leaves may be used as cut foliage.

They prefer humusy loam soils.

Growing about 18-24"

Mulch no more than 1" thick

You may cut off dead fronds in the spring, however, this is unnecessary.

Some cultivars and other species may occasionally be offered for sale.

*Asplenium platyneuron* – Ebony Spleenwort Fern is native to the Midwest including WI.

Its pinnate fronds arise from rhizomatous roots, and are held upright to about 8-15".

This fern grows slowly in neutral to acidic very well drained in deciduous light shady forests.

Mulch very lightly or not at all.

Don't remove spent fronds.

It may be found growing in rocky crevices in South Western Wisconsin.

Other species may occasionally be offered for sale.

*Athyrium filix-femina* – Lady Fern is native to WI and the Midwest.

Typically, Lady Ferns have bipinnate fronds but there are numerous forms and hybrids with *Athyrium niponicum* available.

Even though Lady Ferns can colonize a medium size area, their spreading rhizomes can be easily controlled.

They thrive in medium to light shady deciduous forests with humusy loamy soils. They are also at home in our average garden environments.

They enjoy moist neutral to acidic soils and will even tolerate wet conditions. Moist rain gardens suit them well.

You may cut off dead fronds in the spring, however, this is unnecessary.

Light to medium mulch autumn mulch.

Heights are very variable with 36" being the norm. In ideal conditions, they may reach 60" or more.

Cultivars include:

**'Dre's Dagger'** has narrow crested pinnae that are held in a cross pattern on the rachis. Very interesting.

**'Frizelliae'** Tatting Fern is very unique in having its pinnae (leaves) reduces to flat tats – beads.

Growing about 12-18".

**'Lady in Red'** Glossy red stipes with lime-green foliage. Height about 18-36"

**'Plumosum Axminster'** has gossamer quadripinnate triangular pinnae. Heights up to 24".

**'Rosteil'** grows to only 24" with bright red stems and green fronds.

**'Vernoniae Cristata'** has the tips of each pinnae forked and or tasseled. Matures at 18-24".

**'Victoria Mickel'** is similar to 'Dre's Dagger' except each pinnule tip is forked or crested. 18-24".

**'Victoriae'** is similar to 'Plumosum Axminster' except the pinnules are shape like boomerangs. 18-24"  
In 1908, there were some 296 named cultivars or variants. Happy hunting!

*Athyrium niponicum* – Japanese Ferns are native to rich moist forests of Japan. These rhizomatous bipinnate ferns with rich green and maroon fronds, are easily raised in many of our medium to light shady gardens. They do require good moisture and rich humusy neutral to acidic soils. They will even tolerate occasion flooding. Moist rain gardens suit them well.

Growing 12-24", some cultivars also make good cut foliage for arrangements.

You may cut off dead fronds in the spring, however, this is unnecessary.

They may be mulched 1-1½" deep in the autumn.

Cultivars include:

**'Apple Court'** growing 24" with **'Pictum'** colors with the tips of the fronds split and often crested.

**'Branford Beauty'** is a more upright form of **'Pictum'**

**'Branford Rambler'** is a medium spreader with foliage similar to the species.

**'Burgundy Lace'** is like **'Pictum'**, but with intense purplish new growth and centers.

**'Ghost'** is a hybrid with vertical 24-36" fronds of steely gray. Stunning.

**'Godzilla'** is a 36" tall growing **'Pictum'**

**'Metallicum'** is smaller growing than 'Ghost' with a bit of burgundy blush in its ribs. 12-24"

**'Red Beauty'** is a color enhanced **'Pictum'**.

**'Ocean's Fury'** has narrow gray-green and twisted primary pinnules with crested tips. 24-36"

**'Pearly White'** has light green edges & white centers with a purple-rose rachis. 15-24"

**'Peweter Lace'** is similar to **'Pictum'** but with a richer colored rachis and arched fronds. 18"

**'Pictum'** has silvery blades infused with burgundy. Stunning. 18-24"

**'Silver Falls'** is like **'Pictum'**, but with more white than rose coloring.

**'Regal Red'** fronds emerge dark red with twisted pinnules changing to silver. More upright 24"

**'Ursula's Red'** is like **'Pictum'**, but has a darker reddish center to the fronds.

**'Wildwood Twist'** is a more milky-green **'Pictum'** with arched fronds. 18"

*Camptosorus rhizophyllus* – Walking Fern is native to our deciduous forest of Southwestern Wisconsin.

These wonderful rhizomatous evergreen ferns have *long* tapered heart-shaped entire fronds that end in a tip. When the tip touches a suitable growing medium, it roots and sends up another plant – hence Walking Fern.

Growing about 4-9" high in very shady to light shady deciduous forests on moist to wet rich humusy surfaces.

These surfaces often include porous rock like limestone and sandstones.

Do not remove old fronds.

Must be covered with a mesh and kept moist during establishment.

Do not mulch.

Beautiful patches may be viewed at Wildcat Mountain State Park in Western Wisconsin.

*Cheilanthes lanosa* – Hairy Lip Fern is native to Southwestern WI, growing amongst rocks in medium to light shady deciduous forests. Soils must be well drained and even gravelly.

Growing about 6-12", this rhizomatous fern has gray-green pinnae that are sparsely woolly.

Do not remove old fronds.

Must be covered with a mesh and kept moist during establishment.

Do not mulch this evergreen fern.

*Cystopteris bulbifera* – Bladder Fern is another wonderful native Wisconsinite. This small rhizomatous fern has lime-green fronds and inhabit limestone deciduous medium shady forest environments.

They enjoy consistently moist environments and can be very happy in dry-set retaining and cracked mason-set walls. Arching fronds grow about 18-24”.

It’s best not to remove old fronds.

Must be covered with a mesh and kept moist during establishment.

Only a very light mulch is recommended – or none at all.

*Dennstaedtia punctilobula* – Hay Scented Fern as one of our more aggressive rhizomatous spreading native ferns. It’s ideally suited for naturalizing forest environments. Growing on steep hillsides, it can also be a quality erosion controller.

Maturing at 18 to 30 inches, with bipinnatifid yellow-green fronds, that when crushed or whirled in the wind, emit a fragrance of freshly mowed field. The odor is even more pronounced on dried fronds.

Tolerant of nearly any type of soil, including around boulders, in a wide array of moisture environments.

Hay Scented Fern should be on everyone’s naturalized forest renovation revitalization list.

Division may be accomplished at nearly any time, but best before growth begins in spring.

Once established, no additional care or mulching should be required.

*Deparia acrostichoides* – Silvery Glade Fern is a Wisconsin native found in our shady deciduous forests.

Bright green fronds develop their silvery show with maturing spore cases.

Widely tolerant of average moist soils, this slower spreading rhizomatous fern is comfortable in most any garden environment.

Maturing to 30-42”.

Old fronds may be cut back in the autumn or spring.

Very tolerant of light to medium mulching.

*Diplazium pycnocarpon* – Narrow-leaved Glade Fern is another native upright slowly spreading rhizomatous Wisconsin fern found in our shady deciduous forests.

It prefers moderately rich moisture retentive neutral to slightly acidic soils.

While this green fern could be mistaken for *Athyrium* – Lady Fern, its pinnae are not nearly as divided and have slightly undulating margins

It matures at 30-42”.

Old fronds may be cut back in the autumn or spring.

Very tolerant of light to medium mulching.

*Dryopteris* – Woody Ferns and Buckler Ferns comprise about 225 species found over much of the northern hemisphere.

They all may be moved when they are dormant. Some of the more common species are discussed here.

*Dryopteris carthusiana* (aka *Dryopteris spinulosa*) – Spinulose or Toothed Wood Fern is native to Eastern and Northern North America. Hardiness is Zone 2 to 8!

It is native across most of Wisconsin, being adaptable to nearly all types of moist soil conditions in shady deciduous forest environments.

Ascending rhizomes produce clumps of smooth green fronds maturing to 18-30”.

Old fronds may be cut back in the autumn or spring.

Very tolerant of light to medium mulching.

*Dryopteris x complexa* is a natural occurring hybrid of *D. affinis* x *D. filix-mas*. *D. affinis* is from Europe and *D. filix-mas* is native to North America. This erect rhizomatous fertile fern is happy in our rich moist deciduous forests, thriving in humusy loamy soils.

Singular clumps are crowned with 24-48” bright rich green fronds that make a dramatic show in the garden.

Once established, it’s quite drought tolerant.

Very tolerant of cut back and being covered with 2-3” of mulch.

Cultivars include:

‘**Stableri Crisped**’ has finely divided pinnae that are crisped at the tips.

*Dryopteris dilatata* – Broad Buckler Fern is now included in our native *Dryopteris expansa*. However, *D. dilatata* enjoys acidic soils and *D. expansa* enjoy alkaline soils. Never-the-less, they both enjoy our shady moist deciduous forest environments and maturing at 30-48”.

Upright spreading fronds emerge from erect rhizomes that occasionally sport an offshoot. Therefore, they remain very localized in the perennial garden.

Old fronds may be cut back in the autumn or spring.

Very tolerant of light to medium mulching.

Cultivars include:

‘**Lepidota Cristata**’ has finely filigreed emerald green 24” fronds with minutely crested pinnae.

‘**Recurvata**’ is forest-green and is unusual with its pinnae rolled in inward.

*Dryopteris erythrosora* ‘**Brilliance**’ Autumn Fern is nearly the only form of this fern that is available. It’s native to Japan, China, Korea, and other nearby areas. This tight creeping rhizomatous clumping fern emerges with bright orange evergreen fronds with red rachis, with the pinnae aging to celery-green centers and coppery tips in the autumn. Awesome!

It matures at 18-24” in moist rich humusy soils in medium to lightly shady deciduous forest environment with neutral to acidic soils

If you must, remove the old fronds in the spring before growth appears.

Tolerant of 1-2” of mulch.

*Dryopteris filix-mas* – Male Fern is another wonderful native Wisconsin fern maturing from 24-48”. More typically in the 24-30” range in deciduous dense to light shady gardens.

Male Fern has stout erect rhizomes that form wonderful clumps of dull green pinnate fronds.

Although very tolerant of most any soils, our Eastern USA types prefer a limestone based loamy soil with even moisture. Once established, it’s very tolerant of droughty conditions.

Old foliage may be cut off in the autumn or just covered with 2-2½” of mulch.

Foliage may be used for fresh cut arrangements.

There are numerous cultivars and some include:

‘**Crispa Cristata**’ matures at about 24” with linear pinnae that have wavy margins with fringed tassels at their tips.

‘**Cristata Martindale**’ has narrow, upward-curving pinnae terminating with much divided tassels

‘**Crispa Whiteside**’ has pinnae that are toothed and crispate.

‘**Grandiceps**’ has very large terminal branching crested pinnae.

‘**Linearis Polydactyla**’ has narrow pinnae with narrow fingered terminal crests.

‘**Parsley**’ is a 18-24” cultivar with each pinnae being somewhat crested.

‘**Undulata Robusta**’ is a very robust 36” evergreen form with undulating pinnae. Its sword-shaped fronds are good for cutting

*Dryopteris intermedia* – Evergreen Fancy Wood Fern is native to Eastern North American, including WI.

This evergreen fern, arising from erect spreading rhizomatous clumps, is found in our open deciduous forests growing on acidic to neutral average to humusy loamy moist soils.

I recommend leaving the evergreen foliage for the winter and only removing it, if you must, in the spring.

Makes wonderful cut foliage.

Very tolerant of 1-2” of mulch.

*Dryopteris marginalis* – Our native evergreen Marginal Wood Fern inhabits limestone to sandstone based soils of our shady deciduous forests. The erect rhizomatous crowns form a single vase-shaped crowns of rich green fronds. Since the crowns are singular, this is a very slow to spread fern, remaining in one place for years.

I recommend leaving the evergreen foliage for the winter and only removing it in the spring.

Makes wonderful cut foliage.

Very tolerant of 1-2” of mulch.

*Gymnocarpium robertianum* – Limestone Oak Fern is native to our limestone rocky slopes and walls in medium to light shady deciduous forests. Growing to about 8-18”, this long creeping rhizomatous fern sports bipinnate pale green fronds.

Where it has good moisture, it gently spreads about the area, creating a soft naturalized appearance.

It looks great in shady moist retaining walls.

Do not mulch.

*Matteuccia struthiopteris* – Ostrich Fern is one of our most aggressive and invasive native ferns. It should be rarely planted in the garden. It is very tolerant of just about any type of soil in any shady environment. If grown in wet conditions it will tolerate full sun. Besides being invasive, if it dries out even a small amount during the summer, it turns brown and if a bit too dry for a bit too long, it goes dormant.

Growing up to 72" tall, it will out-compete nearly everything in the garden excluding larger shrubs and trees. If you need a wetter area or a vast shady area rapidly filled in, this would be the fern to do it.

Careful planting along asphalt and brick surfaces, as this rapidly rhizomatous can push its erect rhizomes up through asphalt.

When cut – harvested at the proper time, its new crozier shoots are a gourmet delight, tasting like asparagus. You know they are aggressive, when tons of new fiddleheads are harvested each spring as the State Vegetable of Vermont and the largest export crop on New Brunswick.

The dry coarse feather-like sterile fronds are attractive in dried arrangements.

I have covered them with 12" of mulch in the autumn, wondering if they would return in the spring – and yes, they did.

You may cut them back or divide them anytime the soil is workable.

*Onoclea sensibilis* – Sensitive Fern is a rhizomatous rapidly spreading fern native to our dense to light shady deciduous forests. While it is a spreader, the rhizomes produce a few leaves here and there, allowing many other forest dwelling plants to flourish amongst them.

Tolerant of just about any type of soil and a wide range of moisture levels.

While it may not be suited to the formal garden, its coarsely lobed fronds provide a distinct look in the naturalized landscape.

The dry coarse clasping finger-like sterile fronds are attractive in dried arrangements.

They may be cut back in the autumn or spring.

They may be moved when dormant.

They are tolerant of 1-2½" of autumn mulch.

Named Sensitive Fern due to their sensitivity to hard frosts – seemingly browning overnight.

*Osmunda* ferns belong to their own group, growing unlike any of the other ferns in this discussion. It's a very primitive group going back over 200 million years, making them the longest continuous living fern.

They all enjoy moist acidic to neutral soils in our medium to light shady deciduous forest environments.

All of our native *Osmunda* Ferns are extremely long-lived garden worthy plants.

Once should avoid stepping on the upright rhizomes when mulching or working in the garden.

Leaves may be cut back at any time.

They may be moved when dormant.

Since they don't spread much, if at all via rhizomes, they may only rarely offer up divisions.

They are all very tolerant of 1-2½" of autumn mulch.

*Osmunda cinnamomea* – Cinnamon Fern's rhizomes are upright and trunk like with occasional branching.

Forming erect slightly arching clumps of green fronds, it provides an ornamental contribution to most any garden.

While it can grow to 36-60", 36" is more common in our garden environments.

In center of a mature clump, a fertile frond forms that is devoid of pinnae. When matures the fertile frond looks like cinnamon sticks – hence its name. They may be used in dried arrangements.

*Osmunda claytoniana* – Interrupted Fern grows 24-36" tall with thick upright rhizomes with clumps of upright green fronds. Mature fronds are 'interrupted' with a fertile section in the center portion of the blade.

Interrupted Fern is very tolerant of more average moist garden soils in light shady garden environments.

*Osmunda regalis* – Regal or Royal Fern is a 24-72" tall fern native to our moist to wet swampy deciduous shady to sunny

environments. The emerging fronds are blushed copper and provide a handsome site in the spring garden. The pinnately lobed fronds age a handsome green. The terminal portion of a mature frond is fertile, providing a beige to coppery plume for the garden.

The Regal Fern enjoys more acidic soils.

The cultivars include:

‘**Purpurascens**’ has wine-purple spring fronds.

var. **spectabilis** has thinner pinnules and is a bit more open growing.

*Pellaea atropurpurea* and *P. glabella* are both native to Wisconsin’s rocky driftless area and similar environments. They are both difficult to establish in the residential garden as they enjoy gravelly rocky soil outcrops or rock crevices. Enjoy them in their native environments.

*Phegopteris connectilis* – Northern Beech Fern enjoys our deciduous shady forests. This low creeping rhizomatous fern matures at 8-18” with soft limey green pinnatifid to bipinnatifid fronds. It’s ideal for decorating moist garden walls and rockeries.

Most any moist well drained soil suits it just fine.

You may gently cut off the old foliage in spring.

Easily divided.

Don’t mulch!

*Polypodium virginicum* – Rock Polypody Fern grows on long-creeping rhizomes, covering rocky areas and parts of trees trunks with their pinnatifid linear pinnae rich green fronds.

Growing only 8-18” in height, a nice patch of this fern is a beautiful please to behold in our native shady forests. The growing medium must be moist, yet well drained with near neutral gravels and a fair amount of leaf debris and moss.

When planting, care must be given to lay the rhizomes on the medium and only cover with ¼-½” layer of composted leaves. Also, when establishing, cover with a secured wire mesh to hold everything in place. Keep evenly moist.

Division is in spring before any growth begins.

Don’t mulch. However, a few deciduous leaves here and there are fine.

*Polystichum acrostichoides* – Christmas Fern is an evergreen fern native to our drier shady deciduous forest environments. Growing as single crowns from slowly creeping rhizomes, its deep rich polished green fronds spread nearly horizontally making a splendid sight in most any well drained soil.

Keep moist when being established, but is quite drought tolerant after a couple of years.

Cutting a few fresh fronds for arrangements is an added joy, but never cut all of them off a single plant.

Divide when dormant.

Tolerant of 1-2” of mulch. Try not to step on the crowns, as they are easily damaged.

(Occasionally, I have had gardeners over-winter *P. setiferum* – Soft Shield Ferns without any major effort, but they usually succumb to our winters. Handsome, if you wish for the additional effort.)

*Pteridium* – Braken Fern is one of our weediest native *toxic* ferns and should never be used in our gardens.

*Thelypteris noveboracensis* – New York Fern is native to the eastern USA, excluding WI, and very common with its rhizomatous strongly spreading fern that can out-grow any garden environment. It should only be used to naturalize forest environments. It may be used to control erosion in arroyos and along streams.

Maturing at 12-24”, its deciduous avocado-green fronds are very attractive in shady forest environments.

Once established, no other care is required.

Division at nearly any time, but best before growth begins in spring.

*Woodsia* -- Cliff Ferns are native to the northern cooler areas of the Northern Hemisphere. If you have a cool north facing cliff or glen, then you might give this group of ferns a try. It is ill suited to normal garden conditions.

Look for *W. ilvensis* and *W. obtusa*

*Woodwardia areolata* – Netted Chain Fern is native to south-eastern portion of USA. Not natively found in WI.

It grows in shady to partly sunny deciduous forest in moist to wet average garden soils.

The fronds grow on slender long-creeping blackish rhizomes and mature in the 12-24” range. In your average garden, it is much more behaved than in boggy areas.

Once established, no other care is required.

You may cut back the old fronds in spring, as they commonly remain good looking well into winter.

Division is when they are dormant

Mulch with 1-1½” of mulch.

Other *Woodwardia* ferns may also be occasionally available.

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