

Garden Ferns

By Kathy Wolfe
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Versatile, beautiful and easy to grow

When most people envision the Pacific Northwest, they conjure an image of overcast, misty skies, cool temperatures, towering Douglas firs, fragrant cedars, salal, and ferns, lots and lots of ferns. Indeed, ferns thrive in our maritime climate, but also can be found in mountain elevations, dry desert rock faces, in bodies of water and open fields. These diverse plants are naturally deer resistant, and come in varied heights, densities and colors.

Ferns originated over 300 million years ago, almost twice as long as flowering plants. Their structure is similar to, but also distinct from, flowering plants because they evolved from a more watery world.

- The leaf portion of the plant is called a frond and consists of the leaf stalk (stipe), which sits below the leaflets; the main rib (rachis), which supports the expanded leafy portion; and its blade, which carries the leaflets. Fronds vary in size from mosquito ferns measuring 1/16” to the 12’ frond of a tree fern.
- The rhizome or crown portion of the fern compares to stems of flowering plants. The rhizome generally is inconspicuous or entirely underground. It produces the roots and new frond growth.
- Roots anchor the plant to the earth and absorb water and minerals.
- Sporangia are like seeds and are the reproductive system of the fern. These miniature sacks or capsules (indusium) contain dust-like spores by which ferns are propagated. The spores contain oil droplets and sometimes chlorophyll. Forest ferns have sporangia on the underside of the frond.

When spores are ripe, they fall on the ground and germinate prior to fertilization, creating a substance which looks like algae or moss (called gametophyte). In this mixture are both male and female spores which hide on the underside of the leaves on the ground waiting for water to mix, mingle and unite them. Fertilization can then occur and a new plant is created. No insect pollination needed--- just add water!

While many flowering plants are dependent on the movement of birds and other animals to spread their seeds, the fern can be distributed across continents once its light spores blow up into the atmosphere where they can travel long distances. The Lady Fern, native to the Pacific Northwest and to Europe, is a good example of this phenomenon.



Ferns, such as these tassel ferns, can add a nice accent of color and texture to a garden bed. *Photo by Nancy Crowell / WSU Skagit County Master Gardeners.*

Ferns are easily grown by the novice yet interesting enough to intrigue most experienced gardeners. For optimum performance, most ferns need filtered shade, good natural compost matter and moist but well-draining soil.

There are many ways ferns can be incorporated into a landscape. Most plants range between 1'—3' tall but you can find many exceptions if you are searching for a larger or smaller plant. You can use them individually or in clusters for a bigger impact.

Like ornamental grasses, ferns' grace of form and movement in the breeze can add a new dimension to the yard. They are good at providing a textural break between bold foliage plants like hostas and hellebores. If you are seeking a multi-layered space, mixing several fern varieties can provide this natural look. Some ferns can be as airy and light as a tassel fern while others show a more robust, architectural profile, as does the holly fern.

Looking for color accents? Try a Japanese painted fern with tones ranging from purplish-red to silver. Or perhaps you would prefer the sunset fern with its early spring growth in coppery-pink. Have you ever seen a ghost fern, with its maroon mid-ribs and minty-white leaflet glow? Who can resist?



TOP LEFT:
The fiddlehead of a tassel fern unfurls. Note the hairy stem.

BOTTOM FAR LEFT:
Ferns reproduce via spores on the undersides of leaves.

BOTTOM NEAR LEFT:
Maidenhair ferns are delicate and make bright highlights in a shady area.

Photos by Nancy Crowell / WSU Skagit County Master Gardeners.



Many ferns are natives to Washington State. Western sword fern, deer fern and maidenhair fern come to mind and there are many more. Check information from the Washington Native Plant Society on-line (www.wnps.org) or at your local library to find pictures, descriptions, botanical names and habitat for these fascinating plants.

Another good resource for fern information is the Hardy Fern Foundation (<https://hardyferns.org>), which supplies cultural and propagation information, grower/vendor lists and locations of affiliate fern gardens throughout the United States.

Also look into Great Plant Picks (<http://www.greatplantpicks.org/>), an educational program of the Elizabeth C. Miller Botanical Garden that debuted in 2001 with outstanding plant recommendations for the maritime Pacific Northwest garden. In its fern section are pictures, descriptions, botanical names, growing culture notes, plant combinations, color contrasts and color partners for each fern.

Visit local gardens, especially the Skagit County Master Gardener Discovery Garden and the Salal Demonstration Garden of the Salal chapter of the Washington Native Plant Society to see ferns incorporated into real garden settings. Both gardens are located next to the Washington State University Northwestern Washington Research and Extension Center on State Route 536 (Memorial Highway) in Mount Vernon.

With hundreds of varieties of ferns from which to choose and the perfect climate for growing them, doesn't your yard need a few more of these lovely and versatile beauties?

RESOURCES:

- *The Encyclopedia of Garden Ferns*, Sue Olsen, Timber Press, 2007.
- “Great Plant Picks.” <<http://www.greatplantpicks.org>> Elizabeth C. Miller Botanical Garden. Updated 2015.
- “Ferns.” <http://www.wnps.org> Washington Native Plant Society. Updated January 29, 2013.
- “Fern Database.” <<http://www.hardyferns.org>> Hardy Fern Foundation. Updated October 24, 2014.
- “Fern Reproduction.” <<http://www.sciencelearn.org.nz/.nz>> Dr. Leon Perry. Science Learning Hub., University of Waikato, New Zealand. September 24, 2010.
- “Fern Structure.” <<http://www.sciencelearn.org.nz/>> Science Learning Hub. University of Waikato, New Zealand. March 29, 2015.
- “Fern Glossary.” <<http://www.ontarioferns.com>> Walter Mums. Ontario Ferns .
- “A Brief Introduction to Ferns.” Kathleen Pryer, Alan Smith, Judith Skog. *Fern Journal*. The American Fern Society. 1995.
- “A Dell Full of Ferns.” Charles O. Cresson. *Fine Gardening Magazine*. Issue 56.

Note: some hyperlinks in this article have been updated since its initial publication.