

Plant Profiles: HORT 2242 Landscape Plants II

Botanical Name: *Picea abies*

Common Name: Norway spruce

Family Name: Pinaceae – pine family

General Description: *Picea abies* is a large, dark green, pyramidal conifer with pendulous branches. It has a commanding presence and is best planted on large scale sites. As is true of most *Picea* it grows best in a cool moist climate but is very adaptable and grows well under most landscape settings provided enough moisture is supplied during the first years of establishment. Although native to Europe, *Picea abies* is widely planted throughout the colder zones of North America. There is an extensive selection of cultivars available in the trade.

Zone: 3-7(8)

Resources Consulted:

Dirr, Michael A. *Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses*. Champaign: Stipes, 2009. Print.

Earle, C.J., ed. "Picea abies." *The Gymnosperm Database*. N.p., 2013. Web. 19 Feb. 2014.

"The PLANTS Database." *USDA, NRCS*. National Plant Data Team, Greensboro, NC 27401-4901 USA, 2014. Web. 19 Feb. 2014.

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Keywords/Tags: Pinaceae, tree, conifer, cone, needle, evergreen, Picea abies, Norway spruce



Whole plant/Habit:

- Description: *Picea abies* is a dense, dark green, pyramidal conifer. As is true of all plants in the genus *Picea*, Norway spruce remains pyramidal throughout its lifespan.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: February 16, 2014
- Image File Name: norway_spruce_5628.png



Whole plant/Habit:

- Description: Norway spruce has wide-spreading branches with long, drooping branchlets. This creates a distinctive silhouette and is a good identification feature.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: August 29, 2008
- Image File Name: norway_spruce_3038.png



Bark:

- Description: As is typical of most *Picea* the bark is thin on young trees becoming gray and scaly with age.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: July 23, 2008
- Image File Name: norway_spruce_2380.png



Branch/Twig:

- Description: The yellow-orange color of the young stem is a good identification feature. This is especially evident on the underside of the stem as the way the needles are arranged on the underside expose the stem more so than on the upper side. NOTE: This image shows the upper side of the stem.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: July 23, 2008
- Image File Name: norway_spruce_2416.png



Branch/Twig:

- Description: The lateral branches coming off the trunk are wide-spreading and slightly ascending at the tip. The best identification feature is the drooping branchlets. They appear to be “dripping” off the lateral branches!
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: August 26, 2008
- Image File Name: norway_spruce_2988.png



Bud:

- Description: The reddish-brown buds are ovoid with an acute tip. The scales sometimes reflex making the bud look like a rosette. Buds are not generally used as an identification feature for this species.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: July 23, 2008
- Image File Name: norway_spruce_2417.png



Flower:

- Description: Though not true flowers, the reproductive structures on *Picea* are often referred to as such. Spruce is monoecious; producing male pollen cones and separate female seed cones all on the same plant. Male pollen cones are axillary and are either single or clustered. Female cones are produced at the tip of new growth. The color phases can vary according to species.
- Note: This photo is meant to show general images for “flowers”. These images are of *Picea glauca*, not the species referenced in this Plant Profile.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: April 5, 2012
- Image File Name: white_spruce_1360064s.png



Cone:

- Description: Norway spruce has the longest cones of any spruce species used in the Chicago area. The pendulous cones are 4-6 inches long. Cones of all spruce go through purple-green-brown color phases and may be highly ornamental when first forming. Erect when first forming, they are pendulous at maturity.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: July 23, 2008
- Image File Name: norway_spruce_2426.png



Cone:

- Description: The mature cone of *Picea abies* is a great identification feature. Notice the size, shape and light brown color. The cone scales are stiff and slightly leathery.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: August 29, 2008
- Image File Name: norway_spruce_3050.png



Cone:

- Description: The size, shape, color and texture of the cones of *Picea* confirm the identity of the species. Even the scale margin features can be important. Utilizing *Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses* by Michael Dirr (or other reputable source) study the botanical descriptions of spruce cones to become proficient in species identification.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: March 28, 2011
- Image File Name: picea_cones_1270356.png



Leaf/Leaf Attachment:

- Description: *Picea* needles are 4-angled, attach single to a small peg (pulvini) which leaves a rough stem.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: July 23, 2008
- Image File Name: norway_spruce_2431.png



Leaf/Leaf Attachment:

- Description: The needles of Norway spruce are dark green and persist for several years. The needles on the upper side point forward lightly covering the stem. On the underside the needles diverge exposing the yellow-orange stem. This is a good identification feature.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: August 29, 2008
- Image File Name: norway_spruce_3052.png



Winter interest:

- Description: The size, habit and dark green, almost black silhouette is especially impressive in the stark winter landscape.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: February 16, 2014
- Image File Name: norway_spruce_5659.png



Special ID feature(s):

- Description: *Picea abies* is easy to identify by the drooping branchlets and the long, pendulous cones.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: July 23, 2008
- Image File Name: norway_spruce_2349.png