

Plant Profiles: HORT 2242 Landscape Plants II
BUDS

How to Identify a Pine, Spruce and Fir by Buds

Genera: *Pinus* (pine), *Picea* (spruce), *Abies* (fir)

Family Name: Pinaceae – pine family

Steps to take to determine pine, spruce or fir:

1. How many needles and how are they attached? This should be the first decision you make as it tells you what genus it could or absolutely could not be.
2. Cone features
 - a. Are the cones pendulous or upright?
 - b. How do the cones mature? Does it take two years for the cones to mature? Do they stay intact at maturity or do they disintegrate upon maturity?
3. **Bud features – Are there terminal and lateral buds? Only terminal buds? What do they look like?**
4. Whole plant/Habit – Is it pyramidal when young, but broadens with age (loses apical dominance)? Is the tree pyramidal throughout its lifespan? Notice size, shape, form and color as you approach the tree as these features will all help to confirm the identification of the plant.

NOTE: For complete information on all the steps listed please consult *Plant Profiles: Hort2242 Landscape Plants II - How to Identify Pine, Spruce and Fir*.

Resources Consulted:

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

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Bud: *Pinus*

- Description: Plants in the genus *Pinus* only produce terminal buds and do not have lateral buds scattered along the stems. There may be just one bud in the terminal position or 3 or 4 buds forming a whorl. The buds of the different species of pine can vary in size, shape and other characteristics.
- Karren Wcisel – February 4, 2011
- Image File Name: pinus_bud_1250133.png



Bud: *Pinus*

- Description: The arrow is pointing to a terminal bud on *Pinus*. In this example the structures below the terminal bud are male pollen cone buds that will open in spring, mature and disperse pollen. These pollen cones are different than the vegetative terminal buds in the prior example in location, number, look and function.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: December 28, 2010
- Image File Name: pinus_bud_1240417.png



Bud: *Picea*

- Description: Plants in the genus *Picea* have terminal buds and lateral buds. The terminal buds are ovoid with imbricate scales that are often reflexed. The buds may or may not be resinous.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: February 10, 2011
- Image File Name: picea_bud_1250474.png



Bud: *Picea*

- Description: Notice the lateral buds of *Picea* scattered along the stems of the newest growth.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: January 5, 2012
- Image File Name: picea_bud_1340518.png



Bud: *Abies*

- Description: Plants in the genus *Abies* also have terminal and lateral buds. The terminal buds are ovoid in shape and often resinous.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: November 11, 2010
- Image File Name: abies_bud_1220836.png



Bud: *Abies*

- Description: Notice the lateral buds of *Abies* scattered along the stems of the newest growth.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: November 11, 2010
- Image File Name: abies_bud_1220838.png