

**Plant Profiles: HORT 2242 Landscape Plants II  
CONES**

How to Identify a Pine, Spruce and Fir by Cones

**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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**Cone:** *Pinus*

- Description: *Pinus* cones take two years to complete their life cycle. On a pine it is common to see young, immature 1<sup>st</sup> year cones and mature (open or unopened) 2<sup>nd</sup> year cones all on the same plant. Notice the immature cones developing near the top of this stem and the mature cone on older growth.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: March 6, 2009
- Image File Name: pinus\_cone\_1110598.png



**Cone:** *Picea*

- Description: *Picea* cones are pendulous. Their cones mature and usually shed in the same season. The entire cone falls off.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: August and February
- Image File Name: picea\_cone\_00.png



**Cone:** *Abies*

- Description: *Abies* cones are erect on the branch.
- Image Source: USDA-NRCS PLANTS Database / Herman, D.E., et al. 1996. *North Dakota tree handbook*. USDA NRCS ND State Soil Conservation Committee; NDSU Extension and Western Area Power Administration, Bismarck.
- Image Date: Unknown
- Image File Name: abco\_003\_pvp.png



**Cone:** *Abies*

- Description: The cone scales disintegrate as they mature leaving the upright central axis on the stem.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: October 31, 2008
- Image File Name: abies\_cone\_1070570.png



**Cone:** *Abies*

- Description: *Abies* cone scales after they have abscised from the cone.
- Image Source: Karren Wcisel, TreeTopics.com
- Image Date: November 2, 2008
- Image File Name: abies\_cone\_1070881.png