**Pseudotsuga menziesii var. glauca**

Rocky Mountain Douglas-Fir

Edward F. Gilman and Dennis G. Watson

**INTRODUCTION**

Douglas-Fir grows 40 to 60 feet and spreads 15 to 25 feet in an erect pyramid in the landscape (Fig. 1). The species grows to more than 200 feet tall in its native habitat, but this variety grows slower and is smaller than the species and has very attractive blue-green foliage. Hardiness varies with seed source, so be sure it was collected from an area with suitable cold-hardiness to the area in which it will be used.

**GENERAL INFORMATION**

- **Scientific name:** *Pseudotsuga menziesii* var. *glauca*
- **Pronunciation:** soo-doe-SOO-gah men-ZEE-zee-eye
- **Variety:** GLAW-kuh
- **Common name(s):** Rocky Mountain Douglas-Fir, Blue Douglas-Fir
- **Family:** *Pinaceae*
- **USDA hardiness zones:** 5 through 6 (Fig. 2)
- **Origin:** native to North America
- **Uses:** screen; specimen; Christmas tree; no proven urban tolerance
- **Availability:** grown in small quantities by a small number of nurseries

**DESCRIPTION**

- **Height:** 40 to 60 feet
- **Spread:** 15 to 25 feet
- **Crown uniformity:** symmetrical canopy with a regular (or smooth) outline, and individuals have more or less identical crown forms
- **Crown shape:** pyramidal
- **Crown density:** moderate

**Growth rate:** medium

**Texture:** fine

---

1. This document is adapted from Fact Sheet ST-528, a series of the Environmental Horticulture Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Publication date: October 1994.

2. Edward F. Gilman, associate professor, Environmental Horticulture Department; Dennis G. Watson, associate professor, Agricultural Engineering Department, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville FL 32611.
Foliage

Leaf arrangement: alternate; spiral (Fig. 3)
Leaf type: simple
Leaf margin: entire
Leaf shape: needle-like (filiform)
Leaf venation: none, or difficult to see; parallel
Leaf type and persistence: evergreen; needle leaf evergreen
Leaf blade length: less than 2 inches
Leaf color: blue or blue-green
Fall color: no fall color change
Fall characteristic: not showy

Fruit

Fruit characteristics: does not attract wildlife; no significant litter problem; showy

Trunk and Branches

Trunk/bark/branches: droop as the tree grows, and will require pruning for vehicular or pedestrian clearance beneath the canopy; not particularly showy; should be grown with a single leader; no thorns
Pruning requirement: needs little pruning to develop a strong structure
Breakage: susceptible to breakage either at the crotch due to poor collar formation, or the wood itself is weak and tends to break
Current year twig color: green
Current year twig thickness: medium; thin

Culture

Light requirement: tree grows in full sun
Soil tolerances: clay; loam; sand; acidic; well-drained
Drought tolerance: moderate
Pseudotsuga menziesii var. glauca -- Rocky Mountain Douglas-Fir

Figure 3. Foliage of Rocky Mountain Douglas-Fir.

Other

Roots: surface roots are usually not a problem
Winter interest: tree has winter interest due to unusual form, nice persistent fruits, showy winter trunk, or winter flowers
Outstanding tree: not particularly outstanding
Invasive potential: little, if any, potential at this time
Verticillium wilt susceptibility: not known to be susceptible
Pest resistance: long-term health usually not affected by pests

USE AND MANAGEMENT

Douglas-Fir is most commonly used as a screen or occasionally a specimen in the landscape. Not suited for a small residential landscape, it is often a fixture in a commercial setting. Allow room for the spread of the tree since the tree looks terrible with lower limbs removed. Grown and shipped as a Christmas tree in many parts of the country.

The tree prefers a sunny location with a moist soil and is not considered a good tree for much of the South. It grows but struggles in USDA hardiness zone 7. Douglas-Fir transplants best when balled and burlapped and has a moderate growth rate. It tolerates pruning and shearing but will not tolerate dry soil for extended periods. Protect from direct wind exposure for best appearance. Some occasional watering in summer dry spells will help the tree stay vigorous, especially in the southern end of its range.

Cultivars of the species include: ‘Anguina’ - long, snake-like branches; ‘Brevifolia’ - short leaves; ‘Compacta’ - compact, conical growth; ‘Fastigiata’ - dense, pyramidal; ‘Fretsii’ - dense bush, short broad leaves; ‘Glaucia’ - bluish foliage; ‘Nana’ - dwarf; ‘Pendula’ - long, drooping branchlets; ‘Revoluta’ - curled leaves; ‘Stairii’ - variegated leaves.

Pests

Aphids infestations on small trees may be dislodged with a strong stream of water from the garden hose.

Scale and bark beetles may infest Douglas-Fir, especially those under stress.

Diseases

Root rot can be a serious problem on clay and other wet soils.

Needles infected by leaf cast fungi in spring turn brown and fall off.

Several fungi cause canker diseases leading to branch dieback. Maintain tree health and prune out infected branches.