

**EVERGREEN IDENTIFICATION:
(GYMNOSPERMS - CONE-BEARING OR NAKED SEEDED PLANTS)**

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FOLIAGE TYPES

Needle-like foliage is typical of gymnosperms of the species *Pinus* (pines), *Abies* (true firs), *Cedrus* (cedars), *Pseudotsuga* (Douglas fir), and *Taxus* (yews – which are not gymnosperms). Needles may be contained in fascicles of 2, 3, 2 and 3, or 5 (Pines) or borne singly (fir, spruce, yew, Douglas fir) or in clusters (cedar) along the stem. Needles may be relatively flat (2-sided) or angular in cross-section.

Scale-like foliage overlaps like the shingles on a roof and is typically soft to the touch. Includes *Thuja* (arborvitae), *Chamaecyparis* (false cypress), *Cupressocyparis* (Leyland cypress), and some *Juniperus* (junipers).

Awl-like needles are shaped like an awl. They are usually very sharp or prickly to the touch. Includes most junipers. Generally found in juvenile foliage, but in some (*Juniperus communis*, *J. procumbens*, *J. chinensis pyramidalis*, etc.) it is spiny in both youth and old age.

LEAF AND CONE ARRANGEMENT

Leaves needle-like, 2+ per cluster

Leaves evergreen, in clusters of at least 2. Base of each cluster enclosed by a sheath. Cone-like fruits. **PINE**

Leaves linear, often flattened, occurring singly:

Cones hanging on branchlets, entire cone falling in 1 unit

Branchlets rough because scattered peg-like stubs remain on the branchlets after the leaves have fallen

Leaves without stalks (sessile), 4-sided or flattened **SPRUCE**

Leaves short-stalked, flattened, or slightly rounded **HEMLOCK**

Branchlets smooth without peg-like structures, cones with bracts longer than the scales **DOUGLAS FIR**

Cones upright on branchlets, scales falling away after the seed drops leaving a single central axis **FIR**