Which is it: Pine, Spruce, or Fir?

There are a few simple ways to tell the major Yeutter conifer genera apart based on two main morphological features: leaves and cones.

Leaves or Needles:

1. Pinus (Pine): attached to the twigs in bundles of two, three, or five. (Larch trees also have needles in bundles.) Although there are short-needled pines, in general, pine needles are longer than those of spruce and fir.

2. Picea (Spruce): needles are square, hard and sharply pokey at the ends, and can be rolled between your fingers. They are attached to the twigs by little stalks.

3. Abies (Fir): needles are soft and flat with blunt ends. They cannot be rolled between your fingers. They are attached directly to the twig, with circles at the base that look like little suction cups.

Seed (Female) Cones:

1. Pinus (Pine): can be small or large, short or long; but all hang downward and are stiff and woody.

2. Picea (Spruce): can be small or large, short or long; but all hang downward and are soft and flexible with thin scales.

3. Abies (Fir): always grow upward, are cylindrical, and may be blue or purple when young.
Chamaecyparis pisifera - Sawara Cypress
This species is 20’ + in cultivation (50-70’ in the wild), native to Japanese islands of Honshu and Kyushu. Zones 4-8. Prefers moist, well-drained soils. Red brown, vertically fissured bark; the foliage is arranged in flat sprays and the adult leaves are scale-like.

Pinus mugo var. pumilio - Dwarf Mugo Pine
This species is 3-5’ × 6’ + . Zones 3-7, native to the high mountains of central and southern Europe. Dark green rigid needles, 1 to 2 inches in length, appear in bundles of two.

Pinus strobus ‘Pendula’ - Eastern White Pine
This species is 6-15’ × 10-20’. Zones 3-8. ‘Pendula’ is a semi-dwarf cultivar with weeping, trailing branches that may touch the ground. Its form is variable depending upon pruning and training. Branches typically spread horizontally for a short distance before drooping. Foliage is green to blue-green.

Picea abies ‘Korean Fir’ - Korean Fir
This species is 15-30’ × 6-12’ . Zones 3-7, native to only four small areas in the mountains of South Korea, three on the mainland and one on Jeju Island. The total area of occupancy is only 4.6 square miles and the tree has been designated endangered. Its decline is thought to be the result of climate change. Best in well-drained, not heavy clay soils. Compact pyramidal to conical form, short needles are dark green and glossy above, with two silver stripes beneath. Upright purple cones are produced at a young age. A good choice for smaller yards.

Picea abies ‘Sky Trails’ - Serbian Spruce
This species is 15 - 25’ cultivar of Serbian Spruce known for its blue-green color and upright weeping form. Silvery-white stomatal lines beneath. Upright purple cones are produced at a young age. A good choice for smaller yards.

Picea engelmannii ‘Hoopsii’ - Blue Spruce
This species is 30-50’ × 15-20’ Zones 2-7. This cultivar is known for its silvery-icy blue needles. Dense pyramidal with pendulous magenta-purple female cones. Introduced in the 1950s. ‘Hoopsii’ is a Royal Horticultural Society Award of Garden Merit winner. See 12.

Picea engelmannii - Engelmann Spruce
Generally 20 - 25’ Zones 3 - 6. This is a variety of White Spruce that grows only in and around the Black Hills of South Dakota. It is the region’s only native spruce. Many consider it a superior landscape tree to the species because of its denser habit and brighter green to blue-green needles. It is smaller than the species with a slower growth rate. Generally grows at around 6000’. A good tree for birds and small mammals. The state tree of South Dakota.

Picea omorika - Serbian Spruce
Generally 20 - 25’ Zones 3 - 6. This is a variety of White Spruce that grows only in and around the Black Hills of South Dakota. It is the region’s only native spruce. Many consider it a superior landscape tree to the species because of its denser habit and brighter green to blue-green needles. It is smaller than the species with a slower growth rate. Generally grows at around 6000’. A good tree for birds and small mammals. The state tree of South Dakota.

Tsuga canadensis - Eastern Hemlock
This species is 40 - 70’ × 25 - 30’ (in cultivation), native from New England to Wisconsin, south along the Appalachians to northern Georgia and Alabama. Flat sprays of foliage, short, dark green needles, undersides have two white stomatal lines. Small, pendent tan-brown seed cones. Hemlock wooly adelgid (HWA) is a tiny sap-sucking insect related to aphids that is a serious threat to the survival of native hemlocks in the wild.

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