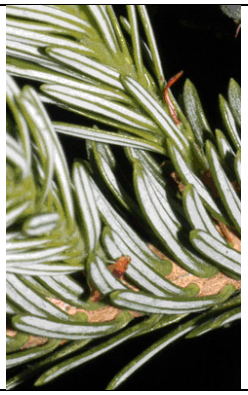
Michigan trees at risk for balsam woolly adelgid infestation

Balsam woolly adelgid is an invasive insect that can infest and ultimately kill trees in the true fir family. True fir trees (*Abies* spp.) in Michigan include balsam fir *(Abies balsamea)*, native to the Upper and Northern Lower peninsulas, Fraser fir *(Abies fraseri),* an Appalachian species, and white or concolor fir *(Abies concolor),* originating in the Southwest. All three species are often planted for use as Christmas trees and can be found in landscapes throughout the state. The Douglas fir *(Pseudotsuga menziesii*) is not a true fir and not known to be a host for invasive balsam woolly adelgid.

Identifying true firs

True firs are conical, or cone shaped. Needles are flattened with rounded or blunt tips and grow singly from the twig. Cones point upward and drop seeds in the late summer or fall, often leaving an upright core attached to the tree. In young trees, bark is smooth, silver-gray to brown, and flecked with resin blisters as trees age bark becomes thicker and more textured with furrows or patches.

BALSAM FIR			
			
Grows to 65’, with a narrow, spire-like crown.	Needles ¾”, shiny dark green with two white stripes on underside.	Cones 2”-4”; dark violet when young turning gray brown and resinous	Bark is smooth, dull green to gray or brown with age bark breaks up into small reddish brown irregular scaly patches

FRASER FIR			
			
Grows to 80', with straight or upward reaching branches.	Needles ¾", shiny dark green with thick white stripes on underside.	Cones 1 ½" to 2 ½" with pointed, toothed bracts on the scales. Purple when young, becoming tan to brown.	Bark silver-gray to brown.

WHITE OR CONCOLOR FIR			
			
Grows to 60', with lower branches tending downward.	Needles 2"to 3", silvery blue-green.	Cones 3" to 5 ½", oblong. Pale green before maturity turning brown.	Smooth, gray bark thickens and furrows with age.