Quick Facts on Blue-Stained Wood

You are seeing more and more of it, and it is becoming highly sought after due to the character it lends to such products as paneling, wainscoting, cabinets, and other wood products, but what exactly is it?

What is it?
The agent responsible for the attractive denim appearance in many Colorado wood products is due to an insect introduced fungus. While this sounds unappealing, the fungus poses no danger to humans, nor will it move from the wood to other mediums. In fact the stain is only in the interior of the wood cells and not on the surface. You will find that the color will not rub off. The blue-stain does not decay the wood as it exists on the food stored in the wood cells, rather than on the cell walls like decay fungi.

Where does it come from?
Blue-stain can be introduced to both living and non-living wood in a variety of ways. Due to our current mountain pine beetle (MPB) epidemic, much of the material is being stained by these tree-killing bark beetles. The fungal spores are carried on the beetle’s bodies and are spread as the female lays her eggs under the bark. It is believed that the stain plays a role in the death of the host tree by clogging the water conducting tissues. Foresters use the stain as an indication of a successfully infested tree which, when possible, is removed from the forest to prevent further spread of the beetles.

Will a sawn board continue to turn blue in my home?
No, blue-stain fungi will not continue to grow within wood products when they are used in the home. In these cases, the moisture content of the wood is too low. The fungi needs the wood to be at a moisture content of 20% or greater, while interior applications in Colorado can be as low as 4-5% in the winter, and 10-11% in the summer.

Where can I find blue-stained wood products?
Due to the Mtn. Pine Beetle infestation in Colorado, most of the pine logs being sawn by Colorado sawmills contain blue-stain. Likewise, producers of paneling, wainscoting, flooring, cabinets, and other products in Colorado are utilizing this local wood for its character and appeal. For information where you can find such products, contact the Colorado Wood Utilization and Marketing Program at 970.491.2958.
Quick Facts on the Mountain Pine Beetle

Mountain pine beetles (MPB) develop in lodgepole, ponderosa, Scotch, and limber pines. Usually they attack weak, stressed, or damaged trees. However, recent droughts in Colorado have stressed large acres of forests, leaving them susceptible to beetle attack. The Colorado State Forest Service reports that the beetles were responsible for the deaths of over 1.25 million trees by the end of 2004, with exponential increases expected in light of conditions favorable to the beetle. Evidence of the beetles devastation is clear on any drive through the 40,000 acres of infested and often red forests of Grand county.

MPB have a one-year life cycle. In early to mid-summer, adult beetles leave the newly faded pines where they have been developing for the past 12 months. They fly to green trees, burrow just below the bark, mate, and the females lay approximately 75 eggs along a vertical gallery. Larvae hatch from the eggs and begin eating their way around the tree destroying the phloem layer that carries food from the leaves throughout the tree. Growing into adults by summer, the beetles emerge and continue their life cycle in new host trees.

The adult beetles introduce blue-stain fungal spores into the tree when they attack. The fungus contributes to the death of the tree, and also results in the characteristic denim-like color seen in the wood.