WOOD LUST

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Random thoughts from 35 years of observation

1. Wood's Body

Stone and wood are perhaps the only two natural materials that have an extreme variety of visual effect with the same fundamental sourcing. Although stone truly has extreme differences between sedimentary, igneous and metamorphic, wood is basically wood. Just like stone, wood's surface and its core can be maintained and celebrated. Just like sedimentary stone, the cross-cut/end grain of wood is expressively distinct from the flat grain/cleft surfaces that follow the grain.

Wood is formed by strands. These strands are called xylem and phloem. They combine muscle tissue, skeletal armature, and cardiovascular system.

Wood at the outside (sap wood) grows more quickly during summer in temperate climates (summer wood), is lighter and less dense. The wood that is formed in winter (winter wood) grows less quickly and is denser. The contrast between the two when cut is "grain" that has "figuring".

Heartwood is at the core of a tree, sapwood is at the perimeter of the tree. Heartwood is most often dead (and sometimes rots), sapwood is living and is fully saturated with water/sap.

2. Wood's Uses

Structurally wood can be used like steel (post and beam) or can gain strength from a composite of stiffeners and membranes/diaphragms (stick frame). It can be virtually monolithic like concrete (log construction) or it can be a space frame (truss construction). Wood can make gussets, ties, columns, beams of pieced or laminated material, and can become skins of overlapping material – clapboards, shingles, board and batten, or laminated sheets (plywood), or be monomaterial (log). Some species of wood can be used for roofs, or it heavily treated for the right subsoil conditions it can be used as foundations.

Wood can be shaped to tolerances down to 1/32", but can easily move up to ¾" depending on humidity. Species, graining, and treatments can give the same essential material the most extreme varieties of visual contrast imaginable.

Wood is one of the very few materials that is completely, 100% renewable with almost 100% of its harvested product useable in some form or fashion.

3. Wood's Qualities

The wood that forms roots is exceptionally different from the wood that forms the above ground tree – denser, harder, "gnarlier".

Some woods are actually heavier than water and have enough oils and are dense enough that they can resist rot for centuries, if not millennia. Some wood is so open grained that rain drains away from it.

Trees move long after they are dead – shrinkage first and warping second. Any time wood is cut it releases the stresses of so much difference in density of the graining and the original tree's shape (vs. the orientation its been cut). Lastly, there is expansion and contraction as the humidity in the air comes and goes.

Wood's appearance changes constantly over time. The more exposure to light and air, the more change (most often dark with sunlight, sometimes bleaching when hit with saltwater, but ever changing).

When wood degrades, it serves as food for bacteria, is turned into dust by ultraviolet light, and is washed away by rain in any natural outdoor situation.

4. Wood's Management

Unless coated with something (lacquer, oil, paint, epoxy resin, etc.) wood will need recoating over time as any breach in the surface will cause light and moisture penetration, discoloration, or decay, and will eventually degrade and compromise the integrity of the wood.

Either you stabilize wood by lamination, casting strands or bits and pieces or sawdust in resin/glue, or you must allow wood to move or its unrestrained movement will simply pull itself apart when assembled.

Lamination, when done correctly, creates extremely strong, very stable structural or surface elements. When done incorrectly (usually glue failures) the thin/small pieces of wood tend to fall apart and the resulting structure/surface has no integrity.

Wood is great at making grids, planes, and simple angular construction. Blocks of wood can be carved to make any shape imaginable, but curved planes of wood can be exquisitely expensive when laminated out of sheets or of glued and cut pieces, but relatively affordable when formed by "barrel" construction (individual pieces set to ribs).

5. Grain as Art

Some of the most beautiful grain is formed by disease. Burls are virtually cancerous tumors, spalted wood is diseased, as is English Brown Oak.

Graining patterns are also determined by the branching of trees. As branches zoom out of the central trunk, the swoops and diversions of the layers of wood create amazing patterns revealed when cut or veneered.

Variations of graining can also happen by the orientations of veneer cuts (book matching, etc.)