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WOOD, WHAT COULD BE

What is wood? This seems like a simple question. Wood is a porous material, made up primarily of carbon, oxygen, and hydrogen, intricately arranged by nature into a complex polymeric composite structure. Wood is relatively lightweight, has a high strength to weight ratio, and it has a tremendous number of uses. Of course all of this is well documented in the scientific literature. Furthermore, a countless number of artisans and practitioners have effectively used wood over the centuries, and they have passed their knowledge on down through the ages. So we really do know all about wood, don't we?

I pose a question. Is this the same wood that my great-grandfather cut in western Wisconsin, some 100 years ago? I humbly suggest that no, "wood" is not the same today as it was in the days of my ancestors. If we consider wood as a generic raw material that feeds the forest products industry, then we must all agree that this resource has dramatically changed. We have seen change in the available species mix, average age of the log, log diameter, growth rate, density, and quality. We have seen change in the way we process the resource. We now do a lot more peeling, flaking, refining, and recycling than we used to. And what about the new wood products that are increasingly common: the wood I-beam, parallel strand lumber, laminated veneer lumber, medium density fiberboard, and others. These are all well known wood products today, but certainly Gifford Pinchot didn't have these products in mind when U.S. timber management strategies were being developed some 90 years ago. Most of

these products were unknown even during the resurgence of the southern pine forest in the early 1960s. Yet, those management practices and political forces dictated the resource that we have today. What will be the resource in the future? Will we still make the same wood products 30 years from now?

In the decades to come there will be an evolution of market demands, and by necessity there will be new wood products to supply those demands. The global market will truly be entrenched around the world. The political environment will continue to alter the world timber resource. What we now know as "wood" will fit quite a different paradigm. What that paradigm will be is certainly up for debate.

Will we be reactive or proactive? As scientists we must look to the future and strive to expand the envelope of knowledge. We must resist the financial draw of applied research as the only research. We must strengthen our partnership with industry. We must view wood on its most basic terms and cast off all preconceived notions of what wood *should* be and concentrate on what wood *could* be. Genetic engineering, intensive silviculture, thermal, chemical, and mechanical modifications are just some of the tools by which we may define the future wood resource. Let us take the proactive course to the future. Let us ensure that there is a future.

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