



Using More of What Trees Provide

Why Not Knots?

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We are all familiar with furniture and paneling made from “knotty” pine. In fact, we expect pine to be knotty and such knots add a certain degree of warmth and authenticity. But have you ever wondered why there isn’t more knotty oak furniture? Or knotty cherry cabinets? The fact is that most knot distortions and visual defects such as color streaks and small holes are removed from hardwoods before the wood is used to make products like cabinets and furniture. Industry researchers and practitioners refer to such visual defects as “character-marks” and there is considerable interest in increasing the use of such features.

Consider the boards cut from a red oak tree as shown in Figure 1. These boards represent high, medium, and lower grades of lumber. On average, of the total amount of lumber a company might purchase to make furniture, about 20 percent is high grade, about 40 percent is medium grade, and the remainder is in lower grades.¹ Apart from major defects such as splits and large holes that could hamper manufacturing processes, think of the opportunities available to better utilize the forest resource by including more of the numerous character-marks that are found in

the sound lumber cut from each tree!

The potential for improvements in yield (the portion of usable material retrieved from each log or board) by using more character-marks has been well documented by researchers. However, there also are marketing-related issues. Consider this statement by noted conservationist and author Aldo Leopold:²

“Take, for instance, our universal insistence on clear hardwoods for furniture and interior woodwork. A sound knot is today absolutely taboo on the face of a drawer or a baseboard or a window casing . . . Is it too much to hope that fashion may some day lift the ban against sound knots in places where they enhance the beauty of the wood and do not injure strength?”

That statement was made in 1928! But a similar lament is being voiced in some quarters today. The point is that the “character” idea is not new. So why has so little progress been made? A key consideration is the focus on fashion as the mechanism to affect change. Ultimately, consumers must be willing to accept such features in their furniture. Likewise, manufacturers and retailers must be willing to take the risk necessary to introduce character-marked products by breaking with established norms of production and purchasing; ultimately, to offer something different from that which consumers have become accustomed.

Some of the reasons why not

Research has shown that there are several barriers to use of character-marks by manufacturers of wood products. Chief among these is that character-marks must fit within an overall product concept that considers style, finish, hardware, and other product attributes. For example, knots would probably not look good in a sleek, contemporary table with a light-colored finish. But they might fit nicely in a rustic, casually designed armoire found in a lakeside cabin. How about your living space and the styles you prefer? Can the use of character be extended beyond the most rustic of designs and settings? Would you like products that reflect more of the natural variation inherent in wood?

This very question was addressed in a recent survey of more than 800 attendees at a major southern home show. Only 27 percent of those surveyed were sensitive to the presence of character-marks when asked to rate their favorite cabinet door (Fig. 2). Most participants paid more attention to the species (cherry and maple) and style (rectangular and arched) used rather than the level of character present (clear, light, and heavy). This suggests that reluctance on the part of manufacturers to include more character-marks in furniture and cabinets might be based on a relatively small subset of consumers, if

not tradition and/or preconceptions alone.

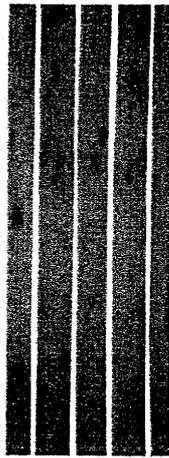
Consistency, or a lack thereof, often is cited as a limitation to the use of character-marks. Research points to subtleness or character-mark size as a manifestation of this concept. For example, a study of acceptance of character-marked oak furniture on the part of retailers showed that they were ambivalent toward small knots (the good news), but their preferences dropped sharply for larger knots (the bad news).³ This finding is important because it means consumers are less likely to see character-marked products in furniture stores. Retailers might be expected to exhibit such risk-averse behavior when one considers what is at stake for them when buying furniture to sell in their stores. A consumer might be surprised when his or her new furniture arrives with character-mark types and/or patterns that differ from those in the floor sample in the showroom. Perhaps this is why intentional distress marks (dents and chips, simulated worm holes, etc.), which can be placed in the same location on every piece of furniture during manufacture, remain popular in casual-styled furniture.

For the few companies that have attempted to develop character-marked products, there often is a learning curve involved with successful implementation that guides the ultimate level and types

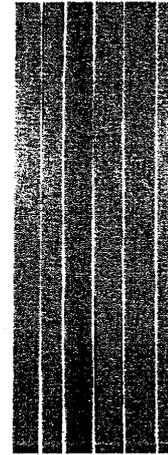
of character presented. For example, companies might tend to initially overdo the use of character-marks to the point that consumers find them unacceptable. Such companies might then decide to abandon the concept entirely, as unsuccessful furniture groups cost companies time and money, and there is continually competitive pressure to come out with something new. A related issue is educating retail salespeople to promote character-marks as a natural part of wood. While furniture companies design and manufacture furniture, they are mostly dependent upon retail salespeople in distant stores to sell their products. Consumer exposure to and appreciation for character-marks comes in part from their furniture shopping experiences.

Implications and opportunities

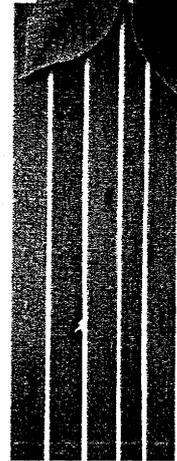
The presence of mid to lower grade trees in our forests is substantial, and from lower grade trees comes lower grade lumber. Often, the economic value of this material does not justify its removal from the forest even if removal would improve the stand and be consistent with management objectives. If character-marked wood can successfully be linked to fashion, consumer desire for character-marks can help add value to the lower grade trees in Ohio's woodlands. Research in this area continues. There are some recent indications that more character-marked products are being introduced to the marketplace (Fig. 3), creating more opportunities for consumers to choose such products. Perhaps at some point, a "critical mass" of character-marked products will push the concept more into the mainstream. Until then, smaller manufacturers that deal more directly with consumers might have the best opportunities to promote character-marked wood. 🌲



Firsts and Seconds (FAS)



No. 1 Common



No. 2 Common

Figure 1. Examples of board grades for red oak: high (termed FAS by industry), medium (termed No. 1 Common) and lower (termed No. 2 Common). (Photos courtesy of the National Hardwood Lumber Association.)

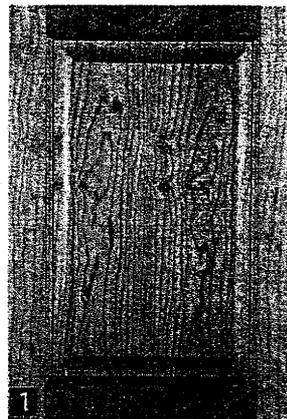


Figure 2. A cabinet door (no. 1 of 12 – cherry, rectangular style, heavy level of character) used in a consumer study of character-mark acceptance. (Photo courtesy of North Carolina State University and USDA Forest Service.)

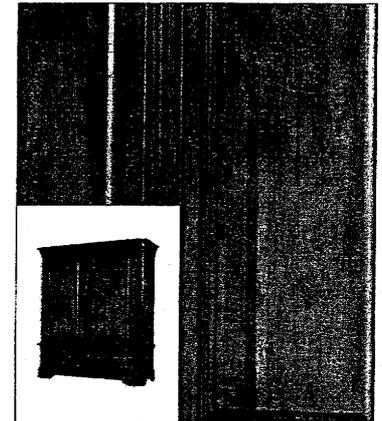


Figure 3. Example of a character-marked maple wardrobe with a medium finish (from Stanley Furniture Company's Provincia Collection).

(Footnotes)

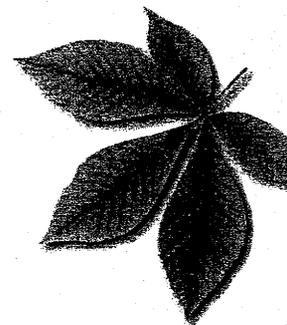
¹ Based on data (2000) generated by Mississippi State University and USDA Forest Service.

² The Home Builder Conserves. *American Forests*. May 1928: 276-278, 297.

³ Bumgardner, M., R. Bush, and C. West. 2002. *Journal of the Institute of Wood Science*. 15(6): 327-336.

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