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GREEN BUILDING & DESIGN

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Perfecting the 20K House

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Material World
Blue Ridge Bark

Highland Craftsmen upcycles waste products from North Carolina's logging industry into unique architectural elements

By Mary Beth Rohde

Marty McCurry and his wife, Chris McCurry, drew inspiration for their poplar bark products after witnessing changes to where they live in the Blue Ridge Mountains of North Carolina.

"We were seeing a huge influx of second homes, which was great for the economy, but weighty on local resources and culture," says Chris, who with Marty founded **Highland Craftsmen** in 1990. "We wanted to offer an alternative building style and approach that blended with the surroundings and honored the environment and the people crafting the raw materials."

Highland Craftsmen's flagship Bark House line includes just about any material derived from local trees: bark shingles, bark panels, bark veneer laminates, millwork and moldings, live edge slabs, handrail components, and split-rail fencing, as well as logs, twigs, stumps, and burls.

Historically, the logging industry has stripped bark from American chestnut trees for tanning leather, but as that industry declined, so did commercial uses for the bark. Marty and Chris reintroduced the mountain technique of using untreated poplar bark shingles for siding after researching ways to peel and cut the bark, kiln-dry the shingles (to sterilize and stabilize them), and permanently affix them to building interiors and exteriors.

Bark House wall treatments, shingles, and laminates have been used in projects for clients as diverse as Bass Pro Shops, Samsung, and the University of Chicago. "The products lend themselves to a clean presentation and modern applications," Chris says.

SUSTAINABLY SOURCED
Five Benefits of Bark House

❶ Bark House shingles are virtually maintenance-free as an exterior product and require no sealing, staining, or painting. They can last for up to 80 years and safely biodegrade.

❷ Shingles are hand-stripped and prepared with tools by hand, using minimal water, electricity, or fuel.

❸ Products are sourced from American forests, 90% sourced within 50 miles of the facility in Spruce Pine, NC, and 99% sourced within at least 500 miles.

❹ Shingles are manufactured with renewable energy, have a high R-value, and are class-B fire rated.

❺ All products have an assurance of ethical purchase backed by Cradle to Cradle and B Corp. The company is B Corp certified and was rated "Best for the World" and "Best for the Environment."

LEFT **Wheeler Kearns Architects specified Bark House as an exterior siding that continues indoors for this childcare center at University of Chicago.**

"For many big customers, we tailor products to fit their unique concepts."

Highland Craftsmen's model is based on "cradle-to-cradle" principles, reducing waste by sourcing its raw material almost exclusively from industrial waste products. The company works with local, small-tract loggers, who appreciate sustainable practices and the additional profits that come from selling what would otherwise be waste.

And there are continued opportunities for innovation: the company recently introduced a decorative wall system of two-by-two-foot squares that make installation extremely simple.

"Everything we have is based on a discard from the industry or a tree dying out due to natural succession," Marty says. "We've always been attracted to using natural and organic shapes and extrusions in building. It's part of our mountain heritage to make use of the items at hand." gb&d

ABOVE A close-up of an interior finish used at Parsons The New School shows the unprocessed aesthetic possible with Bark House products.

IN CONVERSATION
María Arquero de Alarcón and Jen Maigret

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practice and teaching at the same time. I'm currently teaching an introductory construction course, so it's helpful to be able to bring in site photographs of the footings we just put in last week to talk about the reality of how these things play out one way or the other.

Conversely, when we're in design studio or other courses that aren't directly linked, that's an incredibly productive situation in reverse, in the sense that it also allows us to be thinking about ideas that aren't directly embedded in our research. And that allows you to come back with somewhat fresh eyes.

"There's definitely a tendency right now to give a heavy priority to things that are somehow validated through data. Data is not...infallible."

gb&d: One of you wrote in our questionnaire (*p. 176*) that the topic of your TED Talk, if you were asked to give one, would be "Why imagination is more important than big data," which is interesting because the two of you rely on data so much and have been recognized for the critical eye you bring to it. How have you communicated the necessities of both to your students?

Arquero de Alarcón: It's an everyday conversation, and I would say it's one of the most important ones. In a way, we are asking the students to do research, to have a thorough understanding of the problem they are trying respond to. And then we are asking them to have enough latitude to be able to respond in ways in which, no matter what it is you are doing in response, you will go beyond problem-solving. You need to be able to add something to the equation. That's what design does.

Maigret: It has a lot to do with learning how to design questions. The imagination-data interplay–it's an important part of what we do. It's a big struggle. There's definitely a tendency right now to give a heavy priority to things that are somehow validated through data. And while data is certainly important, in and of itself, it doesn't necessarily bring good questions. Data is not inherently infallible.

The conversation continues on p. 177