

# FISH LEATHER, ANYONE?

Harnessing the eco spirit of a new breed of superyacht owner, designers rise to the challenge of turning ideals into tactile eco-friendly materials.

TEXT BY LOUIS POSTEL

**SOME OF YOU ARE PROBABLY** familiar with Pete's Coffee Shop in Harvard Square; if you are, you'll surely recognize our hero: gangly, slight of build, a composite of windblown sailor and perpetual grad student.

He's alone at the back where lavatory traffic becomes most intense, a laptop on his left, a pot of green tea on his right. He's got three tabs currently open on his web browser: 1) his luxe hybrid's owners' forum; 2) an official-looking Word doc regarding RINA's Green Plus certification awarded to his latest explorer, the 190-foot *Summa cum Laude IV*; and 3) a Bloomberg analysis of his company's growing market share in Asia.

"We're seeing a new breed of megayacht owner," says award-winning naval architect Gregory C. Marshall of Vancouver, Canada. "These new owners are very conscious about recycling. In fact, on *Big Fish* we've done away with recycling plastic bottles altogether by installing bottling machines instead—everyone gets his or her own stainless-steel thermos.

"Five years ago, folks had some inkling about green, three years ago green was okay if it didn't cost more upfront, but now owners are willing to pay extra. It's a fascination, a new energy we're seeing; a change in mentality that's bringing new interest to the entire industry, which, frankly, in the pre-crash days was getting stale," says Marshall.

The challenge for Marshall and other leading designers is shaping ▶



## ◀ BAMBOO

An eco-friendly panel material with a variety of surface and millwork looks that are usable in modern interior design and finished products, bamboo is a rapidly renewable and sustainable resource with a fast growth cycle, resulting in higher material yield per acre than tree paneling.



## ◀ FISH LEATHER

Fish leather can be used to manufacture many products that traditional leathers have been used for, reducing the atmospheric pollution from the tanning process—the lime, lye and acids that are usually used to remove hair from skins are not needed for removing fish scales.



## KIREI BOARD ▶

This decorative and durable wood substitute is made from post-harvest sorghum plant stalks, a rapidly renewable resource leftover after the edible portion of the plant is harvested. Kirei board is strong, lightweight, durable and environmentally friendly—usable in furniture, cabinetry, casework and interior design elements.



## ◀ STONE DECKING

This Stone Decking System is made of epoxy-impregnated granite that, unlike teak, is virtually indestructible, requires low maintenance and withstands abuse. Weighing the same amount as a 0.86-inch plank of teak, the Stone Decking System is cost effective and requires a hosedown for minor spills and splotches.



## SURFACE MATERIAL ▲

Recycled glass-and-concrete composite is a highly durable and decorative "green" surface material made of 100 percent recycled glass that has been crushed and then suspended in a matrix of cement. The concrete has the look of expensive granite, is strong like granite and is heat resistant like stone. Because it's not porous, it resists staining.

## DURALMOND ▶

This ecological material takes advantage of a biodegradable, recyclable mixture of crushed almond shells, fire-proof substances and synthetic resins to create decorative walls and ceilings.



this powerful eco-consciousness into forms that are enduring, useful and beautiful. This means researching, testing and approving thousands of cutting-edge green materials and techniques. After all, if a green "sustainable" product is so difficult to maintain that it's just going to get tossed, how sustainable is it?

## FABRICS – AN ORGANIC APPROACH

Right now, bamboo fabric samples await closer inspection at yacht designer Luiz de Basto's studio in Miami. "Bamboo worked well on [the 2004 Hakvoort] *Flamingo Daze*; there's now a wide array of crown moldings, veneers and tongue and groove flooring on the market," he says. "So far, I am impressed by the bamboo fabric; it has a nice texture."

The fabric comes from an eco-friendly firm called Brentano outside Chicago, founded by Iris Wang and her husband. A former art student at Kent State, Wang wanted to do something practical. Her bamboo drapery fabric is a world's first.

"After my parents fled the communist revolution, I spent some childhood years in Taiwan. There, I saw how the Taiwanese used bamboo for almost everything—eating it, sitting on it, walking on it or wearing it," says Wang. "To make cloth back then, they had to be using the ancient method of just leaving the bamboo outside to rot to expose the fibers. But it must have taken forever." ▶



Above  
Bamboo drapes  
are made from  
100 percent  
bamboo yarn or a  
blend of bamboo  
and cotton yarn.  
The bamboo also  
can be blended  
with other textile  
fibers.

Brentano's Silhouette line of bamboo drapery is superior in feel to the more common varieties of viscose, rayon-like bamboo fibers on the market. But that's not the only difference. Wang explains that while both products are derived from the same highly sustainable bamboo, they are processed into yarn in entirely different ways. Common varieties reduce the bamboo to mush using carbon disulfide, a neurotoxin considered one of the most dangerous industrial fumes known. In fact, in the early days of the 19<sup>th</sup>

century, rayon mill owners had to put iron bars on the factory windows because exposed workers were going mad.

Brentano takes a more organic approach to its bamboo: braising it, crushing it, decomposing it, refining it and re-refining it. The result is a yarn with some miraculous attributes as well as "a nice hand" as de Basto says: lustrous, moisture-absorbent, microorganism and sunlight-resistant, the material even acts as a deodorizer.

#### DECKING – JUST SAY NO TO TEAK

The owners of the superyacht explorer *Big Fish* told Marshall right off the bat: "No teak decks!" Motor yacht owners get around a lot—many have witnessed firsthand the utter devastation of the great teak forests of Indonesia, the rapid disappearance of plants and animals.

"No teak represented a conscious decision that cost the owners quite a lot of money. In its place, we used granite infused with resin so it won't stain, and a rough cut so you won't skid. *Big Fish* has already gone twenty-two thousand miles from Tahiti to Florida to Antarctica and the granite's holding up well. We spent a lot of time trying to figure out how to clean it, however. We figured out the easiest way was to use a blowtorch," says Marshall.

#### COUNTERTOPS – DON'T FAKE IT

Countertop material of recycled junk made to resemble stone can look pretty junky. "But, actually, any material can look good if used for what it is and not as a fake," says de Basto. "You have to take advantage of its characteristics. If you want an all-black surface, for example, you don't need black marble. You can use a composite, especially for a single color. It's only when you want veins running through the black that you have to have the actual stone."

Resilica, for example, out of the U.K., has quirky, light-reflecting characteristics that marble can't match. Made of recycled glass, ground and polished by hand, the resin holding it all together is solvent-free. Who needs to confront off-gassing chemicals while charging the ocean waves?

#### PAINT – WITH AN ECO CONSCIENCE

It's well known that the production and dyeing of most fabrics relies heavily on toxic flame retardants such as PBDEs and that arsenic fungicides lace many a "heavenly mattress." Then you've got formaldehyde- and polyurethane-stewed furniture and pressed wood with some heavy shakes of arsenic in decking for good measure. The effect on health of this chemical bath, its adverse impact on immune systems has been well demonstrated, especially in children.

Paints, lacquers, strippers and cleaners with low to zero VOC's (Volatile Organic Compounds) are becoming increasingly available. One interior paint and mosaic palette takes this eco consciousness a step further. Colorist Barbara Jacobs of Boston recently teamed with Ellen Kennon Full Spectrum Paints in Saint Francisville, Louisiana, to create the Eco-Hues line. Eco-Hues has no black or "dead space" mixed in. For the same reason the Impressionist painters banned black as an abstraction outside of nature, Jacobs' Eco-Hues is a truer reflection of sun, sky, waves and sand. "Most commercial paints use black to tone down or mute color; we don't," she says. "One of the major advantages for designers are that our color palette is so easy to integrate because each color is a mix of many."

#### LEATHER – NONTOXIC SKINS

Now let us return to Harvard Square where we find our intrepid yachtsman still ensconced at Pete's. One neat site appearing on his web browser is *Inventables.com*, offering samples of high-tech and eco products for designers to try out. A sampler pack of genuine fish leather skins catches his eye. How perfect for upholstering the bulkheads of *Summa cum Laude IV*.

Offered in braided, half-inch strips of suede, silk, pearlized and scratch- and stain-proof glazes, the skins are, "the second strongest skin in the world next to kangaroo," says Stanley Major of Sea Leather Wear in Calgary. Along with his carp, salmon and perch inventory, Major is selling the intricate fish skin churning, soaking and vacuum-drying technology that enables fish leather makers around the world to render "Proofs of Odorlessness." One side benefit for the eco-conscious—the toxic acids and limes used to remove animal hair in typical leather tanning are foregone with fish.

There is, of course, so much more. "Green is evolving very quickly," says Marshall. He's excited about photovoltaic paints and photovoltaic fabrics. "They're a big game changer. You know those jackets that can power your phone? Very soon the technology will enable us to turn the entire boat into a solar cell. When awnings are out, they'll not only be providing shade, they'll be generating power. And the next generation of glass will have rheostats built in. You won't need curtains; as the boat turns to the sun, the windows will be smart enough to dim, thereby lowering the heat load as well as the AC requirements.

The key now is to get up to speed, find out what's out there that's formaldehyde-free, or can power your boat while shading your guests. Whatever green products you happen to find, resist the temptation to make it mimic something else less sustainable. Be true to its characteristics, as Luiz de Basto says—even if it costs extra. ■