

Green Boards – The Continuum Continuing

By Enrique Gili

Surfers have a reputation for being at one with Mother Nature, but beneath our feet there's always been that dirty little secret. The boards we ride are toxic at every level of the production process, rendered as they are from oil-based products. Eco-friendly surfboards are few and far between, and often just a choice of the "lesser of evils".

A measure of this reality is due to the complex relationship between the men and materials that birthed the surf industry. As the sport evolved from pastime to industry, some watermen became household names, synonymous with the lifestyle. Men who surfed, who understood the interplay between equipment and waves, began building lifestyle empires. Well-known shapers became celebrities. Some became global brands while others developed loyal local followings. In either case, their surfboards became status symbols, hovering between utilitarian tools and magical talismen. They spoke not only about how you rode, but of your standing in the line-up. In the stratified world of surfing, owning a hand-made custom board has always counted for something.

The resulting industry (large-scale and cottage) has supported the lifestyles of thousands of people from board moguls down to shop clerks. Unfortunately, most of them relied on Gordon "Grubby" Clark to make their wet dreams come true. The founder of Clark Foam worked with partner Hobie Alter to perfect manufacturing techniques to mass-produce polyurethane foam blanks that were cheap and readily available. Clark Foam's ability to produce large quantities of blanks to meet increasing demand changed surfing forever, helping to turn an eccentric pastime enjoyed by a few hundred beach bums into a cultural tsunami pursued by millions.

Gordon Clark dominated for decades in a culture that regarded changes to surfboard construction materials and methods with suspicion – even as a threat to their way of life. So Clark Foam's sudden closure last December sent shockwaves through the global surf community, immediately interrupting the supply of new surfboards. Industry observers estimate Clark supplied up to 80% of the blanks used in Southern California, shipping a thousand blanks a day to shapers throughout the region and to distribution centers around the world.

But according to Grubby's "exit fax", sent to his customers on the day he shut his Orange County factory, three former Clark Foam employees were on full Workers' Compensation disability, "evidently for life," thanks to health issues related to the blank-manufacturing process, and he faced a third action from the widow of an employee

who had died of cancer. In fact, inhaling TDI (Toluene diisocyanate) particles has been proven to cause severe and chronic lung problems and is linked to cancer. Clark openly admitted that "our official safety record as an employer is not very good" and that "we do emit TDI into the air."

Mark Massara, the Sierra Club's Director of Coastal Programs and an avid surfer, makes no secret of his antipathy towards Clark. Massara sees Clark's closing as an overreaction to government regulation. "He either received extremely bad legal advice, or he was saying 'fuck you' to the industry," Massara said.

Since then, in a world suddenly bereft of Clark Foam, commercial shapers have been reassessing their construction options, exploring how to survive in a competitive climate that favors economies of scale and mass-production over craftsmanship, while creating goods that are environmentally friendly – not merely to improve their balance sheets and avoid legal actions, but to meet the demands of customers concerned over the health of the planet and the people who build their surfboards, customers willing to pay a premium for greener goods.

Such survival tactics are proving to be prescient. For example, during the recent increase in oil prices, post-consumer products and eco labels have become all the more desirable. A combination of rising fuel costs, stricter environmental regulations, and changing consumer expectations are spurring the demand for greener alternatives. Slowly, very slowly, people are kicking their old habits, replacing oil-based clothes, surfboards, and gear with products made from renewable resources.

Patagonia, the technical goods and apparel retailer, has long managed to mix high ideals with good products, selling high-end gear to affluent consumers. Environmental stewardship is more than just window dressing for Patagonia founder and chairman Yvon Chouinard. His company has benefited from being eco-friendly, generating \$240 million in sales for 2005, while committing 1% of its pre-tax revenue to environmental causes. Over the past two decades they've donated some \$22 million to environmental organizations. Point Blanks, Patagonia's surfboard division, was born out of Chouinard's personal frustration with fragile polyurethane boards. He enlisted his son Fletcher with the task of building more durable boards: the longer a surfboard lasts, the better for the environment.

"Initially we had no idea just how toxic surfboards were," Fletcher commented, who, through trial and error has mastered the technique of shaping the polystyrene blanks now at the core of

Patagonia's boards. Although Fletcher takes no credit for the shift in the production process, he considers polystyrene blanks to be a step in the right direction. Commonly found in packaging materials, polystyrene is described as engineered air. Reputed to be lighter and stronger than polyurethane, polystyrene is recyclable whether in a solid or foam state, factors that can cut down on waste during the shaping process.

Mark Brown, a Santa Barbara environmental consultant and surfer, thinks polystyrene represents a small shift in the transition to greener surfboards. There are risks and trade-offs involved in these technologies, he writes by email. "Composite technologies, which are at the root of all surfboards that mix materials in bonded layers, have a checkered history."

If noxious foam poses a health hazard to shapers, the toxic fumes glassers inhale are a nightmare, presenting environmental and potentially life-threatening health dangers. Workers exposed to fumes during the glassing process run the risk of illness ranging from lung disease to reproductive problems.

Fortunately, scientists and academics are rethinking chemistry from the molecules up. Brown sees a promising future for epoxies extracted from sugar cane. According to the USDA, more than two million tons of sugar cane is produced annually, making it cheap, easy to obtain, and a renewable source. Lab studies indicate that sucrose-based epoxy is capable of remaining stable even when exposed to sunlight and saltwater, and lacks bisphenol-A, a chemical found in petroleum-based epoxy that's linked to sterility in mice and humans.

Envisioning a brighter, greener future is a full-time job for Chris Hines, sustainability director for the Eden Project in Cornwall, UK and co-founder of Surfers Against Sewage. "It's all too easy to say, 'We're not there yet so I'll stick with my old technologies.' Any step forward is better than where we are now," he writes by email. Hines has no doubt that green boards will be entering the line-up in the not-so-distant future, envisioning a day when retired surfboards are suitable material for garden mulch.

As ancient Hawaiian surfboards were carved from hardwoods, Hines took a step back to the future in imaging a new generation of surfboards fashioned from natural materials. Dubbed 'eco boards', his design team at the Eden Project has created earth-friendly prototypes fashioned from locally-grown balsa wood, hemp, and a

plant-based resin, offering a glimpse of a greener horizon.

Hines readily admits eco boards aren't commercially viable just yet. Balsa blanks cost roughly \$400, significantly boosting the cost of finished boards. And until balsa outperforms petroleum-based surfboards, there won't be too many converts at the pro level either. But Hines sees balsa blanks as an incremental step towards surfboards that are both sustainable and meet the requirements of surfers who ride at the highest level.

"Building a better board isn't a matter of scarcity, but a design challenge," he writes. "If we can blow popcorn, we can blow (plant-based) surfboard blanks. This is a far simpler step than the history of flight, which in less than a century went from no flight to man on the moon."

Hines believes a new generation of eco-friendly boards will arise from shapers comfortable with risk and uncertainty, comparing the challenge to big-wave riding. "Riding Mavericks was once thought impossible until Jeff Clark summoned up the courage to do it."

Ben Cross, 34, is one independent shaper who embraces Hines' message. Building the next generation of eco boards in Gloucestershire, England, Cross sees the demise of Clark Foam as an opportunity for his fledgling company, Sannyasi (from the Hindu term for mendicant), to grow. He's experimenting with a mix of MDI (Methyl diisocyanate) and plant-based foams and natural resins to produce greener, lighter surfboards. While Cross hasn't renounced the use of plastic entirely, he's seeking out greener alternatives wherever possible. By combining traditional construction techniques with modern materials, he's hoping to change the industry from within, taking surfing back to its roots in the shaping shed.

Will the surf industry decide to clean up its act, or will it continue to offshore the manufacturing process, shifting the burden of environmental damage to developing nations? Will we soon see broad acceptance of a new kind of surfboard, one based on more sustainable principles? One thing is certain: the search for a cleaner ride is underway, and that, considering our history of complacency, is good news.

