

Prototype Positions Backwater Paddles for Big Box Success

It all started in the treacherous backwaters of the Econlockhatchee River in Central Florida, when retired Navy officer and survival instructor Ed Halm found himself fighting to maneuver his kayak through the swampy undergrowth. The problem, he realized as he picked his way along, was the design of his paddle. It was fine for slicing through open water. But for gnarly conditions like this, you needed something to give you more of a grip—something with the teeth to negotiate the hazards of skinny (that's shallow to the uninitiated) water.

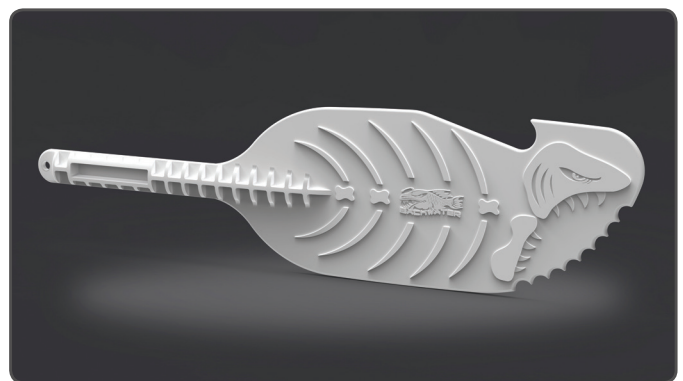
A Small Change in Plans

Ed went home and went to bed with paddle design on the brain. At 3:00 in the morning he got up and started drawing. By sunrise he had it—the soon-to-be-patented hook-and-tooth design that launched Backwater Paddles.

Ed set out to produce a line of full-size paddles, but quickly realized that prohibitive tooling costs would make it impossible for him to finance the operation on his own. So he put together a group of investors and began gearing up for manufacturing—only to be stopped cold by the recession of 2008. Backwater Paddles seemed to have run aground. Then he saw a story in an outdoor magazine about a guy who used ping-pong paddles to steer his kayak with one hand while fishing with the other. And it came to Ed that he could adapt his design to make a line of hand paddles, which because of their smaller size, would be much less expensive to manufacture. In fact, he could have a buddy make them in his woodshop. Soon he was cranking out Predator and Piranha hand paddles, and acquiring a cult following in the backwater paddling world.

New Material for a New Market

In order to take the business to the next level, Ed knew he needed to get his paddles into big box stores. That, he figured, might require modifying the product. “To stand out on the shelf you need the cool factor. We had been making the paddles out of wood, which has a nice rustic aesthetic. But rustic is probably not going to cut it aesthetically in that kind of retail environment. Besides, wood is not ideal for use in saltwater conditions.”



The Piranha Paddle: actual size 21.9" x 5.8" x 0.85"

Ed decided to make a version of his most popular hand paddle, the Piranha, in plastic, which would allow him to pump up the color and graphics, as well as enhance its performance. He turned to Mark Best at VectorCAD (www.vectorcadsvcs.com) for help in producing a prototype.

Firstcut Machines the Real Deal

Working from the existing Piranha paddle, Mark developed the Piranha X design in SolidWorks, making it a little wider and longer than the original, with finished dimensions of about 22 inches long and 5 ¾ inches wide. This was too big for standard rapid prototyping methods. Besides, Mark wanted to be able to show it to Ed in the actual plastic that the product would be made in—Delrin® acetal resin. So he decided to have the proof-of-concept prototype machined by Proto Labs' Firstcut service.

"Once the design was approved, Ed was in a hurry to have something real to look at and I knew Proto Labs would turn it around fast. And I was confident that the Firstcut process could deliver on the fine, grooved detailing on the handle."

Prototype on Tour

Just days after Mark uploaded his 3D CAD file to Firstcut, Ed was holding the first Piranha X hand paddle in his hands. Delighted with the result, Ed sent the prototype paddle around the country on the trade show circuit to get feedback from customers. Because it looks, feels, and functions exactly like the real thing, people can get a completely accurate feel for the product. Based on their responses, he will make small adjustments in the design and then go into production, injection molding an initial run of about 20,000. Look for them at a big box retailer soon!

For more information about Backwater Paddles, visit www.backwaterpaddles.com. To learn more about Firstcut CNC machined parts, or get a free interactive quote, go to www.firstcut.com.

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