

PROFESSIONAL BOATBUILDER

PRACTICAL SOLUTIONS

Return to *Unexpected*

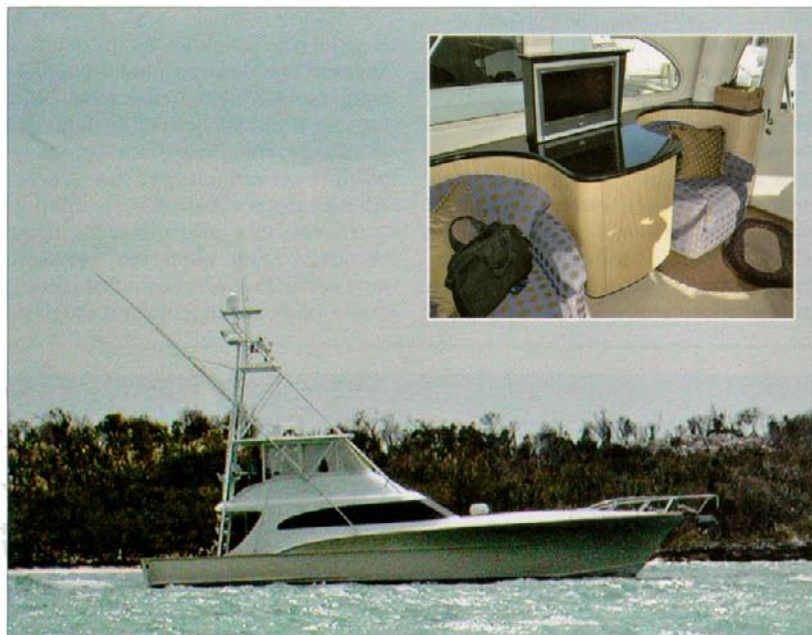
We revisit a sportfisherman that we profiled a few years ago, to see how its paper-honeycomb-cored interior has performed in service.

Text and photos by Bruce Pfund

Back in PBB No. 76, in an article titled "Lightweight Interior Joinery," I wrote about cabinet-maker Kirk Evans' 61' (18.6m) sportfisherman *Unexpected*. Designed by Steve French (Applied Concepts Unleashed, Stuart, Florida) and built by Sunny Briggs (Wanchese, North Carolina), *Unexpected* has been in service for over two years with its lightweight paper-honeycomb-cored interior, the construction of which I described in detail in the article.

My wife and I were Kirk and Sue Evans' guests during the recent Custom Boat Shootout on Harbour Island in the Bahamas. In between hookups and rigging baits, we had time to discuss how Evans' interior joinerwork was holding up and what he intends to do differently on his next boat. I also had the time aboard to appreciate other fine details of Evans' project that make it such an effective fishing machine, as well as one that's safe and comfortable to fish in challenging conditions.

While aboard *Unexpected*, I was constantly made aware of her lightweight construction whenever I opened a door, drawer, or cabinet. Evans reduced weight in exterior elements, too—cockpit, bridge, and tower station—by specifying PVC foam boardstock and foam-cored panels (they're more moisture resistant than the paper-honeycomb interior panels). The door to the engine room and its overhead hatch always caught me by surprise when I opened them, because the high-density PVC boardstock door and low-density foam-cored hatch panels seemed disproportionately light in comparison to how effectively they masked the engines' noise.



The honeycomb-cored interior joinery on the 61' (18.6m) high-speed sportfisherman, built by its owner, Kirk Evans, weighs about one-third of what a similar interior built in plywood or MDF would weigh. **Inset**—One of the many curved modules in the saloon.

As we were provisioning the boat at the start of the tournament, Evans told me, "My biggest overall goof in interior construction was that I didn't install rails into the honeycomb-cored cabinet sidewalls for the shelf-support pins. Sue and I selected what we thought were the correct heights for the shelves, and that's where I drilled holes through the veneers and into the honeycomb. I dug out the honeycomb around the hole, masked it off, and then filled the hole with epoxy. After the epoxy cured I re-drilled it, inserted the shelf-support pins, and we were good to go. No problems at all with the holes I made.

"Things were fine until we started storing some oddball-sized containers in the cabinets, and decided that we wanted more shelf positions. But potting the holes with epoxy, which was easy to do when the cabinets were disassembled and I could lay the panels down flat, is a messy horror show when the panels are vertical. I wish I had let-in bars of hardwood or PVC board so that there'd be something solid to drill into for securing the pins. At the moment, that's at the top of my 'I won't do it that way again' list. My solution was to attach support posts underneath the shelves to the cabinet sidewalls."



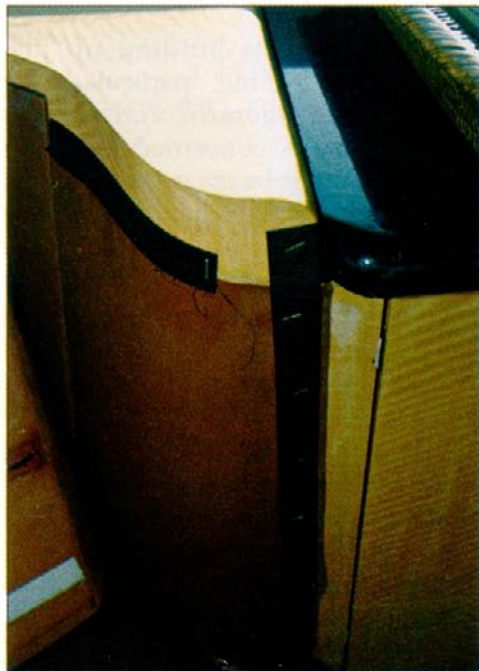
Far left—Unexpected's engineroom is accessed through a solid door front and a cored horizontal hatch. **Left**—Drilling additional shelf support-pin holes in the installed panels proved difficult, so Evans added support posts to the cabinet sidewalls underneath the shelves.

Over the course of three days of trolling out beyond the 1,000-fathom line, Evans and I discussed other joinerwork snags, and ways to avoid them on his next project. As it turns out, the second-biggest problem he

encountered had to do not with how he built the joinerwork, but what happened after assembly was completed. "First," said Evans, "we had a few design and plans glitches. There was a bit of miscommunication between

the designer and me, so the plans for the furniture in the saloon and the cabins did not have correct offsets for the thickness of the upholstery padding. As a result, I lost about 4" (102mm) of depth in the saloon seating units. I found out about that early enough in building the interior modules to recover completely, but I'm going to be extra careful about this detail next time.

"I thought I'd done a good job building all the furniture, but the upholstery guy gave me more than a few headaches," Evans commented. "In fairness, I learned that when I built the modules, I'd created quite a



Left—The contact adhesive securing the Velcro tapes to the joinerwork and fabrics has gradually failed, allowing slight puckering between the staples. **Above**—The domestic-style drawer slides, let into the honeycomb panels here on the freezer units and elsewhere, are working well.

pounding each one in individually with a hammer, supporting the surrounding area with a heavy metal backing plate. Next time around I plan on devoting more time and thought to building modules that are easier to fasten upholstery and Velcro to. I don't think these changes will add much weight, and any extra time I spend on building them will be more than recovered when the foam and fabric are applied to the joinerwork."

Sue Evans pointed out another shortcoming of the upholstery to me as she removed cushions from the saloon seating so I could photograph its interior. "At first, the Velcro-hook sections that were stapled and glued to the furniture were secure, but then, as the hot days added up, the adhesive started to fail. That made for a sticky perimeter of adhesive goo around the tapes. I've investigated quite a bit, and have found two likely fixes. One is a Velcro product with a high-temperature-rated contact adhesive on

few of the problems he faced. In some locations the panel skins were so thin that he was concerned about staple retention, while in other locations his little electric staple gun could

not drive the staples into epoxy-filled kerfs and bondlines. So far, none of the staples in the thin veneers have pulled out. I dealt with the incompletely driven staples by simply

the back. It's good to about 180°F [82°C]. The alternative is glue-it-yourself Velcro tape and a high-temperature-tolerant contact adhesive. I suppose there's a third way, where the Velcro tapes are sewn onto the fabric or leather covering that's glued to the furniture."

During the tournament we noticed that the grouted seam in the longest section of the marble countertop had cracked a bit. "The panels themselves are doing great," said Evans. "I was concerned about the glued-on edge moldings that we lean against so much, but they are stuck solidly. The crew that installed the panels wouldn't let me help, or follow my suggestions, and I think that's why we're seeing the seams crack. They glued down the panels with a brittle epoxy, and then filled the seams with a very hard pigmented epoxy. Those stiff materials work just fine for a house, which doesn't move, but guess what? Boats move around—that's why I had

planned on securing the marble panels, and filling their seams, with a black elastomeric material like 3M 5200 or a Sikaflex equivalent, so panels and seams could move around a bit without gaps opening. At the time the panels went in, I wondered about gluing a spline into the joint, but I didn't do it, figuring that if the panel wanted to move at that seam, I'd better let it. Well, it moved. I plan on reefing-out their filler and trying it my way this time."

All three days of the tournament had winds over 20 knots and three-to-seven foot (0.9m to 2m) seas, with an occasional nasty cross chop. *Unexpected* handles these conditions beautifully, whether at trolling or cruising speed, but the pounding we occasionally took reminded me of one of Evans' earlier concerns about outfitting the boat with "house-rated" drawer slide hardware, and domestic appliances such as washer-dryers and pull-out-drawer refrigerator and freezer units.

"Everything is holding up just fine," Evans told me, "particularly the slide-out refrigerator and freezer drawers. I was concerned that their slides were not beefy enough, but so far, so good—even our interior bait freezer, which is usually filled with about 100 lbs [45 kg] of small and medium ballyhoo and split-tailed mullet rigs. I rigged the galley and cabin drawers with the best Accuride stainless steel slides I could find, and they're working fine, too. We try not to open the bait freezer when we're thrashing around," he added, "but I'm sure it's going to happen someday. And then we'll know for sure about the slides." **PBB**

About the Author: As "Bruce Pfund/Special Projects LLC," Bruce consults on composite processes and inspects marine composite structures. He is the technical editor of *Professional BoatBuilder*.