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DISPLACEMENT HULL PROPULSION EFFICIENCY
POWERBOAT MACHINERY SPACES
THE *PLANETSOLAR* PROJECT
GOLD COAST YACHTS

Their Phone Is Ringing

A durable, nimble business partnership has enabled Gold Coast Yachts (St. Croix, Virgin Islands) to succeed in several market segments; build in multiple media; experiment with design in both sail and power; and above all, survive a few strategic mistakes, one devastating hurricane, and the current killer recession.

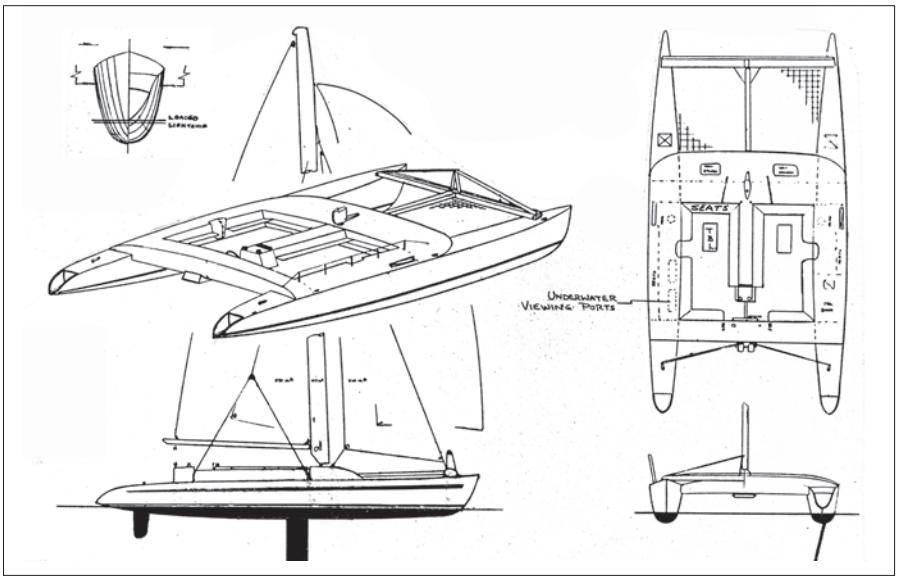
by Steve Callahan
Artwork courtesy of Gold Coast Yachts (except where noted)

Above—*Gold Coast got its start by developing and refining boats for the day-charter business, primarily in the Caribbean. Today, GC boats can be found worldwide. The firm designs and builds catamarans that feature practical shapes for efficiency in both construction and sailing performance. Note the wake behind this 54'/16.5m cat, despite a deckload of paying passengers.*

"If it squeaks, use WD-40. If it wriggles, use duct tape. You need a permit to use 3M 5200. And my wife points out that *boat* is a four-letter word. That's all I know about boatbuilding," said Roger Hatfield, with a laugh, in February 2009.

At the depths of the current recession, Hatfield, the vice-president and designer at Gold Coast Yachts, can maintain his sense of humor: Gold Coast has survived recessions before—as well as hurricanes, different business structures, and one big project that nearly capsized the entire company.

None of the above keeps Rich Difede, Gold Coast's president and Hatfield's partner since 1981, from waiting for the phone to ring. After it does and Difede hangs up, he says, "We just sold another boat!" It's great news, especially since Gold Coast has recently added a 37,000-sq-ft (3,437m²) molding shop, rented from the government of St. Croix, U.S. Virgin Islands, and hopes to keep about 50 people employed. Colleagues from "the mainland" to Europe who've similarly expanded have been falling into receivership faster than you can say "Chapter 11."



Left—*The 57′/17.4m* Nube Volante*, an early charter cat, was designed by Roger Hatfield, a Gold Coast co-founder/owner. The boat's drawings are deceptively simple. Hatfield became a master of multihull dynamics, in part by analyzing other designers' damaged boats that he repaired after arriving in the Virgin Islands in the late 1970s. This early cat—featuring skinny hulls, rocker, quite veed sterns, and spoon bows—was inspired by racing boats of the era.* ***Below—****Gold Coast was quick to embrace the virtues of wing masts—in fact, the first builder to put them on commercial craft. The big spars work well in typical tradewind conditions. Here, the base of a GC designed-and-built wing mast on a 46′/14m cat.*

Gold Coast's strategy? It has crossbred raceboats, cruising boats, and workboats, and seamlessly melded the theoretical with the practical.

"We can tack quickly," Difede says. "If the phone isn't ringing for a day-charter cat, or wave-piercer ferry, or private sailboat, well, what's the phone ringing for? We'll build *that*!" He praises Hatfield's ability to divorce a designer's ego from what clients require. Thanks to design-and-construction flexibility, Gold Coast recently launched its 93rd custom boat. Most are 50′ to 65′ (15.2m to 19.8m) in length, though they range from a 12′ (3.6m) micro-voyaging sailboat to a 104′ (31.7m) passenger ferry, and include a stylistic scope that spans everything from elegant yachts to floating Humvees.

In the mid-1970s Difede was a surfer, bumming around Mexico with his brother and high-school friends from New Jersey. He'd bought a farm south of the border, but when that scene turned a little too "wild west" for his liking, Difede got his long hair lopped off, packed up the boards and dog, and headed to St. Croix.

As for Hatfield, he was focused on sailing "since my mother's womb," he claims. First racing with his father and on one-designs at YMCA camp, and later at Stevens Institute of Technology, in Hoboken, New Jersey—where "my passion for sailing eclipsed my need to study"—he eventually dreamed of building a ferro-cement cruiser. Then he spied designer/builder Jim Brown's trimaran plans in *The Whole Earth Catalog*, in 1973. Hatfield spent two years building a Brown-designed Searunner 31 (9.4m) with his wife, Cynthia, in her 96-year-old grandmother's backyard near Washington, D.C., and another two years living aboard the completed tri in the Chesapeake before heading south. When the money ran out, they were on St. Martin.

Hatfield's experience building with epoxy lured repairwork. "I was pretty handy and logical about what was wrong and how to fix it," he says. He'd memorized both Searunner 31 and 37 (11.2m) plans: topsides, bottom plates, frames, cross structure…. "So when I stepped on other multihulls, I already knew exactly what to look for." Arrangements differed, but the structures were similar.

He soon met Peter Spronk. "Everybody loved his catamarans, but Peter made a lot of compromises to make really beautiful boats," Hatfield says, noting especially low underwing clearances to maintain a sleek profile. "The merciless pounding these boats took when bashing upwind into tradewind waves wasn't well received by the underwing plates, so I was graced with a lot of repairwork. I developed X-ray vision," he says, becoming so familiar with Spronk boats that he could sketch their structures without going aboard. Spronk's creative uses of wood and epoxy to build lapstrake, multi-chine,

STEVE CALLAHAN

Top—*Delivered in '05,* Makani*'s advanced-composite construction throughout makes the 64'/19.5m cat an exciting daysailer in the Hawaiian Islands charter business. GC occasionally collaborates with the party commissioning the job, in this case skipper Jon Jepson and naval architect Dave Wallworth, who participated in the project's design and build.* ***Bottom—****Kai Kanani, delivered two years later, is a less exotic commercial cat. But she shared the same hull mold as* Makani*. Where possible, Gold Coast president and co-founder Rich Difede encourages a cost-effective approach to the company's extensive inventory of tooling: different boats may now have certain shapes and/or whole parts in common.*

and round-bottomed boats added to Hatfield's growing common-sense approach to design and structure. *[For more on Spronk cats, see* Professional BoatBuilder *No. 119, page 78—Ed.]*

To work legally, though, the Hatfields moved to St. Croix, where Russell Brown, Jim's son, introduced Hatfield to Difede one day, out riding waves. Hatfield's and Difede's love of the sea, and balance of skills, soon led them into a three-way partnership with another young man, who owned a water-sports retailing business called Gold Coast. Together the three formed Gold Coast Yacht Consultants, which would repair boats and begin to hack a marina out of a mangrove swamp in a small bay west of Christiansted called Salt River, where they also sold WEST System epoxy. "It was really just a question of what to do to feed yourself," recalls Difede. Building a business was not a high priority. "I actually had a no-work surf clause back then, which was basically guilt-free bailing-out-of-work to go surfing whenever conditions were good." Hatfield wanted similar flexibility to spend with his family.

Hooked on design and construction, Hatfield focused on what made boats go fast. Part of his deal with clients had always been: "I get to go sailing on your boat after I help fix it. Right?" So, he sailed on numerous designs. Between 1978 and 1980, on St. Martin, he enjoyed a growing racing circuit in the region, as Spronk attracted expert multihull sailors like Phil Weld, with Weld's Dick Newick–designed *Rogue Wave*. "I was regularly racing against a fleet of 15 boats," says Hatfield. "The cats were all good in windy reaching conditions, but slower upwind. My one claim to fame was that, in light airs, I trounced them all to windward by hours." He'd done that in his multichine plywood cruising boat.

"I was really curious about hull shapes," Hatfield recalls. "I would swim underneath the boats. It didn't take me long to intuit what was working and why. The first time I sailed on a Newick tri, I was astounded by how beautifully it accelerated. My Searunner would get stuck at 8 knots, and then it would take immense power to get the boat up skittering along the surface in a semi-planing mode on a reach. This Newick tri didn't do that at all. It and the Spronks just accelerated right through the range. But the Spronk cats and Newick tris were really hurting for payload. They couldn't carry many passengers or much cruising gear."

Conventional cruising trimarans at the time typically featured hull length-to-beam ratios of between 6:1 and 8:1. The latter ratio, Hatfield found, could not quite escape hull speed. Newick and Spronk tris sported 12:1 or more. Where, then, is the sweet spot? Hatfield says, "The magic ratio for me became 9:1," which he applied to *Manta*, his first multihull design. "She would drag a little bit of transverse wave, but like the Newicks, she'd accelerate when the puff came without hitting the wall, could clock 20 knots for hours, and was very competitive in the local multihull racing fleet." Hatfield also designed and built a 34′ (10.3m) sailing hydrofoil with an 11:1 L/B main hull and large-plate Bruce foils in lieu of outer hulls. Though very quick in some conditions, *The Mad Hatter*'s skinny main hull and short foils provided almost no pitch dampening, and the foil occasionally gave insufficient lift, making the boat *too* thrilling at times. Hatfield amputated her foils and gave

Still another market successfully exploited by Gold Coast is the passenger-carrying powercat, which—thanks to GC's patented wave-piercing hull designed by Hatfield ***(above left*** *and* ***left)****—has proved to be a near-perfect vehicle for fast, fuel-efficient, interisland travel. The ride quality is highly regarded, with written testimonials from experts to prove it.* ***Above right—***Spirit of Kauai*, a custom GC sailing cat, scoots along under power alone.*

her prosthetic amas. She set records for the two fastest times around St. Croix, which still stand. Difede meanwhile had bought Russell Brown's *Jzerro*, a 30′ sheet-plywood proa that outperformed numerous bigger multihulls racing in the Caribbean. At Gold Coast, fast toys had turned into a preoccupation.

Hatfield admired Newick's master-spline techniques for developing hull shapes, but Hatfield had experimented with sweeping, rotating, and extending the curves to expand possible shapes while retaining one master template with which to produce all the hull's frames. For topsides, Hatfield followed Gougeon Brothers' use of "tortured" (stress-formed) plywood, bent along both axes. But to minimize difficulties and limitations, he strip-planked hull bottoms and stressed ply over aircraft-style frame-stringer structures. To reduce labor while still producing elegant wing akas like Newick's, Hatfield laminated beams over a common jig, and then tortured plywood for skins. (For my profile of Dick Newick and his multihulls, see PBB No. 122, page 40.)

Manta and *The Mad Hatter* drew the attention of Heintz Punzenberger, who owned an old Piver multihull. Most day-charter boats in the area had once been workboats or cruisers, duly adapted to their changed role. But Punzenberger commissioned Gold Coast for a purpose-built boat to run passengers out to Buck Island Underwater National Park. Shallow draft, load-carrying capacity, high performance, maneuverability, and durability were prime directives for *Teroro II*, a 42-footer (12.8m) launched in 1984. Hatfield embraced *Teroro II*'s payload needs, but also recognized that even workboats could benefit from singlehanded-raceboat developments such as the way all control lines were led in organized banks aft to a centralized helm/control station. *Teroro II* carried a big mainsail and small jib, then common only on catamarans too flexible in structure to support big jibs. The big-main/small-jib sail plan would become standard even on shorthanded offshore monohulls by the late 1990s, and only recently on production monohulls.

Hatfield was the first to put a wing mast on a workboat, which boosted performance and tacking speed. While Punzenberger easily singlehanded the boat, passengers remained on comfortable bench seats between the hulls, where they enjoyed safe unfettered views, room to roam, and a stable platform. They also could duck below and observe reefs through a large underwater viewing port. Resin-impregnated paper-honeycomb cores were fitted between framing members, while thin outer skins produced stiff-yet-light topsides and other panels. The boat was fast, beautiful, and efficient, paid for herself very quickly, and has been reliably thrilling paying passengers for more than two decades.

Change was in the air, though. In 1985, Gold Coast had to alter its working arrangement at Salt River, so Hatfield and Difede became tenants, took the opportunity to shed their third partner, incorporated the business, and cast off their laid-back boat-bum approach.

The phone began ringing. In 1986, Gold Coast would deliver two 49-passenger day-charter catamarans. Hatfield wanted to fashion the first, a 57-footer (17.3m) called *Nube Volante*, after a new crop of large racing cats; like the trimarans, these big cats tended to be fine-ended with, in Hatfield's words, quite veed skinny butts. Despite a 15:1 length-to-beam ratio in her hulls, Hatfield became worried when *Nube*'s weight amounted to 4,000 lbs (1,814 kg) greater than a typical racer's 10,000 lbs (4,536 kg). And yet, Hatfield recalls, "the boat just exploded with sailing energy. It was more than you wanted: powerful, fast, clean, exciting, slippery, dangerous, wet. It didn't matter that she was a little bit heavier. It didn't matter that the rig was smaller. It was quite an eye-opener." From *Nube* on, day-charter boats, cats

The ketch-rigged 78′/23.8m Caribbean Spirit *being launched. Handling any big multihull out of the water can be an awkward affair, despite the presence of a pair of large cranes and a tractor towing a substantial flatbed trailer.*

in particular, became the primary staple of Gold Coast's business.

Although *Nube*'s huge cockpits offered guests spacious seating, Gold Coast would outfit future charter cats with cabintops to protect passengers from sun and water, and provide bar and galley services. Typically open to the decks aft, these cabins allow passengers to easily roam. Across the cabintops all control lines run aft to raised centralized control stations, where the captains can eye their decks' perimeters and handle all maneuvers. Hatfield continued to employ wing spars, big mainsails, and small blade jibs, noting, "The cat structure has a really lousy load path for a headstay. You can lie about it or deny it, but it's there. Our sailmaker cuts 15″ [381mm] of sag into the headsail luff for that big piece of wire on a 65-footer [19.8m]. It's intolerable if you really are interested in upwind performance. The catamaran just lends itself more to a uni-rig with a jib blade."

This seeming compromise actually provides big advantages. With no large jib, no coffee grinders are required. Jibsheet, mainsheet with four-part purchase, and halyards all lead to a bank of #50 winches. "You have all the 50s right in front of you, so one guy can tack even a 65-footer"—a real boon for either a cruising or charter boat.

Nube also slid Gold Coast into new businesses. When money ran out for the client midway through the project, Difede and Hatfield arranged to take a third share in the boat, an arrangement they would extend to other boats, with mixed results.

Even as Hatfield introduced raceboat developments into workboats, he never forgot practical balances. His wing masts featured fat sections, only twice as long in chord as they were in thickness. He employed similarly fat rudders and centerboards of about 12% thickness. All these foils might produce a tad more drag than thin foils, but they also proved less likely to stall and were more forgiving. Physically, they were much tougher than thin foils, a benefit for any centerboard striking bottom.

Through the next five boats or so, Hatfield began bumping up hull volumes, especially at the ends, in part by reducing rocker to a near flatline. "Rocker allows you to turn and rocker allows you to go slowly efficiently," he says. "Rocker doesn't do a damn thing for you when you go fast except make you squat or dig the bow in. In a long, skinny multihull, you can have flare and topsides to heaven, but it's better to have reserve volume down low, where it reacts to waves sooner." Fuller shapes may bounce a bit more, but they keep the noses from digging in and transoms from dragging, especially when a third or more of a boat's working weight is composed of passengers who might all want to rush aft or forward to look at porpoises.

By summer 1989, things were going well. Gold Coast had launched nine charter boats between 53′ and 65′ (16.1m and 19.8m). The primary struggle was to obtain and retain about 20 qualified workers. The islands provided little education or training. Difede was also coping with "what it meant to be a real business of a certain size. Once you employ more than 10 people, the EPA [U.S. Environmental Protection Agency], OSHA [Occupational Safety and Health Administration], tax laws, fire regulations—that stuff kicks in pretty seriously," he notes. Slowly, Difede and Hatfield trained a reliable local crew and powered through business problems to develop a series of similar working craft, all built on schedule and to budget. And, notably, all made money for their owners right out of the box.

Then, that September, nearly everything was blown away.

St. Croix residents still talk about Hurricane Hugo. It hit with a near-nuclear blast. Boats were stacked like cordwood on cays. Neighborhoods were reduced to matchsticks. Gold Coast had managed to pack up its shop in containers before the storm, whose winds capsized, righted, capsized, and re-righted at least one trimaran in Salt River. The Hatfield family remained relatively safe in their concrete geodesic dome while many on the island survived only by hiding in their cisterns. Difede found shelter in a reinforced "bomb shelter" next to his cistern. "The next day our corporate records…*everything* was spread out all over the valley," Difede recalls. "But it didn't rain too much, so we picked up the papers and hung them on clotheslines."

It would take months, even years, before the island's infrastructure was restored and island life got back to "normal," if indeed it ever was. At first working in the open air with portable generators, Gold Coast was able to launch another four boats within a year. In 1991, the company would set a record by launching seven. Today, "twenty guys can pack up the shop in four hours," says Difede, "although it takes a good deal longer to unpack it all and set it up again."

The hurricane did not dampen Hatfield's belief in wing masts. Hatfield: "Five big wing spars on boats in different situations received 140 knots steady-state with gusts to wherever you want to guess. *Nube Volante* and *Teroro II* flipped upside down, as did all multihulls under 50′ [15.2m]. *Heavenly Days*, out in the middle of the bay, stayed on her feet, but her mast came down, perhaps helped by a monohull that went between the hulls and sank on the other side. With their wing masts up, the crewed *Sunny*

Gold Coast's bright and spacious new boatshop. Hurricane Hugo (September 1989) literally blew away the company's original facility—along with a vast number of structures on St. Croix, including GC co-owner Rich Difede's house.

Days and unattended *Kapalua Kai* stood, and did fine. In some respects, I think the wing-masted boats did better than other boats. The book isn't written yet, but there can't be more drag to a wing mast than to an aluminum mast with wires. All that small round stuff is cumulative. A fairing is worth a lot more than that turbulence, but any boat smaller than 50′ that's going to get caught in a hurricane with 120-knot steady-state winds should get rid of its spar. Crews should unmast it and flop it over the side, because they're likely to lose their whole boat otherwise. Come back and pull your spar from the water once the storm has gone by."

Gold Coast initially employed wood-epoxy wing spars built with bent-plywood skins and high-lift/high-drag sections. But sections with sharper noses seemed to "quickly bite," Hatfield says. "In Hugo, the wind just blew them off the boats or blew the boats over, in my estimation," he adds. Gold Coast would subsequently strip-plank wing spars and develop more-rounded mast sections. But maintaining perfectly even thickness with wood skins proved difficult. Turning to composites in recent years, Gold Coast resin-infused spars to structural designs by High Modulus (Auckland, New Zealand), though Gold Coast found controlling the resin was a challenge. Hatfield now prefers pre-preg carbon fiber, though he generally shies away from building spars altogether. Gold Coast has also been building more sailboats with conventional masts as clients focus on the bottom line rather than on ultimate performance.

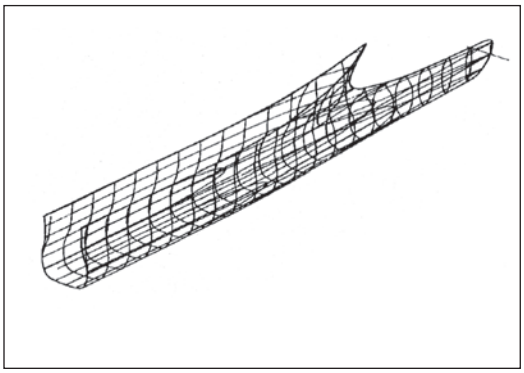
Hatfield has always considered wood to be but *one* great engineering material in a composite structure. By 1990, with a dozen-plus boats launched, Gold Coast had become a wood-composite expert, employing lumber, plywood, cores, and all kinds of fabric reinforcement. "One thing we did, perhaps above and beyond what the Gougeon Brothers had done at their shop, was to glass high-stressed spots." We didn't do so-called sinewed-glass chainplates," says Hatfield, referring to modern raceboat trends. "But I did use a lot of glass sinews. I had no fear of applying unidirectional cloth or anything like that."

By the time the first true wave-piercer made its appearance, Hatfield was on a creative roll. Most earlier multihulls sought to keep bows voluminous and lifted so they wouldn't dig in, but when they did, the wide flat decks on boats like Hobie Cats provided so much resistance to re-emerging, that they often capsized or pitchpoled. With rounded decks nearly mirroring the hulls' bottoms, the SuperCat, a newer beach cat, seemed to poke right through waves and re-emerge with much less fuss. The Paul Lindenburgh–designed 60′ (18.2m) catamaran *Fury* took the concept to full scale, and showed great promise in 1984. Small waterplane area twin hulls, or SWATHs, also had made headway for naval and commercial craft. Their slim submerged catamaran hulls with thin connectives seemed to allow the superstructures to safely glide over rough waves.

Hatfield, who gets seasick, says, "I'd been paying attention to the SWATHs and had seen a needle-like powerboat that someone had drawn up. That boat was structurally impossible, but it was a thought." Sailing his own boat upwind to St. Martin for a race, "I was down to bile," Hatfield says. "I watched how much the boat had to jump over the waves. Lying on my back, miserable, this concept of a power catamaran with really long, low, and fine bows came to me"—essentially a hybrid between the SuperCat and a SWATH. When he returned home, Hatfield made a model, and found a client. "That first wave piercer in 1991 looks like a pterodactyl, in retrospect," Hatfield says. "But, it's been operating successfully for 18 years now."

Wave piercers became a niche powerboat and secondary staple for Gold Coast, despite their unorthodox aesthetics. Some passengers were more drawn to theme-park rides than traditional yachting aesthetics anyway. *All* passengers enjoyed a greatly softened ride as the needle noses sliced through—often for a moment completely disappearing in—the Caribbean chop. The 14:1 hulls were so incredibly easy to drive between 20 and 30 knots, they consumed half the fuel of other ferries running slower and giving much bumpier rides.

When Hurricane Hugo wiped out seaplane services in the Virgin Islands, a local attorney who'd ridden on wave piercers saw an opportunity to compete with airlines between St. Thomas and St. Croix. With five wave piercers up to 60′—driven by outboards or inboards—already launched and working perfectly, Gold Coast was confident enough to buy into the action. However, what began as the Fast Cat devolved into the 104′ (31.7m) Fiasco Cat: every small problem was accentuated by scale. The initial jet drives would not steer. When Gold Coast launched the boat, she ran straight across the harbor and put one of her bows through another boat.



*Two examples of the slippery shapes that Roger Hatfield achieves at his computer "drawing board." **Far left—**One of the hulls for a 54′/16.5m motorsailer, suspended by crane. **Left—**A wireform drawing of GC's wave-piercer hullform. Note the "stilt" fairing; it keeps the house connected to the hulls when the boat plunges in a seaway, while minimizing loss of speed.*

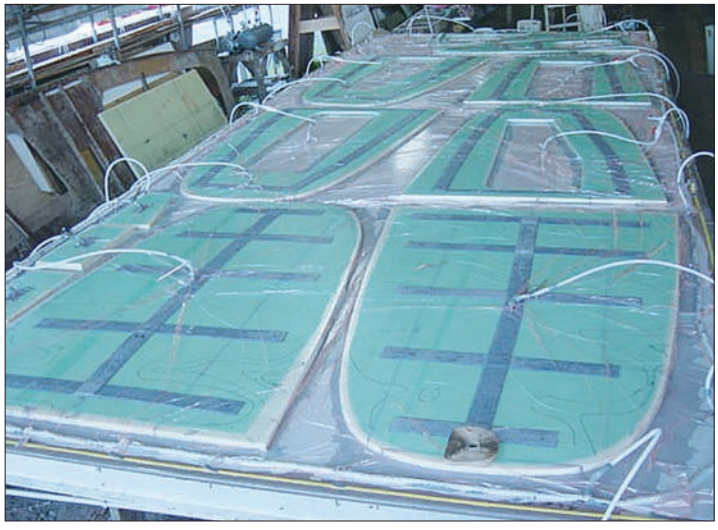
"I still remember sitting down on the floor at the Hatfields' place deciding whether we should sell the business or borrow money," recalls Difede. To raise the $360,000 for new jets, he and Hatfield mortgaged their homes and sold—at no profit—a charter cat they'd been building for their own charter operations. When replacement drives arrived, Hatfield discovered problems with the CV joints, flanges out of true, and both shafts and flywheels out of balance. Once the boat was finally ready for a U.S. Coast Guard inspection run, the long cantilevered bows began to vibrate, growing with an alarming harmonic resonance never felt on Gold Coast's smaller boats. During a run in a tropical depression, a bow snapped off. Watertight compartments kept the boat well afloat, and she returned to port under her own steam, but it was the final straw. The ferry's investors bailed.

After re-engineering the structure by way of finite element analysis, doing repairs that involved larger fairings from the superstructure down onto the bows, and confirming loads with strain gauges, Gold Coast got the boat re-approved by the Coast Guard—but it had cost the company an additional half-million dollars. Today, the Fast Cat serves passengers in Mexico, but it would take Gold Coast years to dig itself out of that hole. Fortunately, the company's stockholders stood by its side, though one would warn, "Mr. Difede, you are going to focus on this boatbuilding company, and you're going to stop creating charter businesses off to the side."

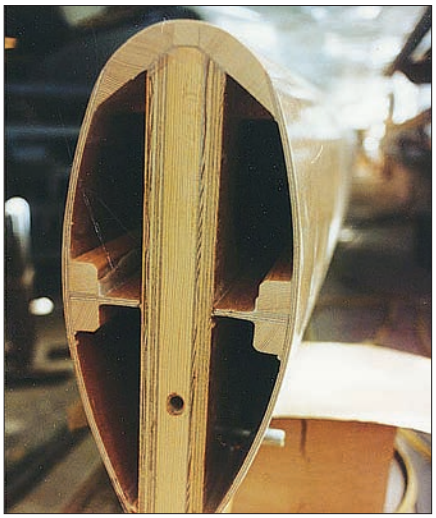
So that's exactly what Gold Coast did.

By the turn of the millennium and 17 boats later, including an 83′ (25.2m) Fast Cat, the company had found that elements of wood-epoxy boats not completely sealed with epoxy could sometimes fall prey to cracks, spots of rot, even invasion by termites, beetles, and other tropical foes. Hatfield concluded, "We'd gotten wood engineering down to a fine technique, but the world was asking us to do foam sandwich."

Gold Coast had always mixed construction media. Most of the company's first 30 boats matched strip-planked bottoms to tortured-ply topsides, but Gold Coast had put balsa core into the bottoms of its first two cats, and had widely applied other cores and composites. Glass and resin were hardly new to them. Still, Hatfield was reluctant to convert completely. "Rich was interested," he says. "I wasn't sure how interested I was. We were doing a good job with glassing the outside of our boats and



*Wood-epoxy construction was the order of the day, for years, at Gold Coast. But the company made a concerted effort to gain expertise in building closed-molded composites, now the method GC employs for all its boats. Here we see a 50′/15.2m wave-piercer hull part **(left)** and bulkheads **(right)** being resin-infused. The company's efforts to recruit, train, and retain a skilled work force have made Difede a committed activist in the still-nascent movement to improve technical marine training nationwide.*



The cross-section of the base of an earlier (circa 2000) mast reveals the wood-epoxy structure that Gold Coast successfully employed in its spars.

with taping, and that was the most frustrating part of our job. But when Rich concentrated his attention on boatbuilding, he really put his heart and soul into it. He was sure that he could sell more foam/glass boats. He also thought we could sell them for less." To which Hatfield adds, "Rich was right on the first."

They began with a 77′ (23.4m) catamaran for 125 passengers with vacuum-bagged foam/glass hulls and wood beams. "It came out beautifully," Hatfield says. "Eventually I just gave in and built boats out of glass entirely, at the same weight and with the same amount of deflection as wood, but with greater strength. They cost a little more, but they're going to last forever."

Next, Difede brought down experts in resin infusion and began figuring out, and testing, the process. Hatfield credits Difede's thoroughness, though he remembers, "We had our steep learning curve where, like open-heart surgeons, say, we'd be slicing open the plastic on a cabintop. We had $20,000 of materials and we were going to lose them all if we couldn't figure out how to stop this massive hemorrhage of resin and vacuum." Now, 40 resin-infused hulls later, Difede and Hatfield are pros at the process.

Indeed, over time they found they were infusing too many parts, so they pulled back to concentrate on other ways to build custom boats efficiently. Similarities among Gold Coast boats allow many of them to share parts. Difede notes, "We can build on a near-common platform, like an auto company," which may place a variety of bodies on a common chassis. "A cat has two hulls, x-number of beams, a wet deck, an upper deck, cabin sides, a windshield, and a roof. So, how many molds do you need? You can make a perfect mold for every part; or, only enough to make whatever *shapes* you need."

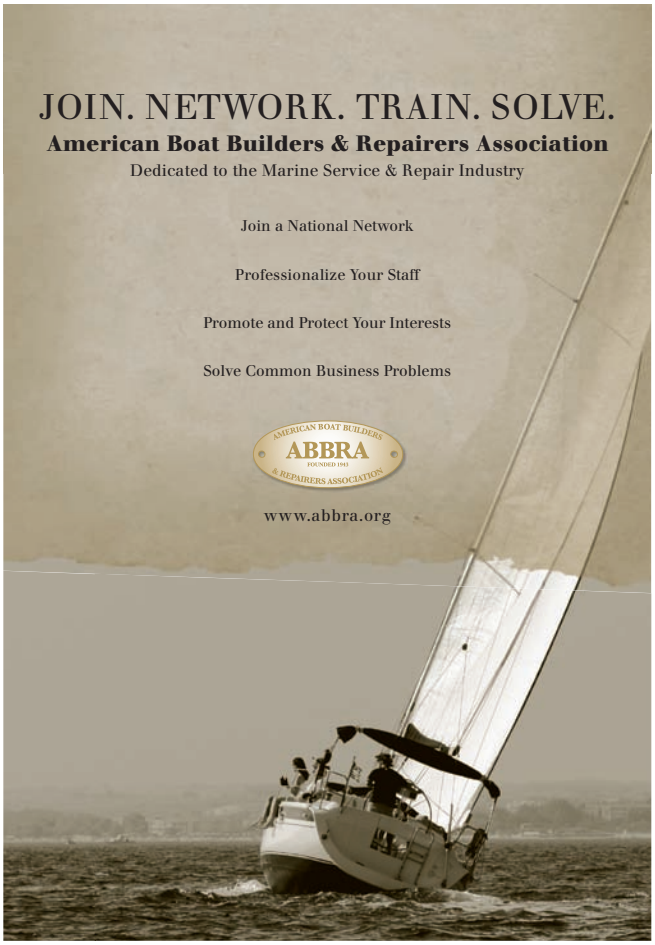
Even a flat layup table produces numerous pieces, but the company also built common-seat molds with edges radiused so that they need no cushions for comfort. On another mold with constant radius, Gold Coast can cast either an inside or outside corner. Hatfield soon included easily bonded, standardized, pultruded composites. He could form crossbeams and other structural elements with bar stock, and beam sections that weigh

The salty cockpit and galley of a semi-custom 57′/17.4m sailing cat whose model Gold Coast refers to as a Mathers. Note the quality of finish and, in the galley, the abundance of space and natural light—compared to, say, most galleys down below in similarly sized monohulls.

about half what aluminum does for the same strength. Over the years, Gold Coast built up a small collection of hull molds from 42′ to 65′ (12.8m to 19.8m), many of which can be used as is or slightly modified to suit a new project.

"We don't actually own all those molds," notes Hatfield. "The clients own some." Gold Coast gets a fee for reusing a mold, but until they get their money back, so do the clients who finance their construction. It's just one example of the flexibility of working relationships Gold Coast has enjoyed with its clients. A few, like experienced racing sailor Joe Colpitt, have largely directed Hatfield and his design team: Colpitt developed a custom liveaboard high-performance trimaran.

Others, like Sonny Eymann, have been regular clients since the early years. As Hatfield puts it, Eymann "leaned heavily" on Gold Coast to build the first few of his current fleet of day-charter and ferry boats, but later



on worked more on co-developing designs and then building the boats himself. Recently, Eymann leased space and tooling from Gold Coast to build hulls with his own crew, then hired Gold Coast to assemble and finish the boat.

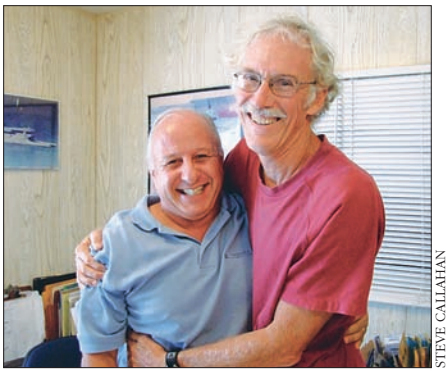
Whatever works remains a Gold Coast credo.

Some things do not work, though. For Gold Coast's first 20 boats, which were relatively simple and of very similar design, it was easy for Difede to accurately quote and schedule. In recent years, however, clients want more-customized designs, boats that contain more complex and expensive systems, and feature a luxury-yacht finish. Few of the newest Gold Coast sailboats still offer that old near-raceboat performance, as people migrate increasingly toward motorsailers that can power at 20-plus knots. Gold Coast's customers also want a wide range of vessels, from party boats to dive boats.

Hatfield and Difede attempted to be clear with clients and encourage consistency, but variations in designs, material costs, and the changing desires of clients as the boats were being built forced Gold Coast to build strictly on a time-and-materials basis.

One might think that production boatbuilding would make things easier, but both Difede and Hatfield disagree, noting that they've never had the two-plus million dollars to set up production for a big boat. More importantly, they point out that builders often convince themselves that their production vision will be *the* boat everybody wants; in fact, few boats find such demand. Instead, Gold Coast's clients increasingly seek individual visions. Those shift, too. When the economy crashed in the current recession, cost became the priority for most clients, versus, say, quick launch dates. To respond, Gold Coast has now returned to incorporating Douglas-fir into the connective structures, eliminating all non-essentials, and working with fixed bids. Such changes are more difficult with production building. "So I guess the bad news is that we are not a production builder. And the good news is that we are not a production builder," concludes Difede.

Somehow, through it all, Gold Coast



STEVE CALLAHAN

Hatfield, right, and Difede ham it up after the author's interview for this article in the trailer that serves as Gold Coast's design and business office. Difede's and Hatfield's Gold Coast venture has not just endured, but prospered, for nearly three decades—a testament to their perseverance, professionalism, and resilience.

continues to work with numerous *repeat* customers. When asked how many initially find their way to Gold Coast through word of mouth, both Hatfield and Difede immediately respond: "One hundred percent." They also point out that tax policy, labor costs, and other factors allow Gold Coast to build boats—particularly Coast Guard–inspected vessels, which require builders to leap significant hurdles—for less than in most regions of the world. Despite the Fast Cat fiasco, Gold Coast's experience with the local Coast Guard has only expanded: the company has helped the government establish standards for USCG-inspected multihull workboats, and for old and new construction methods alike.

The commendable notion of giving back to the community has become important to Gold Coast's founders since the mid-1990s, when Difede and Hatfield opened a portion of the company to employee ownership. As the U.S. Virgin Island's chairman of its Workforce Investment Board, and as an active member of the nationwide Marine Industry Technical Education Council (more widely known by its acronym, MITEC), Difede has also increasingly collaborated with local government and sympathetic institutions to develop educational and training programs for the marine trades. He wants to widen the employment pathways that lead to such skills as mechanic, electrician, boat captain, composites technician, and more.

The company's boat offerings, too, reflect a responsibility larger than mere survival as a business entity. "We are very confident we're building some of the most fuel-efficient powerboats known," says Difede. "The Caribbean people need them. Transportation will always be critically important, and in a downturn, it's even more important to provide less expensive transportation. Where an airline might fail, boats can operate at lower cost. That's what's happening here."

Whatever direction the ringing phone takes the company, Difede says, above all, "the current vision is: Don't do anything stupid. Do we want Gold Coast to survive? Of course. Will I be heartbroken if it doesn't? No."

But in light of having launched its 93rd boat and, since midsummer, having secured several new orders, Gold Coast's demise appears about as likely as, well, Rich Difede ever finding a guilt-free surfing day off. PBB

About the Author: *Steve Callahan has designed and built several boats, authored two books, and written widely in the marine press on modern sailing design, designers, and technologies—including a well-received series of designer profiles for* Professional BoatBuilder *that reflect Steve's passion for boats of all types, especially multihulls, with which he's been involved since the 1960s.*

For more information on Gold Coast Yachts, go to www.proboat.com.

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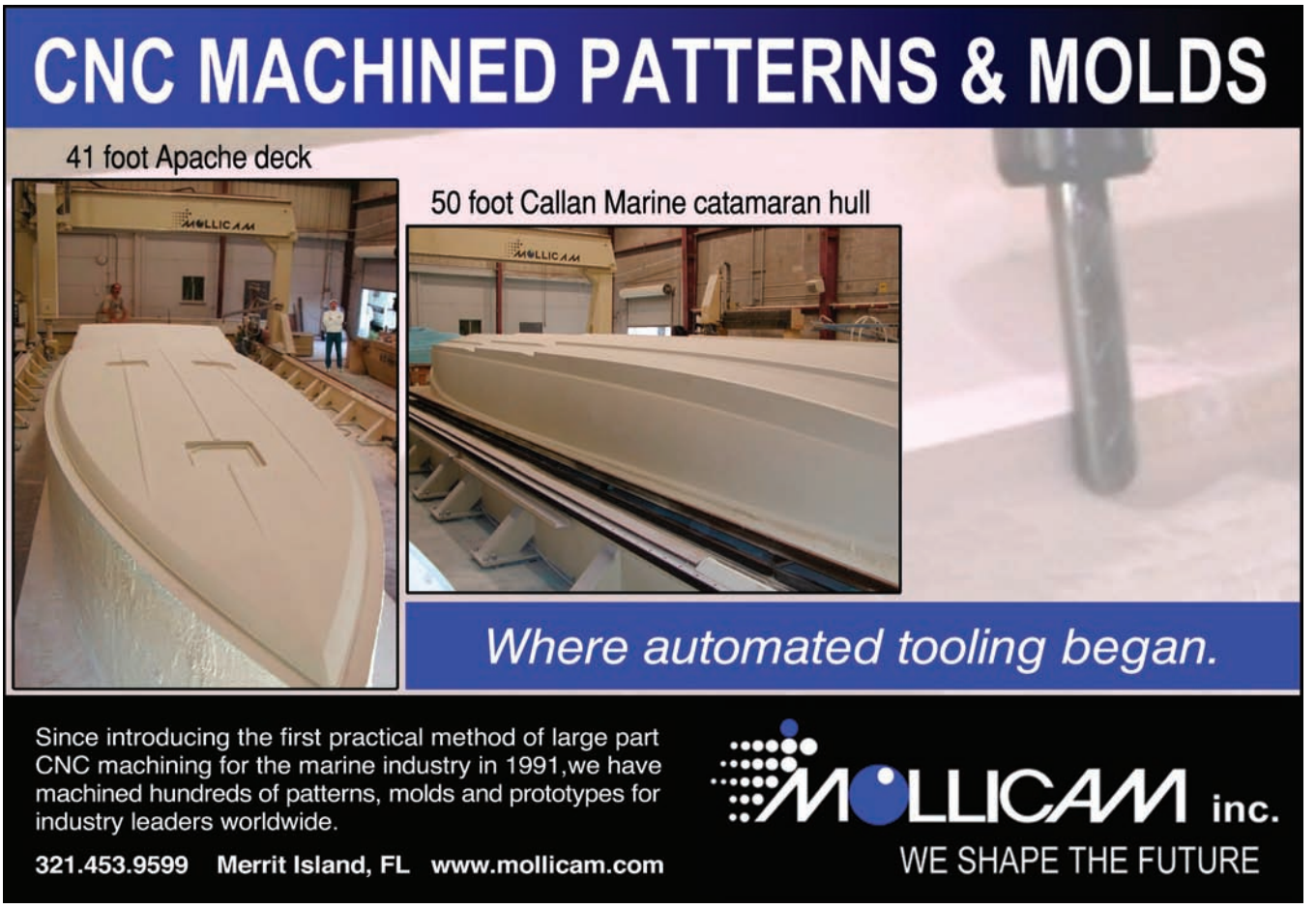

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