

*Though conservatively canvassed, the Hobie still moves in cat's paws (left). Two people can rig the mast on the Hobie in about 15 minutes (below).*

Photos by Ralph Naranjo (unless noted)

## Multihull Magic

*From beach cats to coast-hopping trimarans, PS looks at the latest mainstream trends.*

The BMW Oracle team recently repatriated the America's Cup thanks in part to an absurdly high budget, a boatload of aerospace design and technology, and a very highly skilled crew. The win—along with a flood of e-mail from multihull fans—has given us good reason to revisit the multihull alternative. In this reader-requested sequel to our “Need For Speed” monohull report (September 2009), we focus on design features that make multihulls fast and fun to sail, and examine why many feel that two or three hulls are better than one.

To really get excited about performance in sailing cats and tris, lightweight, lean hulls, and sizable sail area are a must—for this reason, our review will focus more on the David rather than the Goliath side of the industry. The high-volume, heavier cruising cats have their own story to tell, but for now, we'll tack away from the beefy cruisers. Since exploring the art of speed under sail is the object of this exercise, we'll take this search to the corners of boat shows where the more thoroughbred performers tend to prowl.

Prior to western contact, Polynesians, Micronesians, and mariners of India's

Bay of Bengal demonstrated an acute knowledge of what makes a multihull work. For hundreds of years, the traditional cats and proas of Polynesian navigators crisscrossed the Pacific, forming the expansive cultural region known as the Polynesian triangle, bounded at the corners by Hawaii, Easter Island, and New Zealand.

In addition to large passagemaking craft, many Pacific and Indian Ocean islanders developed small coastal multihulls used for fishing and transportation. Among them were the fleet-footed “flying proas” that fascinated Magellan when he stopped in the Marianas.

Crude multihull “yachts” emerged in the 17th century, but it wasn't until the 1870s that nautical genius Nat Herreshoff introduced the first North American multihull yacht, *Amaryllis*. Foretelling a controversy that continues today, *Amaryllis*' victorious debut in the New York Yacht Club Staten Island Race was immediately protested. She was stripped of her win, and multihulls were banned from competition for nearly 100 years. The same fate awaited the wide-beam sandbaggers (also known as “skimming dishes”)

that were also outlawed because of their speed. For the next century, racing sailboats were left to dig holes in the water, tethered to hull speeds determined by waterline length.

Just after World War II, Rudy Choy and handful of Hawaiian surfers began working on high-speed beach cats, and in England, the Prout brothers were tinkering with multihull cruisers. However, it took surfboard builder Hobie Alter and the exuberance of the late 1960s to catapult the beach cat into the mainstream. To date, the company has made more than 100,000 14- and 16-footers.

A pilot named Arthur Piver kicked off an era of trimaran passagemaking, and designer/protégés such as Jim Brown, Norm Cross, Derek Kelsall, and Jay Kantola carried the baton, improving both performance under sail and structural reliability. Today's cruising multihulls emphasize comfortable accommodations, but designers like Jim Antrim, Gino Morrelli, Pete Melvin (of the design team Morrelli and Melvin), and others continue to place performance under sail at the very top of their vessel attribute list.

### DESIGN

As with monohulls, light weight directly correlates to higher speeds. Lighter displacement means there's less submerged hull, which in turn, decreases skin drag



and diminishes the formation of waves that can rob speed. Give a light-displacement hull a long, lean, hull form, and it's easy to see why many efficiency advocates proclaim the multihull to be their platform of choice.

Perhaps the biggest boost in potential speed comes from the ability to leave the lead ballast ashore and still deliver an impressive primary resistance to capsize. In the multihull approach to staying upright, form stability reigns supreme. According to this thesis, a boat's massive initial stability, derived from spreading the hulls apart, obviates the need for a secondary righting moment (ballast).

The idea has merit, but so does the "never-say-never" rule. When it comes to ocean voyaging, steep wave faces and their destabilizing effect on form stability is also an important consideration. Keep in mind that multihulls are just as stable upside down as they are right side up, and many lose the ability to stay right side up at 60 degrees or so of heel. By comparison, the average monohull's limit of positive stability (LPS) is about 110 degrees or higher.

The debate rages. Monohull advocates believe that recovery from a spreader-soaking knockdown turns lead into gold. Multihull advocates point out that whether upside down and flooded or right side up, multihulls are designed to float.

In this review, we unapologetically sidestep the great argument over sea-keeping ability of offshore boats, and instead focus on the excitement of modern beach cats and coastal cruisers.

It is interesting to note that in many of these smaller boats, a "hybrid" stability system is common, as movable crew ballast is added to the equation. Larger trimarans also present some unique stability variations all their own. These triple-hulled sailboats are influenced by ama buoyancy and lift. When the heeling moment generated by the sails increases, the leeward ama will either submerge or the hull and windward ama will try to fly.

*The Weta's ultralight hull makes beach launches easy.*

**AS VALUE GUIDE PERFORMANCE MULTIHULLS**

	CORSAIR DASH ★	TELSTAR	HOBIE GETAWAY \$	WETA	WINDRIDER RAVE
LOA	24' 3"	27' 6"	16' 7"	14' 5"	17'
BEAM	17' 11" / 8' 2"	18' / 14' / 8' 6"	7' 8"	11' 6" / 5' 6"	17' / 7' 6"
DRAFT/SHOAL	5' 8"	1' / 5' 3"	> 1'	> 1'	4' / 1'
WEIGHT	1,584 lbs.	3,600 lbs.	390 lbs.	211 lbs.	400 lbs.
SAIL AREA	428 sq. ft.	525 sq. ft.	180 sq. ft.	123 sq. ft.	195 sq. ft.
WATER	5 gal.	20 gal.	NA	NA	NA
FUEL	3 gal.	3 gal.	NA	NA	NA
SA/D RATIO	50.4	35.8	54	81.2	57.5
PRICE*	\$57,000	\$62,000	\$7,000	\$11,000	\$20,000

★ Best Choice \$ Budget Buy

*Each of these boats will appeal to certain sailors. The Corsair Dash stood out for its exciting performance in a coastal boat, while the Hobie Getaway met its design criteria (fun beach craft) while holding cost down.*

Experienced multihull sailors recognize these important stability signals, and keep the boat flat on its feet by bleeding off sailplan pressure. Such indicators tell when the heeling moment is getting ready to overwhelm the righting moment of the boat. The art of flying a hull—or, as one might say, navigating on the brink of capsize—is part of the fun of Hobie sailing and was a crucial tactic in winning the 2010 America's Cup. However, it is the last thing the owner of a Lagoon, Fontaine Pajot, Gemini, or other cruising catamaran wants to dabble in.

Huge initial stability allows a multihull to pile on sail. But designers have a real challenge in determining just how much sail area to offer in their consumer

market boats. The more square footage that is available, the more exciting the ride. More sail area also means better performance in lighter airs. Of course, this extra horsepower also means that a reef will need to be tucked in sooner, and the traveler will need to be closely tended by vigilant crew.

It all boils down to one of naval architecture's most fundamental theorems: An increase in beam leads to a cubed increase in stability. So by spreading the hulls farther apart, righting moment and sail-carrying ability increase noticeably. Unfortunately, there's a point at which too much beam becomes undesirable. A multihull designed with a really low beam-to-length ratio will resist capsize,





Bowsprits (left, the Weta) and boom-less mainsails (right, Hobie Getaway) are the mark of a 21st-century beach boat.

## Rig, Spar, and Sail Design Weigh Heavily on Performance

Most multihulls have mainsail-dominated sailplans, and the fully battened high-aspect-ratio sails have even reshaped how monohull sailors look at mainsails. Recognizing that there's more breeze aloft, and that there's significant form stability to a large sail area, multihull designers and sailmakers have conspired to power-up even modest-size sailplans. The full battened "fat head" sail that began in multihulls, was adapted to high-speed windsurfing, and was finally embraced by monohull sailors, who had to cope with an interfering backstay.

Sprit technology has flowed in the other direction—in this case from the monohull community to multihulls. Conventional spinnakers were less popular because faster multihulls build an apparent wind that brings the angle forward of the beam, even though the true wind is off the stern quarter. But by adding a sprit and a light roller-furling reacher, or a sock-deployed asymmetric spinnaker, a sizable increase in reaching sail area can be added. This is the magic touchstone that can turn 10- to 12-knot conditions into absolute exhilaration. The furling or snuffing light-air sail also allows the crew to bridle all the extra horsepower with a simple pull on the endless reefing or snuffing line. (See *PS* March 2008.)

There's been much said recently about the automotive hazard

referred to as unintentional acceleration. Multihull sailors also have a need to be able to decelerate when necessary. The fine line between full speed and full-blown problems can arrive with an unanticipated gust. A knockdown is usually a recoverable experience for a monohull sailor, but for multihull sailors, the outcome is seldom rosy. Only smaller boats have "self recovery" capability. All multihull sailors should spend some time sailing beach cats, developing the "feel" for stability and discovering why flying a hull is exhilarating on a beach cat but can be far more costly on a larger cat.

Another sail innovation we liked aboard the beach cats we reviewed was the elimination of the boom. Each of these boats derived respectable mainsail performance by relying on a multiple set of full battens. The elimination of the boom was both a sensible safety feature and a simplification in setting up the boats. The value of not having a head-level boom cross from side to side during a double-digit jibe is obvious to anyone who's had a near miss—or worse yet an encounter—with the appendage. Each of the boats we reviewed also had adopted a roller-furling headsail systems for their small fractional jibs and their larger sprit-mounted reaching sails, a feature that significantly improved sail handling.

but have a tendency to bury the bow and an increased potential to pitchpole.

To offer a broad look at the mainstream trends in small to midsize cats, we picked a handful of boats to examine. Since the adrenaline factor is at the forefront, let's start with the beach cats.

### HOBIE GETAWAY

From its rugged rotomolded construction to its efficient, but simple rotating

wing spar, Hobie's 16-foot Getaway catamaran is a boat that puts technology to work where it makes most sense without pushing the cost too high. Keeping things simple, in this case, helps keep overall cost in line with the reality of the marketplace.

The objective of the Getaway, designed by Greg Ketterman and the Hobie Cat design group, was to develop a fun family boat with both performance

appeal and load-carrying capacity. The keep-it-simple theme kicks off with a built-in keel to add lateral plane and beachability without the complication of daggerboards. The boat is not in the same league as the Hobie Wildcat F18, and if you're a white-knuckle, high-performance sailor who likes to give Jet Skis a run for their money, take a close look at the Tiger or Wildcat. But if you're drawn to the idea of a fun beach cat that is in-

## SPECIAL REPORT

*In about 12-knots of breeze, the rotomolded Windrider Rave (right) lifts out of the water on its three-point foil system. The foils are tied into rigid aluminum cross members, helping to overcome the flexible nature of polyethylene. The 14-foot Weta (below) blends lightweight materials and a powerful sailplan to turbo-charge multihull-beach sailing.*



gone for a sail, it's a ride you'll never forget. The kayak company Wilderness System creates the amas from rotomolded polyethylene. But what separates the Rave from the rest of the fleet is a clever three-point foil assembly and simple but powerful rig. The result is a bit like putting a super-

charged V-8 in Mom's Saturn hatchback. (Wilderness Systems also sells a capable non-foil beach trimaran.)

Part of the brilliance of the design is how Bradfield spreads rig loads and foil force into the stiff, strong tubular alloy cross member rather than overloading the more flexible hulls. Once the somewhat complex assembly is complete and the boat launched, departure can be a little anticlimactic. In fact, the ride starts out like a normal outing on a somewhat sluggish trimaran.

However, once the first 15-knot puff hits, there's a little shudder as the wolf strips off its sheep's clothing and rises out of the water onto three innovative foils. In 20-knot conditions, the chop smooths out thanks to the immensely reduced water plane. Soon, you're traveling a little faster than the true-wind velocity, and some adolescent stirrings are rekindled. The first time you enter a jibe on a full plane and exit it at the same speed, you're hooked. The Rave offers a "sit down" windsurfing experience. The speed is exhilarating, and the efficiency of being up on the foils allows the boat to turn less sail area into much more speed over the water.

**Bottom line:** The reward of double-digit speeds on foils outweighs the hassles of a complicated setup.

vigorating, easy, and forgiving to sail, the Getaway has plenty to offer.

Three wires comprise the standing rigging, with the headstay carrying an easy-to-handle roller-furling headsail. Like all multihulls, the absence of a backstay allows for a roachy, high-aspect ratio mainsail with plenty of sail area aloft. And with a series of full battens and no boom, this most manageable sailplan makes adapting to multihull sailing a breeze.

The addition of an optional hiking rack/backrest and the "Hobie Bob" masthead float, standard on all boats, lessens the chance of capsize and eliminates the worry about turning turtle. Self-righting is straight forward and one of the biggest checkmarks we gave the Getaway was for its user-friendliness.

**Bottom line:** If you value ruggedness and ease of use over out-and-out performance, this is an excellent choice.

### WETA TRIMARAN

Lightweight materials and plenty of sail area give the little Weta trimaran (reviewed in the May 2008 issue) an ability to get up and go even before whitecaps appear. In many ways, the boat is a blend of high-performance skiff and multihull form stability, delivering an ability to easily alter sail area configurations on the fly. The brilliant adaptation

of a sprit and furling reacher allows the crew to kick in an afterburner that turns a sedate afternoon sail into an exhilarating romp.

The pre-sail setup is simple: Install the carbon-tube akas that connect each ama to the main hull, step a light spar, and install the rudder and daggerboard. Carbon-fiber tubes, spars, and blades minimize weight and show how serious the designer and builder are about performance. Five well-placed lines control all three sails, and this little tri has both an easy-to-steer sports car feel, plus the simplicity and stability to get the whole family ready for a ride. The boat's lower-volume hulls make it quick to scoot, but not a great load carrier.

**Bottom line:** It's the right boat for a couple, but two linebacker-sized sailors will wait for 18- to 20-knot conditions before they are off and skimming. That said, this is a great boat for beach multihull sailors looking for more speed.

### WINDRIDER RAVE

Part contraption, part gifted innovation, this airborne Millennium Flyer is the brainchild of designer Sam Bradfield, and he deserves special recognition for bringing the esoteric to cost-effective production status.

This is definitely not the ideal multihull for every taste, but once you've



The heavy Hobie Getaway (left) favors durability over weight savings, while the Weta leans toward light, stiff panels.

## Which is Better: Rotomolded or Carbon-fiber Composite?

The ultimate material for multihull speed is prepreg carbon, foam, and honeycomb core—and as little of it as possible. At least that’s the recipe for AC boats, C-Class cats, and stripped-down ocean racers. The builder’s skill needs to equal that of the Boeing staff, and the price tag for such a boat awes a Ferrari owner.

Top-tier production boats swap E-glass for carbon, vinylester for epoxy, and aluminum for titanium. Panel stiffness and strength can approach that of carbon-sandwich laminates, but this comes with a significantly higher weight. The “street legal” multihull also needs to have greater longevity

and be able to endure more wear and tear, adding extra weight to the design. The good news is that the build quality of multihulls, when it comes to control of fiber-to-resin ratios in laminates, is generally quite good. In fact, it’s much better than what’s seen in the average production cruising monohull, a boat that’s less impeded by a few hundred pounds of excess resin.

The ability to handle scrapes, dings, and other abrasive contact can be an issue with a vessel that’s designed primarily to be light and stiff. It’s one of the reasons why many beach boat manufacturers have gone to rotomolded polyethylene structures rather than

stiffer, stronger, and lighter foam sandwich construction. Just watch a kayaker with a rotomolded boat drag it up on a rocky shoreline. The fellow with the carbon-sandwich kayak cringes at the display. When it comes time to hoist these boats onto the roof, the tide turns. The owner of the rotomolded boat groans and the carbon/kevlar kayaker starts to smile. At least that’s true up until he realizes that he could have bought four rotomolded boats for the price of his featherweight composite kayak. And that’s why Hobie and Wilderness System are pioneering rotomolded multihulls, and Weta uses carbon fiber where it makes the most sense.

### CORSAIR DASH 750

Many of the features that scored highly in the realm of beach cats are evident in Corsair’s latest 24-foot multihull, the Dash 750. The Dash is much more than an upgrade of the popular Corsair 24 MKII. It’s a plumb-bowed speedster with a retractable sprit, rudder, and daggerboard that keeps beachability an option while still harnessing the full-throttle performance in a pocket cruiser.

The rotating wing mast sports a good-sized mainsail, and the jib, plus a sprit-mounted roller furling reacher make the sailplan quite versatile and able to adapt to both sides of the wind spectrum. Few pocket cruisers can offer double-digit boat speed in 12 to 14 knots of wind,

and with the retractable daggerboard, there’s an upwind sailing component that’s appreciated by those cruising or racing toward a windward objective.

Corsair honestly refers to the Dash’s accommodations as affording “camp-style cruising” and for those out for a weekend or on a longer duration coastal cruise, this may be just fine. Berths, a sink, one-burner stove, and a porta-potty will sound palatial to a backpacker but more than a bit cramped to those contemplating the luxury of a Lagoon.

**Bottom line:** No, it’s not The Ritz. But the primary design criterion behind these boats is to unleash easy-to-handle performance, and Corsair has met that goal admirably.

### TELSTAR

This long-lived name for several Tony Smith designs was born in Britain in 1970 as a 26-foot pocket-cruising trimaran. There were three model changes over the 11-year span in which the original boat was built. Production ceased after about 350 hulls when a factory fire destroyed the molds in 1981. This occurred just after the Smith family moved from the United Kingdom to the U.S. and set up shop in Annapolis, Md.

The new company, Performance Cruising Inc., focused on its Gemini line of cruising catamarans. In 2003, after a thorough and thoughtful redesign of the Telstar concept, a new 28-foot trailerable, folding-ama trimaran



The Corsair Dash (top left) features the folding ama design of its cousin the F-24 (bottom left). The amas of the Telstar (top right) neatly tuck in for fast motoring (bottom right) or maneuvering in tight quarters.

was launched and named the Telstar 28—soon dubbed the “T2.” The boat packs a cruiser-friendly interior into a soundly built structure that retains a very respectable capacity under sail.

With a fine entry and maximum beam well aft, the center hull conveys a bit of the Gemini legacy, but the vacuum-infused light amas keep the overall weight down, striking a good compromise between comfort and performance.

The flat run aft contributes to this tri’s willingness to get up and go once the gennaker is unfurled and the crew bears off onto a reach. The boat is easy to steer, and, thanks to a modest amount of mainsail area, sail handling doesn’t require a gymnast or a weight lifter. The boat can be powered efficiently with a 9.9-horsepower outboard, but for those facing calm conditions and a tight schedule, the option of a four-stroke 40- or 50-horsepower outboard can yield 14-knot sprints.

**Bottom line:** The most cruiser-friendly of the group, the Telstar will

appeal to getaway artists who like a turn of speed.

### CONCLUSION

The Hobie brand has led the push to introduce America to sailing ever since the patriarch himself, Hobie Alter, hung up his surf jams and turned from surfboard innovator to multihull maven. His legend lives on, and the new Getaway is another well-targeted success that blends performance, people, appeal, and price.

One of the clear messages behind this boat is that in an economic downturn, you can keep the family sailing without having to belong to a yacht club, lease a marina slip, or need the service of a boatyard. The “hitch and trailer” plan opens up destinations around the country with clean campgrounds and the welcoming breeze off countless bays and lakes. The Hobie Getaway lives up to its name—a boat that may indeed rejuvenate the beach-cat lifestyle.

The Corsair Dash is a more self-contained sailing experience. Large enough to qualify as a three-hulled pocket cruis-

er, yet performance tuned enough to win point-to-point club races. Shoal-draft cruising destinations or local fun weekends are part of this tri’s repertoire, and the blend of construction quality, design, agility under sail, and trailerability make it our choice for those seeking great sailing performance in a Spartan pocket cruiser. ▲

### CONTACTS

**CORSAIR**, 773/889-3087,  
[www.corsairmarine.com](http://www.corsairmarine.com)

**HOBIE**, 773/889-3087,  
[www.hobiecat.com](http://www.hobiecat.com)

**PERFORMANCE CRUISING**  
410/626-2720,  
[www.performancecruising.com](http://www.performancecruising.com)

**WETA (NOR’ BANKS SAILING)**  
252/202-6880,  
[www.wetatrimarans.com](http://www.wetatrimarans.com)

**WINDRIDER WAVE**  
320/245-5116,  
[www.windrider.com](http://www.windrider.com)

Photos courtesy of Corsair (top left), Telstar (right, top and bottom)

# Ocean Voyaging on Two Hulls



Built in France, the Outremer 45 is regarded as a "high-performance" cruising cat.

## *Circumnavigator separates cat cruising fact and fiction.*

BY JOHN SPIER

**A**fter starting out in monohulls many years ago, I'm now cruising aboard my third catamaran. All of my cats—a Maine Cat 30, a Kelsall 40, and now an Outremer 45—could be classified as performance cruisers: light weight, narrow hulls, daggerboards, and generous sailplans. I try to stay out of the mono/multi debate—we're all sailors, and all boats have their pros and cons.

One of the first questions that comes up regarding cruising cat design is whether daggerboards or fixed keels are better. My Maine Cat had one daggerboard, and my Outremer has two. My Kelsall came with keels, which I eventually cut off and replaced with daggerboards. I like boards, but the pros and cons are worth considering.

Daggerboard boats cost a bit more to build and buy, and have a few extra rigging bits to maintain and to handle when sailing. Mini keels are simple and sturdy. Interestingly, in the U.S., daggerboards are the exception; in the multihull hotbed of East Australia, keels are the exception. Sailing conditions are similar, so go figure.

Contrary to popular opinion, well-designed keel cats can sail to weather fairly well. The windward advantage of

a good daggerboards is, at most, about 5 to 7 degrees (on each tack). That can be significant, but weatherliness alone is not why I prefer daggerboards.

The under-rated sailing advantage of boards is raising them off the wind; the reduction in wetted surface is considerable, and the extra leeway allows a deeper course while keeping the sails drawing and building apparent wind. Other advantages are the stability of sailing downwind in big seas with the only lateral planes at the sterns; and the ability to use the boards to balance the sailplan, easing the workload on the autopilot. Lastly, one board fully extended makes a great pivot point for close-quarters maneuvering.

Daggerboard boats usually draw less, at the expense of less protection for rudders and props. Our Outremer is advertised as having a draft of 2 feet with the boards up, but the reality is that the rudders and saildrives are protected by an armored skeg that draws 3 feet. So much for truth in advertising! Mini keels are often both sturdy and sacrificial, suitable for beaching for bottom maintenance.

We have friends on a PDQ 44 who remodeled the granite edges of Wood's Hole, Mass., at 9 knots with their mini keel, doing only non-structural damage. On the other hand, we've used our

boards as depth sounders, creeping into shallow, soft-bottomed anchorages or running blithely over the shoals of the Intracoastal Waterway channel. When they touch, we raise them and back off. Occasionally, we've used them to plant ourselves firmly in position while waiting for the tide to rise. Well-designed boards are also sacrificial, and will break off without damaging the boat's hull or trunk.

Experienced ocean sailors have told me that being able to adjust daggerboards in extreme conditions is a safety feature, allowing the cat to slide along instead of tripping. I haven't tested that theory, and hope not to, but I'll keep it in mind!

### HOW FAST?

The other question many ask about cats is, "How fast does she sail?" The simple answer is, "Up to about 20 knots," but the real answer is much more complicated. Our offshore passages for the past 30,000 miles have averaged 170 miles per day. Our best day was 240 miles, and our best week was about 1,400 miles. But we've had some 50-mile days, too.

One man we know circumnavigated in a very fast Malcolm Tennant 40-foot former racing cat. He calculated his round-the-world average speed at 4½ knots, or about 110 miles per day. He never ever motored, and for comfort and safety, he never sailed over 10 knots. Another friend sails his Shuttleworth Tektron 35 between New England and Florida every year. He picks his weather windows carefully and routinely makes the trip in five to seven days, often averaging well over 200 miles per day.

We've met many other sailors cruising on big comfortable cats, and their average passage times are comparable with monohulls, especially as the average cruising monohull is larger and faster than it used to be. Passagemaking speed has more to do with individual sailing style and tolerance for using diesel fuel than with actual boat performance.

The two significant advantages of a performance cat, in my opinion, are in

Photos courtesy of Outremer

daysailing and in light air. It's possible to sail much faster in daylight with a well-rested crew than is prudent on long passages. In windy reaching conditions, such as in the Caribbean or on the east coast of Australia, we often sail happily at 10 to 12 knots. This gives us many more anchoring choices, and makes a 60- to 80-mile trip a safe and easy daysail, instead of a dawn-to-dusk affair with the risk of arriving in the dark. In light air, it's much nicer to be sailing rather than motoring or wallowing about with the sails slatting. Some of our most enjoyable offshore passages have been drifting along in less than 10 knots of breeze, when we can still be making between 3 and 7 knots, depending on direction.

As we spend more time cruising, we often find ourselves sailing at much less than our potential speed. Part of this is safety: A cat needs to be reefed for the gusts, not the average wind. Sure, you can sit in the cockpit hand steering and easing the sheets and traveler every time there's a gust, but that's not cruising. The other part is comfort; on a recent passage in 30- to 40-knot winds and big seas, we opted to jog along at 7 to 8 knots under a scrap of jib. With a reefed main, we could double our speed, but then stuff starts bouncing around and nobody rests. When the wind drops, we go faster.

### LOAD CARRYING CAPACITY

The big bugaboo of cruising cats is not capsizing; it's load-carrying capacity. Every cat skipper I know struggles with this. We become weight fanatics, feuding about necessities. Some cruisers stay lighter, but we're all loaded past the designers' wishes—it's a reality of long-distance sailing.

On *Aldora*, we have a big tender, four big anchors, a sea anchor and drogue, 80 meters of chain, 2,000 feet or so of line, spare parts for every system on board, tools, schoolbooks for three kids, and personal gear for five. Add to that 2,000 pounds for fuel, water, and food, and we go from a design displacement of 14,700 pounds to 18,000 pounds or so. The *Outremer 45* has some reserve buoyancy, so when fully loaded, we're only a little deep on our waterlines. Our loaded *Kelsall 40* would sink to her chines, which is why we traded up.



*The charter industry represents a big share of the catamaran market. Most cruising cats, like the Voyage 44 (above), have relatively high displacement weights.*

On the other hand, some wider-bodied (slower) cats will handle this weight with aplomb. What this means to cruising speed is a 20- to 30-percent reduction in performance. This is borne out by my experience, based on the published polar diagrams for our boat, and confirmed by other sailors who have sailed their cats both light and loaded. Good judgement and safety also come into play when your fully loaded. Just because you have the sailpower to push the weight through the water at speed doesn't mean you should. If anything, the boat's motion is easier when heavy, provided the extra weight is concentrated near the center.

### WINDWARD ABILITY

The other accusation most often leveled at cruising cats is an inability to sail to windward. There is some truth to this, but in my travels, I've rarely seen cruising monohulls going to windward either. Racers and delivery skippers go to windward; the cruising and trade routes around the world have been established off-the-wind for centuries. Our *Outremer* is very weatherly for a cruising boat, with deep daggerboards, slim hulls, minimal windage, and a tall rig. In open ocean conditions in 15-20 knots of wind, we make our optimum VMG tacking through about 105 degrees including leeway, sailing at 8 to 9 knots to make 5 to 6. A few cats can do better, most not as well, and some not at all.

In 25 to 30 knots, we can make ground to windward, but it's rough on the boat and miserable for the crew. At 40 plus on a lee shore, we'd probably be clawing our way off with a triple reefed main and the

engines running. This, by the way, is the method I've seen Caribbean delivery skippers using to move charter boats back to windward, both cats and monohulls. For most cruising boats, the best way to deal with windward sailing is to use good passage planning and maintain the luxuries of time and searoom. That said, I could never give up the satisfaction and safety of a boat that can sail well to weather.

In summary, don't choose a cruising cat for ultimate speed, unless you're prepared to pay for a performance boat, and then keep it light. Choose a cat for comfort, safety, spaciousness, shallow draft, and some extra speed off the wind. But be prepared to accept the downsides: extra cost, limited carrying capacity, and expensive and limited dockage and haulouts. ▲

*John and Kerri Spier and their three children, Sally, Sam, and Dave, recently finished a circumnavigation aboard their 45-foot Outremer, Aldora.*

### CONTACTS

**KELSALL**, 64/7863-3332,  
www.kelsall.com

**OUTREMER**, 631/246-6448,  
www.aeroyacht.com

**MAINE CAT**, 207/529-6500,  
www.mecat.com

**MALCOLM TENNANT**  
www.tennantdesign.co.nz

**JOHN SHUTTLEWORTH**  
44/1903 742 928  
www.john-shuttleworth.com