HOW TO USE HIGH-TECH SAIL-TRIM TOOLS p. 44

A NEW AGE OF ONE-DESIGN HAS ARRIVED p. 24

THE 5 BEST WATERPROOF CAMERAS p. 48







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Paul Goodison - Laser

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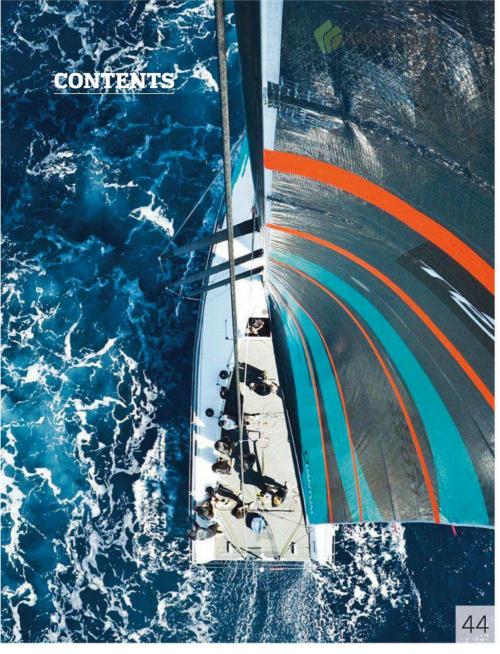












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If this year's best designs can't shake up the establishment, we don't know what can. With these four BOTY winners, it's time to go racing.

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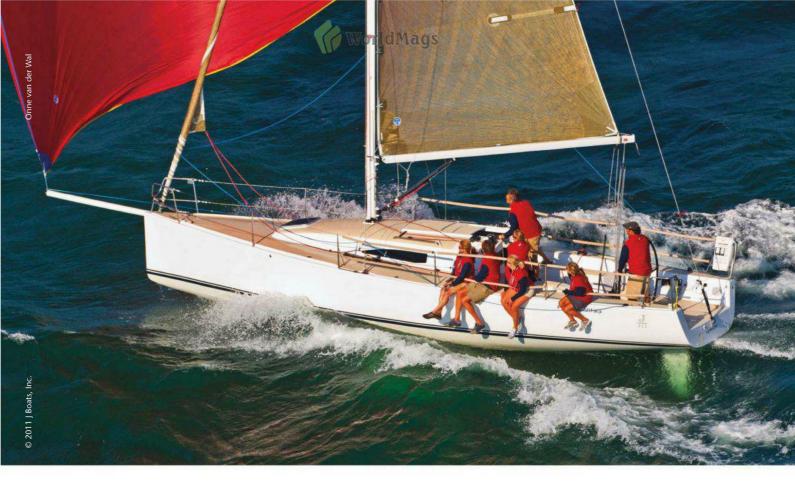
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On the Cover

The Farr 400 One-Design had everyone's attention when it debuted at the 2011 Rolex Big Boat Series. A month later in Annapolis, Md., at Boat of the Year 2012, it had ours, too.

Photo by: Sharon Green



"18 kts in 24 kts TWS in Full Control"

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J/111's ability to accelerate and sail close to the wind speed in light air, and how quick it planes at double-digit speeds when the wind pipes up. Said one owner, "this boat had the fun meter pegged in the 'red' all of Sunday afternoon on the Chicago-Mac. We had three consecutive drivers hit 18+ kts in 20-24 kts TWS and in full control. The boat just likes to go fast with none of the drama we've dealt with on previous boats."

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EDITOR'S LETTER

Open Drawers

"As much as

the sport has

changed, its

essence remains

the same. The

same is true of

the magazine."

Sailing World's offices occupy the second floor of an ordinary brick-andmortar building in Middletown, R.I. Half models and oversized posters of past covers accent the maze of faded blue cubicle walls and navy blue filing cabinets. Inside the latter are hanging folders bulging with our sport's captivating history. We have drawers, identified by some past editor's chicken scratch, labeled "Famous People," "Famous Boats," "Events," and my all-time favorite, "Misc."

I walk past these drawers at least 10 times a day. Rarely does it occur to me to stop and linger. Only when the odd Internet search fails, might I roll one open hoping to unearth a gem. It might be a picture: black and white, with grease-pencil crop marks and a handwritten caption scribbled on the back. It might be one of the hundreds of tattered envelopes bursting with slides and early CD-ROMS. Maybe what

I'm looking for can be found in the press releases, official event documents, newspaper clippings, class newsletters, and brochures of boats and equipment long obsolete. Thankfully, our previous editors had the foresight to file most everything that crossed their desks.

On the rare occasion the contents of these drawers do see the light of day, they're instantly entrancing. Once you pull something, it's impossible to not get sidetracked. It's an addictive diversion, as is paging through any one of the nearly 600 issues from this magazine's 50-year history. When something in these pages grabs my attention—be it a story or an advertisement-it's easy to see that as much as the sport has changed, its essence remains the same. The same is true of the magazine. It's always been about the people, the places, the races won and lost, the sharing of knowledge.

But as I've journeyed through the

drawers in preparation for our 50th Anniversary run as the "magazine of sailboat racing," as our first publisher Knowles Pittman coined in 1962, I wonder about the next person tasked with building an anniversary issue 50 years from now (yes, I suspect we'll still be around in some fashion). With the evolution to digital media, we're losing the physical connection to our past. Tangible printed images and carefully crafted narratives have been replaced by hard drives of JPEGs,

> and blogs, both of which will either fail or fade into obscurity.

> But it's not just our present we're losing, either. In my search for photos from the inaugural 1988 Audi Key West Race Week for this issue (p. 18), I reconnected with an aging, but still practicing, photojournalist in Connecticut. I gasped when he told me over the phone, "Funny you should ask for them. I just put a bunch of Key

West stuff in the trash . . . I didn't think anyone would care for it nowadays."

I'd like to think I saved a few years of Race Week history when I asked him to fish the photos out of the garbage can.

Which brings me to our golden milestone. To mark our anniversary and share the history of all things performance sailing, throughout the year we'll be digging deep into our archives, bringing many of these treasures to you in these pages, and online at sailingworld. com and Facebook. So join us as we look back. For those of you who've been with us for the long haul, we thank you. And if you're just joining us for 50 more, welcome. The drawers are now open.

Dave Reed editor@sailingworld.com

SAILING

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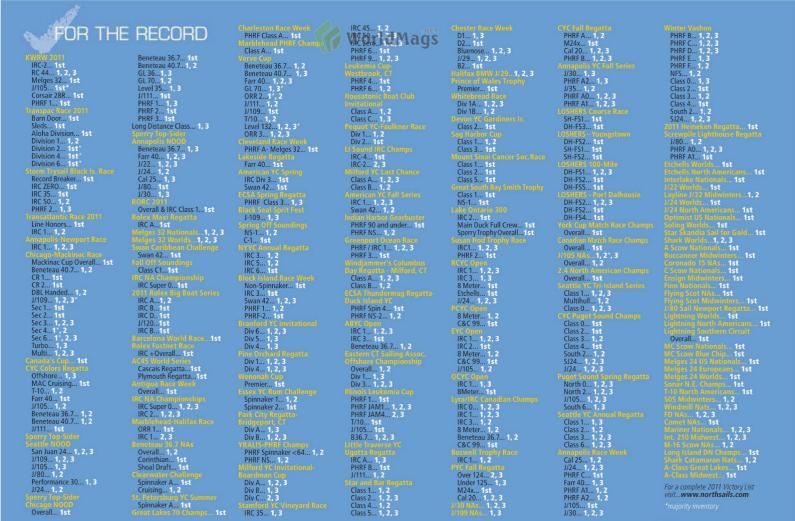
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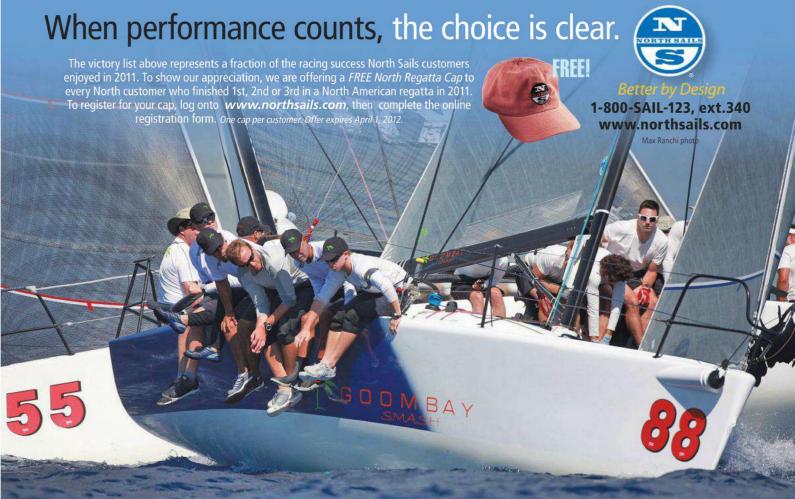
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abay Smash carried North 3Di upwind sails and V-Series downwind sails. North-equipped M32s also finished 2, 4, 5, 6, 7, 8, 9, 10 at the event

CONTRIBUTORS



2012 Boat of the Year Judges "Tough job," is the common response we hear when escorting the Boat of the Year judging team from boat to boat during our test sails in Annapolis, Md. It's the response one would expect after explaining you're being paid to critically scope out all the new raceboats, sail each of them, and then debate into the night—on a diet of wine and pizza—which of them is best. It may seem a plush weeklong gig, but trust us: this year's judges (above, I to r: sailing columnist Dobbs Davis, sailmaker Chuck Allen, and designer Greg Stewart) had their work cut out for them. They also did a lot more swimming than in years past.

The best of the wipeouts belongs to Stewart, a big guy who's not intimidated by any small craft. He rolled right onto the Topaz 14CX catamaran for its test sail and scurried away in a big gust. When our Zodiac 7.33 Meter Military Spec'ed Law Enforcement model RHI photo boat (capable of 51 MPH, and ably driven by Zodiac's Tim Hazen) threw him a meaty wake, we sent the poor guy rag-dolling in one glorious slow-motion pitchpole (camera clicking away, of course). He surfaced with his head turtle-like in his inflated PFD bladder. He laughed, we laughed harder (at him), and moments later he was back in the saddle for more. **Page 24**

Craig Leweck, like most sailors, isn't the biggest fan of training. "I think that's what kills practicing for a lot of sailors—it's just



fairly boring," says the 49-year-old, who writes in this issue about the group training that lifted Bill Hardesty's team—on which Leweck sailed—to the 2011 Etchells World

Championship. "Ed [Adams, the group's coach] helped a lot to keep us focused on the goal. Inside jokes helped too. During one of the training sessions, three of the four onboard swear they saw a penguin. I was the one that didn't, and wondered if it was because I was too old. Whenever we needed an emotional lift, talking about the penguin did it."

Leweck is the editor of Scuttlebutt, a daily, sailing-focused e-mail newsletter started by his father in 1997. With the Etchells world championship feather in his cap, Leweck is returning to his roots this winter, sailing on a ProSail 40 catamaran and also at the helm of his Snipe dinghy. His big keelboat regatta for 2012 will be the J/105 North Americans, hosted by the San Diego YC in October.

"We were hopeful it would do a good job digitizing photos for later analysis. None of us realized how powerful it would become."

Andrew Scott, 38, on the VSpars technology that helped Quantum Racing win the 2011 Audi MedCup. **Page 52**



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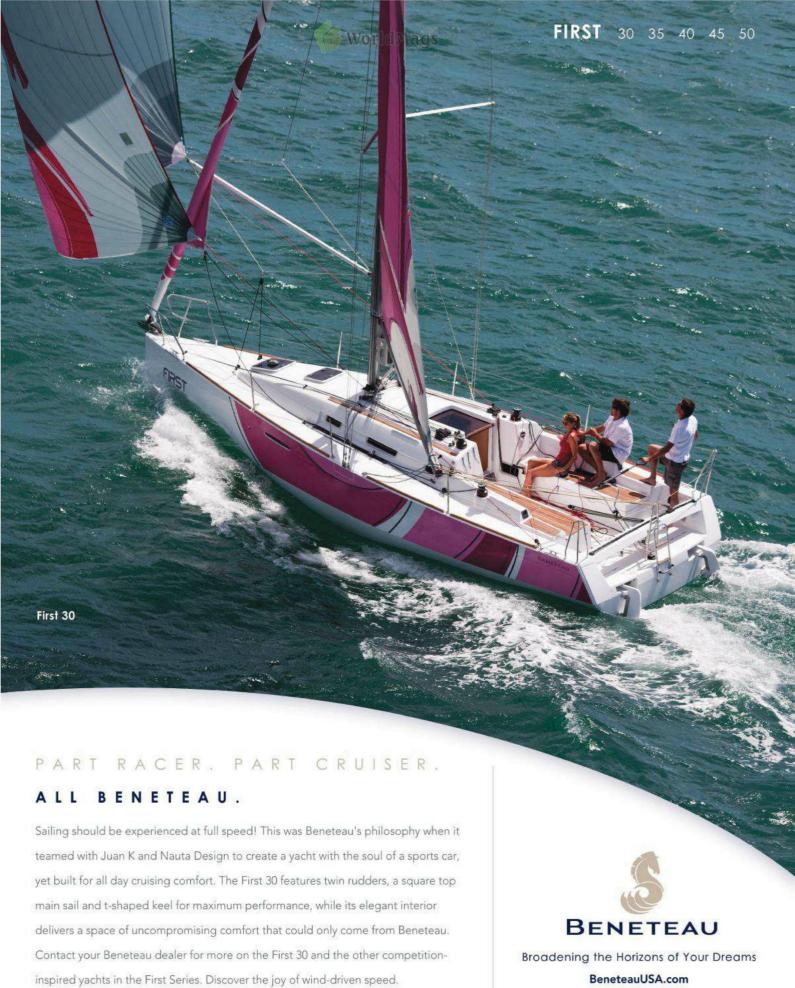
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SAILORS' FORUM

Whacked Geometry?

While I enjoyed your Editor's Letter in the October 2011 issue, I have concerns about your geometry. An equilateral triangle has three equal sides. If the first beat of an equilateral triangular course is 1.5 miles, then the first reach leg would also be 1.5 miles, followed by another 1.5-mile reach, for a total of three miles of reaching.

EUAN SWAN OTTOWA, ONTARIO

-ED

feedback to editorial@

sailingworld.com or

Snail mail to Sailing

Way, Middletown, RI

02842.

Perhaps I wasn't clear enough in my description of the triangle racecourse in question. Yes, the first beat was 1.5 miles, and the reach legs were each three miles in length. There's also the 1.5-mile beat from the leeward mark to the finish line, which, of course, makes it all equal.



I'm disappointed that you've joined the Whiner's Fleet, as evidenced by the conclusions you reached in your October Editor's Letter ("Triangle on Trial").

You asked, "Who in the fleet had actually calculated the angle...then compensated for current set?"

The winners did! You claim that the wind shifted and eliminated passing lanes, but the passing lanes were determined at the weather mark, by the boats that had done their homework. You just didn't know it yet. When the shift came in, it sealed the deal. The wind always shifts-if you're on the right side of the shift, you're golden, if not, you're screwed. Upwind, downwind, it doesn't matter. Those that think the sausage is more tactical are just more comfortable in that skill set—the

reaches can easily make or break a race if you're not prepared or experienced with that point of sail. Most telling, you missed the point about one-design racing. It doesn't matter if you're racing 49ers or 12-Metres, as long as they're the same, and the racecourse is the same for everybody. Long reaches on heavy sprit boats may not be as exciting as you'd

like, but this one was clearly a challenge that you and half the fleet weren't pre-



real cause of the capsize.

The causes are multiple, mostly involving the mania of designers and owners pushing performance at any cost. It's up to the rule makers to keep the reins on such practice. For any boat that ventures offshore, the requirement for having a safe keel should be right up there with the requirement for having life jackets. Because, let's face it, all of that excess weight of life jackets, life raft, lifelines and stanchions, etc., is not a hell of a lot of use when you're upside down in the middle of the ocean.

HASTY MILLER

A detailed US SAILING report—which doesn't explore the keel failure itself, but does examine the capsize incident and safety equipment and rescue-related issues—is required reading for anyone planning an offshore race. You can find it at www.sailingworld. com/1201reports

-FD

pared to meet. Don't blame the course when you aren't prepared.

MARK WEINHEIMER ORIENTAL, N.C.

You're right, Mark. As I wrote, we did

fail the PRO's test of reaching skill—especially the navigational component. We didn't do the math before turning the corner and blindly sailed the course as a result. I won't make that mistake again. But, still, the experience of racing an equilateral triangle in a heavy-displacement sprit boat in light winds was . . . well, tedious. With the persistent shift and current set, it was a long parade for most competitors. If

the point is to break the proliferation of "sausage" courses, then maybe race orga-

nizers can follow the lead of the America's Cup World Series, and experiment with courses that are vastly different.

-ED

A point of clarification

When I covered the 30th Anniversary of the Cal 20s for SW, none of the fleets used a spinnaker. In your piece "Cal 20 Turns Five-Oh," (Oct. 2011) you seem to imply, with the phrase "a low-key, non-spinnaker Bronze Fleet," that the Gold and Silver Fleets used spinnakers. Have the Cal 20s added a kite?

BRUCE BROWN.

FORMER WEST COAST EDITOR

The Cal 20 is non-spinnaker, just as they were 20 years ago. Perhaps we were overzealous in pointing that out.

-ED























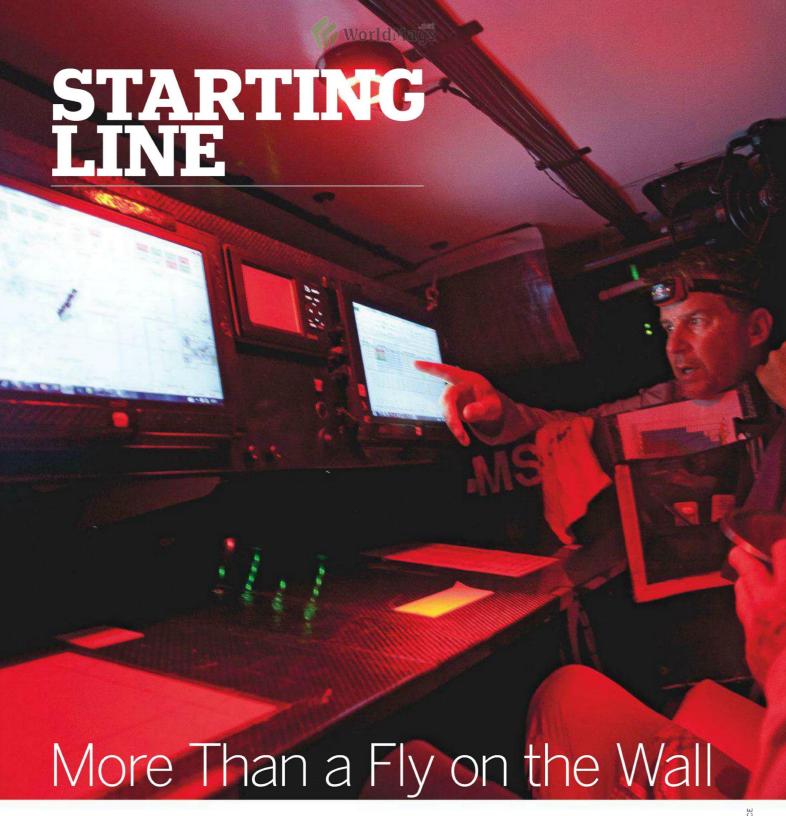












For the media crewmembers embedded in the 2011-'12 Volvo Ocean Race, there's no hiding behind a camera. Everyone has a job to do.

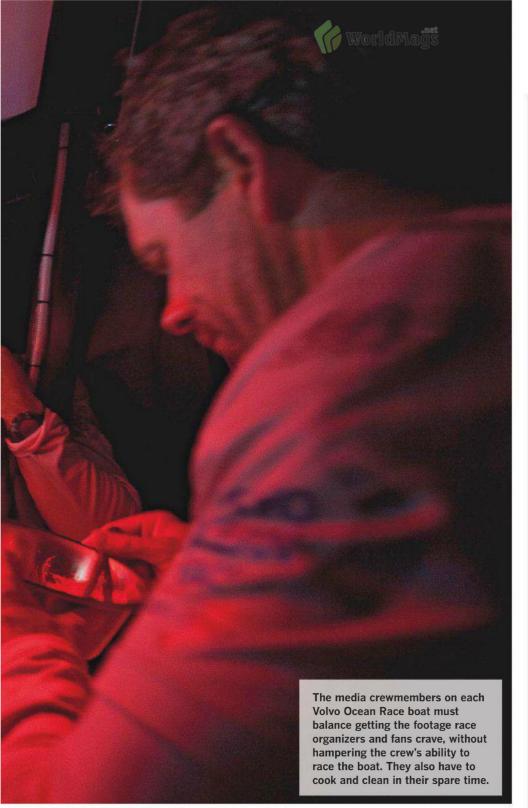
f all the jobs aboard an Volvo Open 70 blasting around the globe in the Volvo Ocean Race, the role of media crewmember may be the least appreciated. It could also be the most grueling.

The MCM's 19-hour workday begins

at 2:45 a.m. and combines the responsibilities of galley slave, journalist, and bilge pump. Aside from sleep deprivation, the biggest challenge is time management. "My priorities are always split," says Amory Ross of PUMA Ocean Racing, who, like his counterparts, is

required to submit 200 words, two minutes of video, and five photos each day. "I could go heavy on the content, but that would take away from the team. I could go heavy on the team duties, but that would take away from my responsibility to the sponsors and the race."

Long hours belowdecks editing video at the media station can be torture in rough seas, especially if you're prone to seasickness like Camper's Hamish Hooper. "The seasickness is becoming more manageable," says the Kiwi. "But in



the end, it's really just a pain in the arse."

For Hooper, a videographer, and Ross, a photographer, the media content comes naturally. For Telefonica's Diego Fructuoso, a pro sailor, content generation is a work in progress."[Since the start] I've learned all that I know about video," he says. "It's new for me. I'm part of the crew, but with a different role."

Despite varying backgrounds, the MCMs all stressed the importance of being part of the team. "[The sailors] know that for them to do well in this

race they need everyone's help," says Ross. "The more they make me feel like a part of the team—and they have—the more enthusiastic I get about meals, coffees, etc. It's the only way I can legally enhance the performance of this boat.

"It makes my job easier, too," he continues. "It's easier to ask a difficult question if I'm one of eleven rather than an outsider to ten."

-MICHAEL LOVETT

Meet the **VOR Media**













The media crewmembers for the 2011-'12 Volvo Ocean Race are (clockwise from top right): Amory Ross (PUMA Ocean Racing), Diego Fructuoso (Team Telefonica), Yann Riou (Groupama), Nick Dana (Abu Dhabi Ocean Racing), Hamish **Hooper** (Camper with Emirates Team New Zealand), Andres Soriano (Team Sanya).

The Freeze-dried Gourmet: "The cooking is easy—just add water!" says Amory Ross. "The secret is in the complements-plenty of sauces, like BBQ, Cholula, chili sauce, and ketchup."

Best Joke So Far:

"Why wasn't Jesus born in Australia? They couldn't find three wise men and a virgin."

-Hamish Hooper, poking fun at Camper's Australian skipper, Chris Nicholson.

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STARTING LINE

Sailing World's College Rankings



Sailing World's college rankings, presented by Sperry Top-Sider, are determined by an open coaches poll. For more information on the poll, or on how your team's coach can become a part of it, sailingworld.com/ranks. The number of first-place votes a team received is in brackets. This is the sixth national ranking for the Fall 2011 season, based on results through November 20.

>> COED	TOTAL POINTS
1. Roger Williams [18	378
2. Dartmouth	336
3. Yale [1]	325
4. Charleston	315
5. Brown	308
6. Hobart/Wm. Smit	th 293
7. St. Mary's	248
[8. Georgetown	236]
9. Stanford	222
10. Miami (Fla.)	191
11. MIT	186
12. Harvard	163
13. Tufts	142
14. Navy	136
15. Old Dominion	114
(tie) Wisconsin	114
17. Boston College	86
18. South Florida	81
19. SUNY Maritime	46
20. Connecticut Coll	ege 24

>> WOMEN'S	TOTAL POINTS
1. Yale [17]	283
2. Rhode Island [1]	265
3. Dartmouth [1]	245
4. Georgetown	219
5. Connecticut Colle	ege 196
6. Charleston	189
7. Brown	175
8. Stanford	118
9. Tufts	109
10. Navy	108
11. Vermont	103
12. Hobart/Wm. Sm	ith 83
13. Boston College	49
14. Bowdoin	38
15. Eckerd	34

Report Puts Wings on Trial



WWW.SAILINGWORLD.

At US SAILING's annual meeting in October, an independent panel reported on the capsize of the Kiwi 35 WingNuts during the 2011 Chicago YC Race to Mackinac, which resulted in the deaths of crewmembers Mark Morley and Suzanne Makowski-Bickel.

To compile the 70-page report Chuck Hawley, John Rousmaniere, Ralph Naranjo, and Sheila McCurdy investigated how the incident unfolded, examined factors like weather and use of safety equipment, scrutinized the design characteristics of the Kiwi

35, and recommended how race organizers and US SAIL-ING can make future offshore contests safer for all.

The report applauds the competence of the WingNuts crew, the rescue effort, and race organizers. If there's any

culprit, it's the Kiwi 35, which the report describes as a "highly inappropriate boat for a race [like the Chicago-Mac]." With its beamy, "winged" hull shape, the lightweight Kiwi 35 knocks down easily. Once on its side, the winged hull presents a large surface to wind and waves, making it more likely to turn turtle. Once overturned, the wide platform resists self righting.

"It's a highly unusual boat," says Rousmaniere. "The question is, do boats like this belong in races like the Mac?"

The investigation into the deaths of two sailors in the 2011 Chicago YC Race to Mackinac scrutinizes the flared hull shape of the Kiwi 35 WingNuts (above).

The freak storm that hit Lake Michigan on July 17 knocked down several boats in the Chicago-Mac fleet, but WingNuts is the only one that turned turtle. As the boat capsized, Morley and Makowski-Bickel were knocked unconscious and became trapped beneath the overturned hull.

The Chicago-Mac rates entries accord-

ing to US SAILING's Offshore Racing Rule, which measures stability in two ways: limit of positive stability, the angle to which a boat can heel before capsizing; and stability index. While WingNuts' stability measurements put it at the bottom

of the fleet, there was no minimum stability requirement for the general fleet, only for shorthanded crews.

Among its recommendations, the panel urges organizers to implement minimum stability requirements and suggests that US SAILING recalculate its stability index to adequately punish boats for extreme flare. "We're not trying to micromanage," says Rousmaniere. "It's up to the organizers and US SAILING to decide what to do."

-MICHAEL LOVETT



Visit AZ's Racing Hot Spot

The Buccaneer 18

class (above) is a

staple of Arizona

YC's Birthday Re-

gatta, which also

22s, Viper 640s,

and other boats.

hosts Catalina

With 100 boats racing in a half-dozen classes, old friends, and plenty of booze, Arizona YC's Birthday Regatta has the elements you'd expect to find at any successful trailer-rig event. What makes it a classic is that it happens in January,

smack-dab in the middle of the Sonora Desert.

The racing takes place on Lake Pleasant, 30 miles north of Phoenix. "You look at those vistas, and it's just so wicked cool," says Arizona YC commodore Emory Heisler. "You're in this lake, and you're looking at

one hundred square miles of desert."

Since it began in 1960, the regatta has grown larger and a bit more formal—particularly with the addition of the Leuke-

mia Cup in 1998—but competitors still camp out under the stars among coyote calls and wild burro tracks. "It's a 'great outdoor' kind of vibe instead of being the big formal thing with the jackets and the hats," says Heisler.

The 2012 event kicks off Friday, Jan.

13, with the Centerboard Challenge for boats like Lasers and Viper 640s. For the post-race "cultural extravaganza," club member Rick Johnson and crew will serve up an ethnically-inspired meal—last year's was Slovakian. The actual Birthday

Regatta takes place Saturday and Sunday, with the Leukemia Cup scored on Saturday.

For locals, the Birthday Regatta is a welcome alternative to the club's summer Heat Stroke Series. For sailors from cooler climes, the event's warmth—both in temperature

and temperament—can be addictive. This year, as he's done twice before, Frank Hunter will drag his Buccaneer 18 from Long Island, N.Y. "It's worth six days of driving to spend three days sailing with these people," says the 66-year-old, who keeps up with his Arizona friends on Facebook. "You meet people you're not going to turn your back on, and they ain't gonna turn their back on you, either."

-DAVID WEIBLE

nas yea par- Hui e- Lor II driv ote the eat kee



Winning Ways

In November, Anna Tunnicliffe won the ISAF Rolex World Sailor of the Year Award for the second time. Iker Martinez (left) and Xabier Fernandez, who conquered the Barcelona World Race before taking on the Volvo Ocean Race, took the men's trophy.

College Sailing Team Spotlight

BROUGHT TO SPERRY YOU BY TOP-SIDER

GEORGETOWN UNIVERSITY]

>> Location/Enrollment:

Washington, D.C., 7,500 undergraduates, 5,800 graduates

- >> Sailing Site: Potomac River
- >>> Facilities/Boats: The team rents a facility at the Washington Sailing Marina in Alexandria, Va., which is seven miles from campus. The fleet includes 18 FJs, six 420s, three Lasers, and four motorboats.
- >> Coaching: Mike Callahan, head coach; Michael Campbell, assistant coach; various volunteers coaches
- >> Team Status: Varsity

Although sailing has been a varsity sport at Georgetown since the 1930s, the team has not always been the powerhouse people know it as today. When head coach Mike Callahan was an undergraduate and a captain on the team in the 1990s, he put in a tremendous effort but did not see a lot of return in the form of good results. Shortly after graduating in 1997, Callahan became the team's head coach. The first order of business was to change the way the team thought of itself. "We began treating ourselves as varsity athletes with things like team workouts and mandatory attendance," he says. "I scheduled easy regattas to begin with to get wins under our belt and build confidence. Soon, wining became the norm no matter what level we were competing at."

Callahan's coaching techniques made a difference, as the sailing team has won seven national titles and produced four of the last six College Sailors of the Year. The team marks its 75th anniversary in 2012, and is hoping for a strong performance at spring nationals despite graduating several talented seniors in 2011. The women's team finished ninth at the 2011 Sperry Top-Sider ICSA Women's National Championship and is gunning for the title this year.

>> Did you know?

In 1955, Kathleen "Skippy" White, who sailed on the men's team, became the first female athlete to earn a varsity letter at Georgetown.

WorldMags

STARTING LINE



Prada's Mixed Reception

Welcome back to the America's Cup; have you met my lawyer? That was, in sum, the response Luna Rossa Challenge received when it announced it would be returning for a fourth go at the Auld Mug.

The Italian syndicate, led by Prada fashion house CEO Patrizio Bertelli, officially announced on Nov. 2, 2011, that it would be entering the 34th America's Cup and signing a technology-sharing agreement with Emirates Team New Zealand.

Two weeks later, Artemis Racing announced it had asked the Jury to scrutinize the partnership between Luna Rossa and ETNZ. Oracle Racing filed a similar request.

"We're seeking clarification on what is allowed by the protocol and what isn't," said Paul Cayard, CEO of Artemis Racing. "I guess it's fair to say that our understanding of what's allowed is not exactly the same as what is being reported by [ETNZ head] Grant Dalton in the media."

The protocol for the 34th America's Cup limits teams to 30 days of AC72 sailing before Feb. 1, 2013. It also prohibits teams

Before announcing a fourth challenge for the America's Cup, the Italian Luna Rossa syndicate honed its multihull skills on the Extreme Sailing Series.

from launching a second AC72 before that date. The cooperation between ETNZ and Luna Rossa could enable the two teams to run a two-boat testing program while all the other syndicates are only sailing one boat.

If the jury finds nothing wrong with the ETNZ/Luna Rossa arrangement, one source predicted Oracle Racing founder Larry Ellison would consider bankrolling another syndicate and tying it into a technology-sharing agreement with Oracle Racing.

But the inquiries aside, there was universal support for Luna Rossa's return. "The Italians are so passionate about sports," said Oracle Racing skipper James Spithill, "perhaps moreso than anyone else in the world. To have the Luna Rossa guys back involved is a huge boost for the event." And, apparently, the attorneys.

-STUART STREULI

"By July 2013, we have to be as race ready as we can be. There'll be a lot to learn in the next 18 months."

Emirates Team New Zealand skipper Dean Barker gives an exclusive video interview, www.sailingworld.com/1201barker



McKee's Minute

I love planning for the next season. You can absolve yourself of the sins



of last season and make a fresh start. Here are a few things to consider when making a plan for the coming year:

1. Set goals. I'm not big on numerical

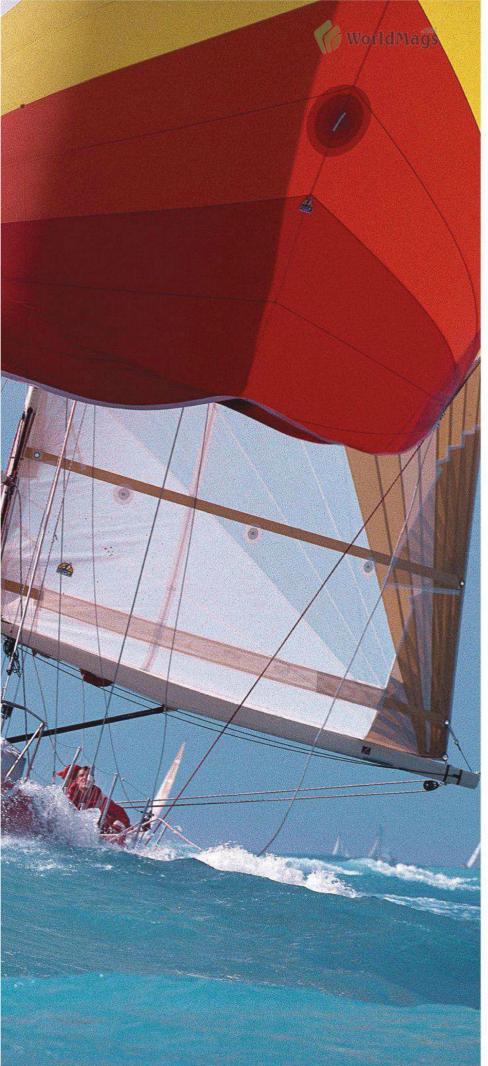
performance; I pick smaller, more personal goals and let the results take care of themselves. For example, you might say: "I want to sail in San Francisco," or "I want to help my girlfriend be a better trimmer," or "I want to practice for 10 days during the season." Making these goals now will help you structure your program next year.

- 2. Rethink your schedule. Choose regattas that look like fun or further your goals. You don't have to go to every event. Skip venues you don't like, or even better, plan a training weekend at home with another team.
- **3. Make the upgrade.** Are there technical developments you need to address? Maybe the class rules have changed, or there's a new sail you need to learn. Recognize these opportunities and take advantage.
- **4. Pick a key event.** This year, prepare for a specific regatta. Consider the venue and what skills you'll need to succeed. What conditions do you expect? What type of racecourse is it likely to be tactically? Can you practice there in advance?
- **5. Review the crew.** Are there people you don't get along with, or aren't as available? Is there a new person you'd like to add? Would it help to move crewmembers to different positions?
- **6. Look ahead.** It's tempting to analyze last season and organize the coming year solely in response to that. And while it's good to incorporate these lessons, it's more important to focus on the opportunities presented by the new season. Be proactive and think hard about how you can make your sailing more fun, as well as more successful.

-JONATHAN McKEE









Our Golden Highlights

In celebration of our 50th Anniversary, we're opening up our archives and back issues. For more from our vaults, **www.sailingworld.com/anniversary**.

"Few other sports demand so much of their participants—such

total preparation and concentation, not to mention skill. For these reasons, a 'magazine of sailboat racing' must take frequent soundings to determine what questions the individual sailor wants answered, what problems common to all classes need solutions, what problems or opportunities there are which involve all one-design yachtsmen."

-Knowles L. Pittman, *One-Design Yachtsman*, January 1962 (Volume 1, Issue 1)



Name That One-Design

Ever seen this classic plastic? Every Friday, starting in January, we'll open our photo archives and post a photo on our Facebook page. Like us, and let the world know you know your one-designs.

Old-School Trimming Tips

For our first installment of From the Experts Archives, we bring you Mike Toppa's "Trimming the Tri-Radial," from *Yacht Racing/Cruising* 1982. www.sailingworld.com/anniversary

COURTESY OF THE ATHLETES



JOBSON REPORT

The Next Generation of All-Star Talent is Here

Seven junior sailors with top results at home and abroad join the ranks of my All-Star sailing team. By Gary Jobson

recently discovered many of my early results preserved on a website maintained by New Jersey's Barnegat Bay Yacht Racing Association. It was fascinating to study these long forgotten races, and it was a reminder of how important sailing was to me as a junior competitor. The experience of browsing through my own past coincided with an exhaustive look into the performances of more than 300 junior sailors as I finalized my 2012 Jobson Junior All-Star selections. Narrowing the field was a Herculean task, but I'm excited to present a new group of talented sailors, all making my list for the first time. So long as these seven sailors keep at it, our sport is in good hands.

Bradley Adam, 17, of East Greenwich, R.I., sails for the Rocky Hill School and the East Greenwich YC. He sails



his Club 420 constantly and is always near the front of the East Coast's biggest fleets. His regular crew is Chas MacBain, but he's also sailed with Matt Coughlin

and Emily Vasiliou. Adam's 2011 highlights include winning the New Bedford Regatta against 87 boats, the Falmouth

All-Star **Honorable Mentions**

Ian Barrows, Scott Buckstaff, Alex Curtiss, Pat Floyd, Christine Moloney, Kelly McGlynn, OJ O'Connell, Pearson Potts, Taylor Reiss, Tristan Sess, Scott Sinks, Axel Sly, Elizabeth Tell, Holly Tullo, Callie Tullo, and Nick Valente

Regatta (64 boats), and Marblehead Junior Race Week (57 boats). Adam credits his father for being the most influential person in building his sailing career. He also competes on Rocky Hill's cross-country team and finds the mental aspect of both his sports to be significant and similar. He hopes to attend the U.S. Coast Guard Academy in the fall of 2012 and join the sailing team.

When asked if he had an embarrassing moment he was willing to share, he said, "I was flagged by the on-the-water judges during the Optimist New England Champs a few years ago, and the video ended up on the Internet."

Zack Downing, 16, is from Encinitas, Calif., and sails out of the San Diego



YC. He is a junior at The Bishop's School, where he competes on the top-ranked sailing team. Like many Southern California sailors before him, Downing cut his teeth in

the Naples Sabot. Today, he races a 29er with crew Andrew Cates. They won the 155-boat 29er European Championship. Downing also races Etchells and Melges 24s with his father.

Graham Biehl, who crewed for Stuart McNay in the 470 at the 2008 Olympics, coached Downing and Cates at the European 29er regatta and has been a major help with their development. "Graham is a phenomenal coach," says Downing. "He taught Andrew and me everything, from how to sail the 29er to how to perform at a major regatta." Looking to the future, Downing plans to race in college and campaign a 49er.

Paris Henken, 15, is a member of

California's Coronado YC. Henken and crew Connor Kelter, 16, from Newport Harbor (Calif.) YC, won the 29er Youth



Championships last summer. "We've sailed together for two years. If it wasn't for him, I wouldn't be as successful as I am now," says Henken. Her brother,

Hans Henken, crewed for her at the 29er European Championships in Switzerland, where they finished fourth in the Gold Fleet. The brother-sister team also won the 29erXX class at Kiel Week and the German National Championships on Lake Walchensee. She credits several top sailors with helping her development, including Charlie McKee, Chris Rast, Kristen Lane, and her brother Hans. The 2016 Olympic Games will feature a co-ed multihull and women's skiff disciplines. Henken could be a strong contender in either.

When not sailing, Henken skis competitively. "[The two sports] are comparable when it comes to equipment, mental preparation, and commitment," she says. "Before a ski race, you make sure your skis are waxed and tuned. You also must know the conditions. Sailing is the same, because your equipment must be tuned correctly for the wind."

Henken is a high-school sophomore and hasn't started looking at colleges seriously. "I might like to attend Stanford like my brother or do something different and attend a college on the East Coast. Either way, I really want to sail in college."

Lily Katz, 16, lives in Brooklyn, N.Y., goes to school in Manhattan, and sails out of Bellport, Long Island, during the



summer. Katz and crew Fiona Walsh won the U.S. Youth Championship in the Club 420. Like our other All-Stars,



Katz is planning on racing in college and has been looking at several schools in the East. She and Walsh are training with the goal of qualifying for the ISAF Youth

Sailing World Championship in the International 420. Asked what motivates her, she says: "Watching the older, more experienced sailors has always inspired me to push myself harder. Sailing has brought richness into my life that's hard to find anywhere else. I've been able to experience this wonderful sport, have learned a lot about life, and made friends with people from all over the world."

Olin Paine, 17, lives in San Diego and sails for the Mission Bay YC. He started sailing when he was 6 years old



in a Naples Sabot. "I tagged along with my brother to a clinic led by JJ Isler," he says of one pivotal moment in his career, "and she told me I wasn't too young to start

sailing." Paine is a member of the Point Loma High School sailing team, which has qualified for the Interscholastic Sailing Association's national championships every year he's been on the team. In 2011, Paine won the Laser division at the U.S. Youth Sailing Championships. He prefers Lasers and multihulls, which he races with his friend Grant Rickon.

Olin recalls an embarrassing moment on the water. "I was winning the first race of the Cressy [ISSA High School Singlehanded Championship for the Cressy Trophy], and did not read all the sailing instructions," he says. "I passed on the wrong side of the finish boat and ended up DNF."

Katja Sertl, 17, sails out of the Rochester (N.Y.) YC in the spring and fall and the Conanicut (R.I.) YC during the summer. She enjoyed an active year in 2011, racing Club 420s and J/22s. In the C420 she races with Ailsa Petrie. "Racing with my best friend against

some amazing sailors is a ton of fun," says Sertle. They competed in events in Ohio and Massachusetts, as well as the Club 420 North American Championship. At the 2011 Rolex International Women's



Keelboat Regatta, in Rochester, she placed eighth with a J/22 crew that included teenagers Merritt Moran, Julia Weisner, and Christine Moloney. Sertl credits her mother, Cory

Sertl, who won 2011 RIWKC, for giving her pointers about sailing keelboats. Like Henken, Sertle is a competitive ski racer. "Both sports require discipline and mental stability," says Sertle. "The number one thing I've learned from both is to never stop trying."

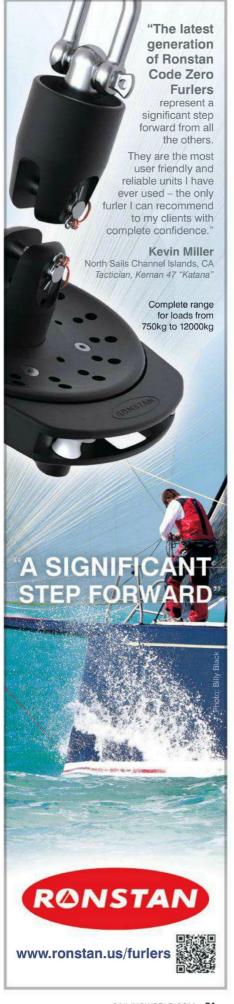
Sertle didn't always enjoy sailing. "When I began sailing the Optimist, I was terrified of even a breath of wind," she says. "Without my parents' push and passion for the sport, I don't know if I'd still be sailing. Now, I absolutely love it, especially in heavy-air conditions."

Nevin Snow races out of the San Diego YC and is a member of the Cathedral Catholic Sailing Team. He's a peren-



nial presence in the A Division at high-school regattas. Today he races Lasers, F18 catamarans, and likes match racing. Showing his versatility, Snow placed third

in the Laser at the U.S. Youth Sailing Championships and third at the U.S. Youth Multihull Championship. He also won the Governor's Cup, an international junior match race regatta. He credits his parents, Chris and Mary Snow, as most influential in building his sailing career. The latter was an All-American sailor at the U.S. Naval Academy, and the former is a J/24 class champion and sailmaker with North Sails. Snow gained inspiration reading Fatal Storm, Rob Mundle's book about the deadly Sydney to Hobart Race in 1998. When not sailing, Nevin likes to surf. "Surfing really helps with my downwind Laser sailing," he says, "knowing the waves and where to position my boat."



GAINING BEARING

The Domino Effect

When the mast collapses mid-race and mid-ocean, *mar mostro*'s crew turns its efforts from a race against the fleet to a race against the clock. **by Ken Read**

even hundred miles from one of the most remote pieces of inhabited land on Earth, we found ourselves accepting green jerry jugs of diesel from the 843-foot, container-topped cargo ship *Zim Monaco*. In all the scenarios I'd played out in my head before the Volvo Ocean Race's start, this is one I never imagined.

How did the crew of PUMA Ocean Racing come to be mast-less and adrift in the Southern Atlantic, bumming fuel off a passing ship? It all started on Day 17 of the opening leg, some 4,000-plus miles into the race, and five days out of Cape Town. *Mar mostro* was surfing along in 20 to 25 knots of wind, averaging speeds in the low 20s. We liked our position, and life was good. All morning it had been a routine of reef, unreef, reef again.

The on-deck watch asked for a hand putting in a reef. Our navigator, Tom Addis, had his foul-weather gear on, so he went on deck to help. I stayed in the nav station, working with the routing software to find a passing lane around

Team Telefónica, which was just over 30 miles ahead and in the lead. Once the reef was set, we were off again—until *it* happened.

The only sound I can equate to our mast breaking is that of a towering tree in your back-yard falling during a storm, only the "snap" was as loud as if the tree were in your house, where you could feel the noise resonate through your body.

The boat jerked upright and then heeled to weather because the keel was fully canted. I can still distinctly remember the blood curling scream from Ryan [Godfrey], who was in the pit area,



letting us know that, "The *\$%&*!# mast is down!"

Now what? We had to quickly assess the damage and determine what would happen if the rig broke free—i.e., would

With an anxious

Ken Read watch-

PUMA Ocean

Racing's Casey

Smith salvages

the team's sails

tic dismasting.

after a mid-Atlan-

ing from the deck.

it punch a hole in the boat? I've broken a lot of masts in my lifetime, but never in the middle of the ocean. Watch captain Tony Mutter had, and he said to me, "We have to try to save as much as we can, especially the sails."

So we did, and to be honest, I never thought we'd save everything. We

wouldn't have, if not for the heroics of our bowman, Casey Smith, who jumped into the water with a knife in hand, in order to cut away as much of the mainsail as possible. I would've never let him do it if he asked, and he knew that. He's just another tough S.O.B. who will do whatever it takes at any time. Twice I told him to get back on the boat when he got dragged under while cutting away the webbing on the mainsail's luff, and twice he came up and smiled at me, telling me he was fine.

Ninety minutes later, every piece of the mast was lashed to the deck, and the main, jib, and staysail were onboard, with only minor tears. The lifelines along the starboard side were mangled, but there were only a few dings on the rail. We were lucky.

It was a surreal feeling to have woken up that morning, racing along at full-tilt, and then to be going to sleep 2,500 miles from where we needed to be. We went from sailing under a beautiful 10-story carbon rig to limping along beneath a 15-foot stump with a storm jib and storm trysail lashed to it. We went from 25 knots to 2.8, wondering when our



food would run out and how we would use our small reserve of diesel fuel.

It's these unexpected situations where we most need friends and people that care for us, and more importantly, modern communication. I was on the phone for what felt like the next 24 hours, coordinating back and forth with our shore team and the race organizers to hatch a complicated plan that would hopefully get us to Cape Town in time for the Leg 2 start. If we missed that leg, we figured our race was mathematically over.

In the modern days of communication, I can call anyone in the world from the boat phone, just as if I was in my car driving down Memorial Boulevard in Newport, R.I. It's just a lot more expensive. But we weren't thinking about the phone bill. We were in the middle of nowhere, and I had 10 other people who wanted to continue with the race. They also wanted to eat, to have water to drink, to be real human beings, and to not wistfully drift toward South Africa.

We faced a difficult choice: Should we turn around and go back toward South America, which was closer? Not an option—we would never get to Cape Town in time. Could we get a tow? Heck, we couldn't find a ship within 400 miles, so how could we hitch a ride and not damage the boat while towing in ocean waves? Could we get diesel fuel air-lifted? Nope. Food dropped? Nope.

So with the help of Portugese and Brazilian maritime agencies a pan-pan message went out, alerting all nearby that a sailing vessel had lost its mast and was in need of diesel. After 36 hours, Captain Borys Bondar came to our rescue. He didn't have to, but he said there was a "code" for seamen, and he understood that diesel was our lifeblood at this point. With it we could run our water maker and, eventually, make landfall at the island of Tristan da Cunha. Tristan da what?

As we pointed our bow toward this Atlantic outpost, my daughter, Tory, sent me an e-mail briefing on Tristan: there we'd find 262 people living on a volcano sticking out of the middle of the Atlantic Ocean. There's no airport. The only way to get to the island is by boat. But it was the closest piece of terra firma, and it would allow us to re-supply and rally around part two of our plan.

At Tristan, we devised, we'd meet a ship that would be dispatched from Durban, South Africa. The ship would have a crane, allowing us to pick up the boat and place it on our cradle, which our shore crew would have put in place. A few members of our shore team would be on the ship, as would a 20-foot container full of tools and equipment. We'd use the four-plus days of transport to Cape Town to put the pieces of Humpty Dumpty back together again. And what about our spare mast? It was sitting at Hall Spars in Bristol, R.I., and had to be expedited by airfreight to Cape Town. When the boat and mast would eventually meet, we'd need a full-team press to get the boat in the water and the rig tuned properly before the in-port race on December 10, and more importantly, the next leg to Abu Dhabi.

Would this all go to according to plan? By the time you're reading this, the outcome will be known, and we'll all have a better appreciation for the logistical nightmare that follows a mid-ocean dismasting. It's times like these that prove our shore team is just as important as the sailors who get all the glory. Without them, I figure, Tristan's summer population would have increased by 11.



www.forummarine.com



2012 Boat of the Year Awards

BY DAVE REED PHOTOS BY WALTER COOPER

From a field of a dozen new performance designs, four boats emerge with the promise of taking sailboat racing to a better place.







reality of the American onedesign racing landscape, to borrow a line from The Beatles, is that one is

BOAT OF THE YEAR &

une

BEST ONE-DESIGN

Design purpose: One-design

Pros: Hull profile, simple control

Recommended crew: 3

Price as sailed: \$30,000

SPORTBOAT

the loneliest number. With our preference for company on the racecourse over having the latest and greatest design, it's a challenge for a new-and often betterone-design to take root and flourish. And without a builder's long-term commitment to nurturing a startup class, its existence can be short-lived.

Sportboat enthusiast and boatbuilder Brian Bennett knows this reality well. With the Viper 640, our 1997 Boat of the Year, Bennett created a design with

great one-design potential. He had success initially, but without his full attention, the class eventually withered from neglect.

But the Viper 640 class, which is enjoying a grassroots resurgence supported by a new builder. is in Bennett's past, and he has reemerged, fully committed, he

says, to seeing his next excellent creation, the VX One, become the ultimate threeperson raceboat. After our 2012 judging team—Chuck Allen, Dobbs Davis, and Greg Stewart—had their way with the 19-footer during test sails in October—sailing it in both drifting and heavy conditions—they agreed the VX One is the one for the sportboat masses.

"He's put an impressive level of thought into the production to keep this boat competitive for years," says Davis, whose enthusiam is echoed by Allen: "The VX is an obvious choice as Boat of the Year."

The VX One is a collaboration of Bennett and Rodger Martin Yacht Design, with Bennett applying his diverse sailing background to come up with practical sail-control systems and a sophisticated rig that requires only basic tuning on the racecourse. The list of keep-it-simple concepts includes a self-tacking jib on a furler, a single centerline jib sheet, a boomled mainsheet, and a single-line spinnaker launch and retrieval setup.

The infused hull and deck composite is vinylester/Divinycell. There's an integral hull spine and a robust carbon-reinforced keel box to absorb rig loads and provide overall stiffness.

After sailing in rough conditions, Greg Stewart noted the absence of any play whatsoever in either the keel or the transom-hung rudder. The lifting keel is an aluminum extrusion with a glass-reinforced bulb (and integral weed cutter), which is good for one-design repeatability. The keel head and bulb are bolted to the fin, so either component can be easily replaced. Plastic guides in the keel box give the fin a tight fit, with the slightly pliable aft guide also serving as a sacrificial

cushion.

The hull design is about minimal wetted surface, drag being the curse of beamy sportboats in light air, and the shape is defined by a defined hard chine that runs nearly the length of the boat. Bennett describes the One's lines as a "mini Volvo 70," a shape with good form stability. At 6 to 8 degrees of heel, he says, you're tapping

into the boat's length without dragging around much of the hull at all.

"At that angle there's not much immersed surface," says Bennett. That much was apparent when the judges first tried the boat in extremely light winds. With crewweight concentrated forward at the keel, the boat glided along without the hint of a quarter wake.

A light-air test would've sold this boat short, however, so the judges had Bennett return the following morning, with the arrival of a gusty 15 to 25 knots.

"Reaching, with only two of us in the boat, we easily hit speeds in the midteens," says Allen. "Upwind with two people, the boat had a nice groove."

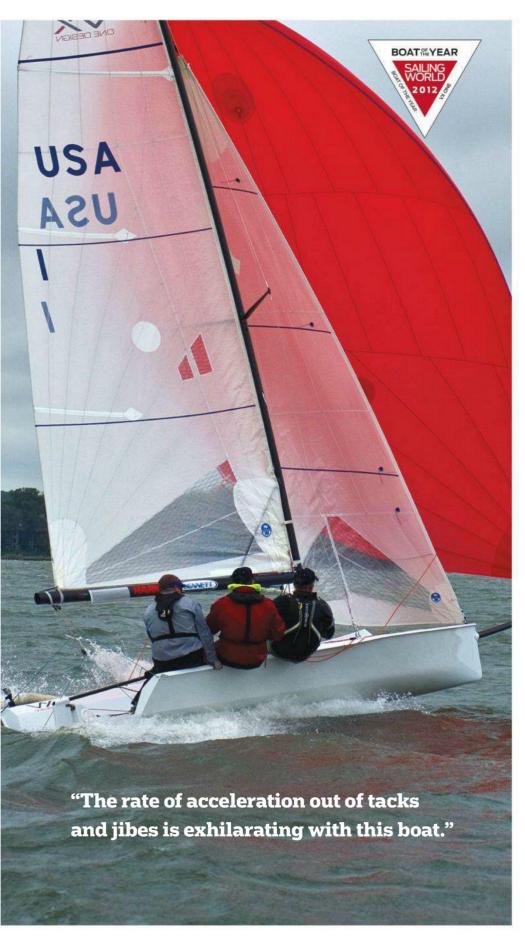
Allen felt three people in the boat would make a significant difference to the boat's balance and, sure enough, when we added another judge, the boat was flying,





THE VX ONE'S LAYOUT is clean and simple, allowing for fluid crew movement across the boat. Essential control lines are led outboard, and the single jibsheet for the self-tacking jib exits from a cam-cleat system mounted under the forward coaming. The main halyard is used to lift the aluminum keel.





popping through and over big chop. The mid-boom sheeting works well, Allen noted, although he'd personally prefer a floor-mounted block in order to get a better sheeting angle and improve his movement across the boat during tacks and jibes.

Setting up for a broad downwind angle, they hoisted the fractional kite, and when it snapped full the boat set off, literally humming down the bay, hitting the low 20s with excellent balance and control.

Earlier in the day, Bennett said he'd yet to see the boat turn turtle—and that it righted itself easily—but as the judges carved into their first high-speed jibe, with Allen on the helm, the tiller extension got caught in the mainsheet, and they quickly capsized to windward. Allen scrambled to get over the side and onto the keel, but was unsuccessful, and the keel bulb went skyward. Bennett then demonstrated how he could singlehandedly douse the kite and right the boat; the waterlogged judges watched from the support RIB.

Minutes later, with the mainsail's top panel plastered with Chesapeake mud, the three of them were off on another tear. "The boat was absolutely screaming, sailing to 24 knots comfortably," says Allen. "Great control. We had our weight as far back as we could pile it, and quickly realized that some foot straps [on the cockpit sole] would be a good addition."

"The rate of acceleration out of tacks and jibes is exhilarating with this boat," adds Davis, "and at high speed the boat flies like no other monohull I've sailed. The only thing that scares me is the proposed "performance package," with masthead kites, trapezes, and no keel bulb. That would definitely be an expertsonly program."

At the time of our test sail in October, Bennett reported having as many as 30 boats pre-sold at the introductory price of \$24,750, which includes an aluminum trailer with fitted fiberglass bunks (but not sails). With production expected to ramp up through the fall, said Bennett, we could see a half-dozen boats at the first class event, scheduled for March, and even a few more by the time Charleston Race Week rolls around in April.







BEST OFFSHORE ONE-DESIGN



Farr 400

Purpose: Grand-prix inshore Recommended crew: 8 Pros: Easily driven hull, sophisticated build and design, versatile **Cons:** Undrafted class rules **IRC TCC:** 1.243 Price as sailed: \$520,950

ous, as is the interior volume. For those who heed "the numbers," the boat's polar diagram shows a quick, well-rounded machine: in 15 knots, we're talking 8 knots upwind and 16 downwind at 150 degrees true. Its sail-area-to-displacement ratio is 40; the Farr 40, by fair comparison, has a ratio of 36.

With masthead spinnakers, carbon/ epoxy construction, and a 9.5-foot lifting keel, it's a powerful package, one that comes with a slew of concepts and gadgets borrowed from the custom, grand-prix realm. The deck layout uses a clever array of the latest hardware, all of

which makes for more efficient sail handling and trim adjustments. The offset foredeck and companionway hatches are the most obvious. The foredeck hatch, to port, allows a straight run aft for the spinnaker string-takedown system (with the spinnaker being pulled into a sock belowdecks). The hatch also allows for the retractable pole (angled downward for a longer spinnaker luff length) to be put on centerline. Primary sail controls and halyards are led to a single pit winch, which is tied into the all-important pedestal.

Belowdecks, the boat is a carbon cavern; only a Porta Potti forward and a web of bungees keeping control-line tails out of the cockpit. The test boat was not equipped or set up for distance racing, but with a short list of required essentials, it could be easily converted to offshore racing mode.

Premiere Composites, which builds the Farr 400 in Dubai, has plenty of experience building grand-prix raceboats, alongside intricate composite architectural structures, and the finish quality, the judges each agreed, was outstanding: all edges and exposed surfaces were faired, with systems run neatly. The attention to detail is true on deck as well. "It's the first time I've seen Dyneema lifelines properly fitted with smooth ferrules in the composite stanchions and railscritical little touch," says Davis. "And there's a myriad of adjustments to the jib

THE FARR 400 ONE-DESIGN comes loaded with trickle-down advances from custom raceboats. Above, the bright, cavernous interior, looking aft, shows incredible high-quality construction and attention to detail. At left, the deck layout is focused on a concentrated starboard pit area and offset port hatches.

to allow full control of sheeting angle and luff tension."

The twin wheels the 400 tested with are better suited to an offshore program, noted the judges. For a dedicated inshore program, the tiller option would be the way to go. With a quoted cost of \$520,950 to get a 400 commissioned and on the racecourse, the market for the Farr 400 is certainly a narrow one, but reduced costs of transportation compared to similar one-designs should be an attractive feature for the budget-conscious owner with international intentions.

With the lifting keel and two-piece carbon mast, the boat is portable on either a trailer or custom "flat-rack" (available from the builder), which would serve the concept of a grand-prix regatta circuit well. At the time of our testing in October, class rules were still being drafted, with no decision yet on professional versus amateur drivers, or how many professional sailors would be allowed. Given the powered-up nature of this boat, however, owners with serious intentions would be wise to budget a generous salary cap.



f you're looking for a boat to set Junior down the path toward an America's Cup multihull career, the judges recommend looking no further than the Topaz 14CX, easily the most exciting rotomolded catamaran to come along since the Hobie Wave. But parents be warned: you may end up "borrowing" it more often than you think.

The "CX" model is actually one of three that make up the Topaz 14 line, which was introduced in Europe in 2008. Using the same platform, the English builder (Topper International) offers three packages: the "C," the "CX," and the "Xtreme." The C has a basic Dacron sail combination: main and jib. The CX upgrades that with a 107-square-foot gennaker. The Xtreme model (meant for singlehanders) has a bigger Mylar mainsail and gennaker (no jib).

Topaz Sailing, of Annapolis, Md., now imports the 14CX exclusively, it being the most versatile of the three. The 14CX is designated for two lighter sailors. With our judges being on the heavier side, they jumped into the boat individually on a blustery 15- to 20-knot day. While they did don trap harnesses, they found handling all three sails kept them too busy to even think about getting on the wire.

Allen got first licks and tucked under the hiking straps to go upwind. It was easy to see there was excellent floatation in the hulls; the boat cruised over the short chop with some slight pitching, but a lightweight crew on the wire would have really helped balance foreand-aft trim.

Turning the boat downwind required a calculated three-step process: sit on the tiller extension to hold a steady course, take up on the single-line spinnaker halyard, and then trim the sheet straight from the ratchet block, which is mounted near the leeward shroud. After Allen set and trimmed the kite, he shot off with the first big puff, with his weight well aft. Each time he stuffed the leeward bow, the boat only paused before accelerating again. At the end of a high-speed run, he was huffing and puffing, with a big smile. The kite doused simply with three pulls of the halyard, which sucked the sail into its sock.

Stewart had a similar run, handling the boat with ease. When he conducted the "mandatory" capsize test —pitchpoling in the wake of our photo boat—he had no trouble righting the boat from turtle. There's a capsize line, and weight placed aft on the hull helped it pivot into the wind and come upright.

Rotomolded manufacturing has progressed over the past decade, and Topper's technique uses what they call a "Trilam polyethelene." This is essentially a three-layer material with a core, which, we're told, is stiffer than most rotomolded builds, and repairable. It also

BEST MULTIHULL

Topaz 14CX

Purpose: Youth racing and recreational sailing
Recommended crew: 1 or 2
Pros: Excellent buoyancy;
three-year hull warranty
Cons: Stock rope package needs upgrades
Price as sailed: \$10,000

contributes to keeping the boat light.

The beauty of a durable plastic boat, of course, is that you can drag the thing up and down the beach or onto the dock without fear of gouging the hulls. There are no daggerboards, so feel free, as did Stewart at the conclusion of his test sail, to point the bows at the beach, approach at full speed, let the rudders kick up, and step off onto dry sand—a move sure to impress.

In terms of rigging, the systems are foolproof-simple: twin or single trapeze wires, a roller-furling jib led to a cam cleat on the forward beam, jib sheets, cunningham, mainsheet off the aft beam, a spin halyard and retrieval led to cam cleats, and spinnaker sheets led to ratchet blocks. There's not a whole lot of setup, which means you'll be sailing off the trailer in 20 minutes or less.



very year, on lakes, rivers, and along coastlines, point-to-point races set off with hearty jib-and-main and cruising classes.

And most of these racing sailors at

heart know better than to set off on a craft that will leave them wallowing on the course long after the awards-party keg is dry. Yes, even for some cruisers, speed does take priority. And that's why, for this year's Boat of the Year program, we opened up the field to performance cruisers. Given the variety of boats in this category, with excellent offerings from a number of production builders, the judges found this group more complicated to get their heads around than they'd imagined. How to fairly weigh so much compromise, so much "stuff"? Yet, in the end, the boat that captured their attention on the water was the one that had impressed them most before the sails went up.

Maybe it was the Tartan 4000's air conditioning that cooled them as they pulled back floorboards to inspect the keel bolts during their inspections, or the lavish use of light cherry for cabinets everywhere on the boat. Maybe it was the "barrel chairs" or the plush berths that begged for an off-watch

snooze. Whatever it was, they knew that if the sailing test to follow confirmed their suspicions, the choice for their next cruising-class competition would be the 4000.

"It's a well-built boat of thoughtful design that is a step above the other performance cruisers of this genre," said

BEST PERFORMANCE CRUISER

Tartan 4000

Purpose: Cruising-class distance racing

Recommended crew: 8

Pros: Composite construction and mast package, comfortable interior, and deck layout

Cons: N/A

SA/D ratio: 20.5

Price as sailed: \$500,000

www.tartanyachts.com

Davis after sailing the boat in light wind. "The quality was the best in class: composite cored hulls and decks, infused with epoxy."

The boat the judges sailed was set up with a pair of rolling furling headsails—a self-tacking non-overlapping jib and a 150-percent furled reacher—and already

had plenty of miles under its keel, including the 2011 Chicago Yacht Club Race to Mackinac, in which it placed third in its 22-boat division (with a .914 ORR rating). Even after all those miles and a summer of cruising and demos, the boat appeared factory fresh.

Everything about this 40-footer is quality, including the stainlesssteel deck fittings and hand rails, teak toe rail, and carbon mast and "pocket boom" (both built in-house). However, while the builders tout the use of aluminum backing plates integrated into the deck laminate (to accept machine screws and thereby eliminate leak-prone through-deck fastners), the judges did take issue with this when one of the traveler track's screws pulled away from the deck while under load (which explains why, in the photo, the boom is not on centerline). But this was an issue that would be easily addressed with longer screws, and did not take away from the overall, impressive quality of the boat: the interior layout and house systems were deemed both clean and easy to access. On deck, smartly placed handrails made movement around the boat fluid, and the wide side decks left plenty of room for an on-watch crew to comfortably take up residence with a proper meal as the miles comfortably ticked away.









"I play guitar," he says.

"Cool," I say. "Do you have a band?" "Yeah."

"Nice. What do call yourselves?" "INXS."

Being an original member of a band that's sold 30 million albums, I soon learn, doesn't make you a big deal on Hamilton Island. The centerpiece of the Whitsunday Islands—which dot the Coral Sea between the continent's northeast coast and the Great Barrier Reef-"Hammo" is Australia's premiere island resort, and its annual race week has become THE event of the winter season for keelboat sailors and beautiful people alike. At the 2011 edition, Kirk Pengilly of INXS blends easily into a crowd that includes Academy Award-nominee Naomi Watts, Australian celebrities, French millionaires, and America's Cup heroes James Spithill and Iain Murray. The regatta and its myriad shoreside attractions provide ripe fodder for the national

press; in 2011, Sydney's Sunday Telegraph dedicates an entire page to the rumored philandering of television producer Michael Pell on the island.

But what's most impressive about

Facing, clockwise

from top: Robert

Oatley with wife,

Moran; INXS'

Valerie; chef Matt

Kirk Pengilly with

wife/surfer Layne

Beachley; Nicky

Tindall (left), ac-

tor Naomi Watts,

designer Collette

Dinnigan

Race Week isn't the exclusivity, it's the inclusivity. Alongside the super maxis and four-course menus, the recordsetting multihulls and five-star accommodations, you find momand-pop crews sleeping aboard family cruisers and beer-guzzling teams that wouldn't be caught dead at a fashion show. "We want to have a little something for everyone,"

says Sandy Oatley, an architect of the regatta's recent renovation. "We want to attract the super maxis, sure, but we also want to be accessible for the people who want to charter a boat for

the week, the family teams, people who are racing on a budget."

John Clinton is the type of racer Oatley has in mind. With his long, grey beard, Clinton could stand in

> as a member of the rock band ZZ Top. Which isn't too far off from reality. The 63-year-old is the drummer and vocalist for the Wolverines, a popular Australia country-music group. For this week, though, he's all about the sailing. With his wife, Kim, as navigator, Clinton has been making the 1,000-mile trek from Sydney Harbor to Hamilton Island for more than a decade. They treat the

scheduling stopovers at marinas near airports so John can fly off to gigs on earning money in the entertainment





industry and sailing up the coast is a bit of a headache," he says, "but we work it out."

The Clintons' Beneteau Oceanis 50 Holy Cow, with its black-splotched headsail, has become a staple of Race Week's Cruising 2 division. "We're fortunate to be one of the few cruising boats with a crew waiting list," he says when I join the gang for a midweek round-the-islands race. "We don't consider ourselves experienced racers, but we're always trying to improve our speed. It does us good as far as the cruising goes, because when you're doing 1,000 miles up the coast, you can save days if you trim your sails right."

Given the festive headsail and our mainsail trimmer's choice of evewear-green, Kanye West-style shutter shades—I assume we'll bring up the rear of our 39-boat division. But I'm quickly corrected as the crew executes a flawless jibe, nails the downwind start, and leads toward the first waypoint.

How to Go

One thing missing from Hamilton Island Race Week is a U.S. presence on the entry list, but organizers are trying to change that. In 2008, they introduced the South Pacific Cup, a grand-prix competition between twoboat national teams; they're hoping to welcome U.S. challengers for 2012. Interested? E-mail Rob Mundle (rob. mundle@bigpond.com).

Charter a Boat

For more budget-conscious teams from overseas, chartering is an excellent option. Sunsail operates a base on the island with a fleet of 11 catamarans and 25 monohulls, and Race Week packages include access to the daily dockside sausage sizzle. www.sunsail.com

Travel

U.S.-based flights on Quantas (www. gantas.com.au) connect through Los Angeles, and then it's 14 hours in the air to Brisbane or Sydney, where you catch a quick flight to Hamilton Island's Great Barrier Reef Airport. You won't be renting a car, as the only vehicles on the island are golf carts and chauffeured Audis. Everything's within walking distance.

Where to Stay

Some racers sleep aboard, but many teams rent one of the Palm Bungalows, starting at \$320/night. More upscale options include the Beach Club Resort or the qualia resort and spa. www.hamiltonisland.com.au



Like most Race Week participants, the Clintons come for the full experience—the thrill of racing in a competitive fleet amidst stunning scenery, the joy of forging new friendships and rekindling old ones, and the richness of sampling an array of cultural, social, and gastronomic offerings. John combs out his beard for the Moët and Chandon luncheon; for the crew costume contest, Kim dresses her team as jungle animals bound for Noah's Ark. "We're here to have fun," she says. "We race as hard as we can, but it's more about getting the crew together and exploring these beautiful islands."

amilton Island was a rocky, pine-studded sheep pasture when realestate developer Keith Williams began turning it into a destination resort in the early 1970s. He added an airport, built high-rise hotels, and dug a marina. In the fervor surrounding Australia II's victory in the 1983 America's Cup, Williams decided to host a regatta. The inaugural event took place in April 1984 and attracted 93 entries. Persistent rains prompted sailors to

dub the regatta Hamilton Island Rain Week in the Wetsundays. Of course, Aussies enjoy themselves no matter the weather, and the event became an annual celebration, with teams flocking from Queensland ports like Brisbane and Cairns to race and revel in the enchanting tropical venue. In the early going, it assumed the shape of a typical destination regatta, with amateur crews sleeping aboard racer/cruisers and socializing in the beer tent.

Williams went bankrupt in 1992, and the resort went into receivership. With the regatta facing an uncertain future, organizers made the prudent decision to move the event to late August, the heart of winter in the Southern Hemisphere, a time when sailors in the southern part of the country are eager to bask in the equatorial warmth of a place like Hamilton Island. Rescheduling also positioned the regatta as a logical encore for racers competing in nearby Airlie Beach Race Week. But Hamilton Island Race Week was still just a regatta.

The prospect of renovating HIRW to his own tastes was a key factor in Robert Oatley's decision to purchase the island in 2003. "My vision was to recreate the experience I've come to know in Porto Cervo," says the

businessman and yachting enthusiast, who spends his summers at Yacht Club Costa Smeralda on the Italian island of Sardinia. "I wanted to make it uniquely Australian, too. But first we had to dust off the property."

Oatley's "dust off" entailed \$300 million worth of upgrades to the island's infrastructure. He built several resorts within the resort, including the Beach Club—a "mid-range" hotel where rooms go for about \$700 per night and the exceedingly lavish qualia spa and resort. At the brand-new Hamilton Island Golf Club, on Dent Island, racers can spend the lay day knocking off a quick 18—golfing is one of more than 60 a la carte activities resort guests have at their disposal, others include ATV excursions, helicopter rides, and snorkeling the Great Barrier Reef.

Of all the improvements, the Hamilton Island YC is the most elegant. Architect Walter Barda designed it in a swooping, nautical style that marks another Australian masterpiece, the Sydney Opera House. On race days, spectators gather on the club's cantilevered deck to watch the fleet line up for the starts on Dent Passage.

The remaking of Hamilton Island has been a family affair. Sandy Oatley, Robert's son, runs the family business-



es on and off the island, and Sandy's daughter, Nicky Tindill, manages events for the resort. Together, they've made every effort to ensure that Race Week reflects the entirety of their vision. "We want to create an experience that's more than just racing," says Sandy Oatley. "We want the shoreside activities are just as stimulating as what's happening on the water."

Indeed, the social side of 2011 Hamilton Island Race Week is unlike any regatta anywhere. Each day's schedule brims with offerings for the senses—fashion shows, degustations, pool parties, wine tastings, gallery openings. Audi brings more than 50 cars to the island to serve as shuttles for the week, and competitors sign up to race the title sponsor's R8 sportscar around the airport runway. On the lay day, partway through the Moët and Chandon luncheon, guests migrate to the deck at qualia to watch a stunt plane perform aerial maneuvers.

On top of all they've done to accessorize the regatta, the Oatleys have

which includes a morning radio show and post-race video presentations.

The caliber of the competition is the draw for die-hard racers like Ross Muir, who could care less about the social calendar. "Most of the

on-shore activities are for the ladies," says Muir. "We come for the sailing."

Muir hails from Tasmania, but he runs a chandlery in Brisbane. For the past ten years, he and his brother John have chartered a boat and invited their Tassie friends. "You could say we need a bit more practice, but we've all known each other for 50 years. Be-

two separate starting areas, the committee keeps divisions on the move and congestion to a minimum. A team of photographers, videographers, publicists, and emcees documents the action for the regatta's extensive on-site media program,

> Hamilton Island YC (opposite) overlooks Dent Passage. John Clinton (below) of Holy Cow stars in our video postcard (sailingworld. com/hammo).

sails, spinnaker pole, and boom. Their resourcefulness paid off in 2011 when they broke the boom in high winds early in the week. "We fixed it using some welding equipment over at the airport, and we didn't miss a race," says

> Muir. "It's a lot easier to charter a boat, bring our gear over on the ute [i.e. "truck"], and rerig it when we get here. Plus, when the racing's done, you just get off the boat and fly home."

After taking first-place in Cruising 1, the team will return home with even more hardware. "[Race Week] is good because it brings us all together, just the way it used

to be," says Muir. "It's just like home, except it's snowing and sleeting in Hobart right now."

Late in the week, I hop aboard Robert Oatley's Reichel/Pugh 100 Wild Oats XI—which holds the course record for the Rolex Sydney Hobart Race and took line honors for the fifth time last January—for one more race through the islands. We're well on our way to line honors in an IRC A division that also stars Anthony Bell's Investec Loyal, Stephen Ainsworth's Reichel/Pugh 63 Loki, and Marcus Blackmore's TP52 Hooligan when skipper Mark Richards hands off the wheel and takes a place beside me on the rail. "Hammo is the beginning of our training for the Sydney-Hobart," he explains. "We use the regatta to work on our crew work, practice sail changes, and test the sail inventory. We figure out what needs to be tweaked."

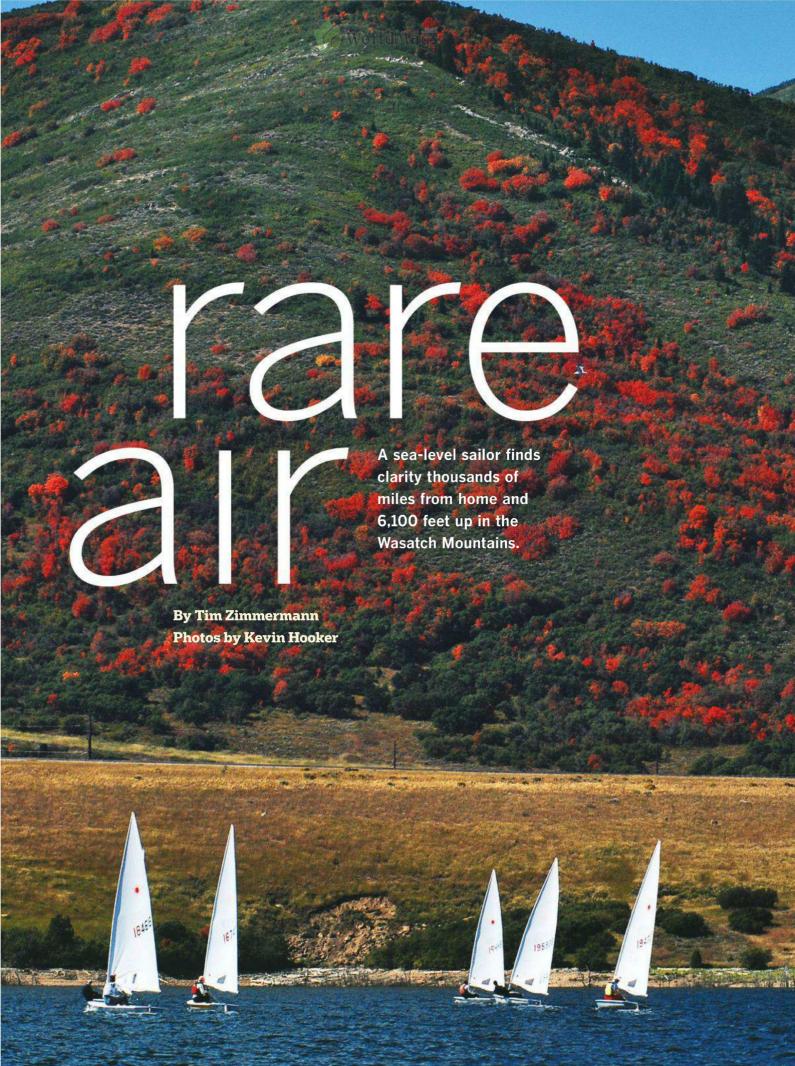
Richards words trail off. I follow his gaze to find a pair of humpbacks breaching within half a boatlength of our leeward rail. They surface, spout, then dip their lumpy heads, fanning their tails in unison. I want to reach for my camera, but I'm transfixed. Here I am, zipping along at 14 knots in a 12-knot breeze, riding the rail of a state-of-the-art raceboat, watching two of the world's largest animals put on a show in impossibly turquoise water, before a backdrop of blue sky and emerald islands. I'm in awe. Judging by their gaping jaws, so are my crewmates, for whom Hammo is an annual trip. Hamilton Island Race Week, it seems, always finds a way to put sailors in a happy place.

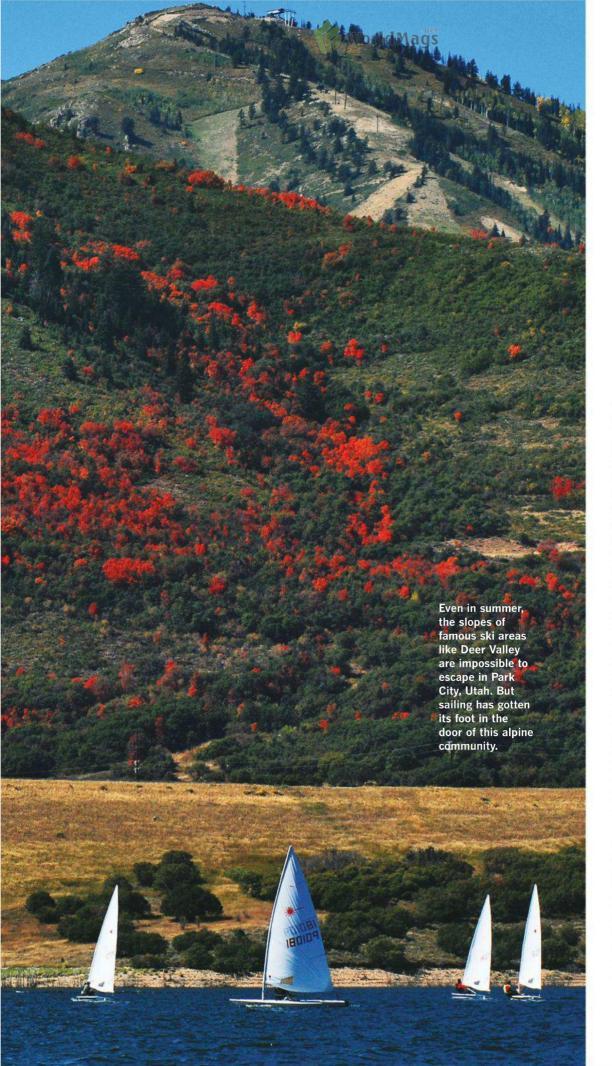


expanded the racing side of things, too. The 2011 schedule spans a full eight days, Saturday to Saturday, with a mix of windward-leeward and aroundthe-islands races. The 195 entries fill eight divisions, ranging from Laser SB3s to chartered Jeanneaus to the blazing-fast trimaran Vodaphone (ex Géant). The cruising divisions are the most popular, and the race committee likes to send the fleet on meandering courses that afford up-close views of the largely uninhabited islands. Using

tween us, we've sailed a few races," he says. "We're all geriatrics—the average age onboard is 66. We're all married, but we don't bring our wives because we don't want them to spoil our fun!"

Running on equal parts machismo and Cascade lager—Tasmania's finest-the Muir clan has established itself as the team to beat in the Cruising 1 division. They bring a truckload of spare parts and upgrade their chartered Jeanneau 49 with much of their own gear, including a folding propellor,





he smooth tarmac of Interstate 80 winds east out of the urban sprawl of Salt Lake City and straight up into the Wasatch mountains. It's September, and the air is crisp, cool, and dry. On the soaring canyon slopes above me, the scrub oaks are showing some red, and the Quaking Aspens are hinting that they are about to flash major color. I've made this drive to Park City before, but always in winter, with snow on the ground and skis in the car. This time is different. I'm not wondering how much powder might pile up over the next few days. Instead, I am wondering how squirrely the mountain breezes might be, and how altitude affects wind density. This time, I'm going sailboat racing, at 6,100 feet.

It's seemingly ridiculous that Park City should have a sailing club, much less one that is hosting a serious Laser regatta. Skiing, of course. Mountain biking, fishing, hiking, climbing, sure. But sailing? Well, it turns out that you should never

underestimate the power of a small group of dedicated sailors to plant the sailing seed just about anywhere. The Park City Sailing Association (PCSA), which sails on the nearby Jordanelle Reservoir, is just four years old and has everything from an active and rollicking Laser fleet to a juniorsailing program that last summer put more than 130 eager kids into 11 club-owned Optimists.

Geoff Hurwitch, who serves as PCSA president, got it all rolling in 2008, after moving from Vermont and car-topping his Laser across the country. He grew up sailing on Cape Cod, and figured there had to be a better way to sail than driving down to the Great Salt Lake YC. So he and his neighbor started PCSA and spread the word. "It was like Field of Dreams," says Hurwitch, who built a Moth in his living room last winter. "One by one people started showing up." By the end of 2008 Hurwitch had recruited 7 to 10 active Lasers. After a year, PCSA had some 30 Lasers involved, and today Hurwitch says there are about 70 Laser sailors in the area who show up for one PCSA event or another. (For his efforts, Hurwitch won US SAILING's 2009 One-Design Leadership Award.)

So maybe it makes sense that the North American Laser Class Association should choose to hold its annual No Coast Regatta in this mountain playground in Utah. It's definitely novel, I think, as I roll up to my decidedly non-rustic lodgings, the beautiful home of Chris Hartley and Ken Block, a Marblehead refugee who's become an active capo in the Park City sailing mafia. "But will it be great racing?" I wonder, failing to fully suppress my coastal sailing snobbery.

had sailed oceans, lakes, and estuaries (my home waters are the Chesapeake Bay). But I'd never sailed on a reservoir, and I have to admit to a certain skepticism as I navigated my way to the Jordanelle for the first day of racing. As I crested a hill on Route 40, the vast 3,300 acre reservoir—created in 1995 by a massive earthen dam that plugged up a canyon fed by the Provo River—spread out below me. I followed the signs into



"I really didn't care that much how I did, because nothing could detract from the pure pleasure of the sailing itself."

Jordanelle State Park, and down a winding road that took me past condos, then campsites, before ending at a Laser-filled parking lot on the reservoir's southwestern shore.

The Park City Sailing Association doesn't have much infrastructure just a dinghy corral and a 40-foot shipping container—but all you need are boats and sailors, and the parking lot was full of them. I paused to look out across the beautiful expanse of wind-ruffled water and deep into the vista beyond the dam itself. I scanned the scrub and tree-covered mountainsides that soared high into the endless blue sky above us. I noted the distinctive grassy slopes of Deer Valley ski resort to the east. It was a spectacular view, perhaps the most remarkable sailing venue I've seen. Already I knew one thing: this regatta would be something special.

The No Coast Regatta, which floats around western North America, has been around for more than a decade. It draws sailors from states far and wide because it offers grand prix points Laser-ites need to gain entry to top-level Laser championships. Twenty-nine sailors turned up for the 2011 No Coast Championship,





coming from states like California, Oregon, and Colorado. "It's interesting to come to a new place and sail out of your comfort zone," says Tracy Usher, president of the North American Laser Class, who came from the San Francisco Bay area and typically feasts on heavy air. "You have to figure things out."

As we sailed out onto the sun- and wind-dappled chop for the first race, I couldn't imagine a less generic sailing area than the Jordanelle Reservoir. That's a moment when you have to hope that the local sailors are friendly and generous—and they were. With a

few quick conversations I learned that the wind at Jordanelle is mostly a thermal, which pumps up as air from down in the valley gets sucked up into the canyon by the heat rising off the sun-baked mountainsides. The thermal creates a very nice southerly—which can top 20 knots on a hot summer day—that lines up perfectly with the dam and flows directly up over it (as opposed to coming across a high ridgeline, which would mean epic shiftiness). So you get unparalleled Wasatch views with the equivalent of a sea breeze. "In terms of mountain sailing, we have really steady wind,"

says Scotty Vermerris, who served as head instructor for the PCSA junior program in the summer of 2011.

The only puzzler, as I looked up the course at the weather mark set very close to the dam, was whether the pressure for the final approach was better on the left or right. I adopted the age-old strategy of newbie sailors everywhere: lock on to a good local sailor, and let him or her make the call. For the first race I tracked

Part of the fun of traveling to regattas is meeting new people. The author (No. 184618) chats with Park City fleet founder **Geoff Hurwitch** between races.

Jay Miles, a former All-American at the College of Charleston and J/24 World Champion. He definitely was heading left, so I went left, too. Unfortu-

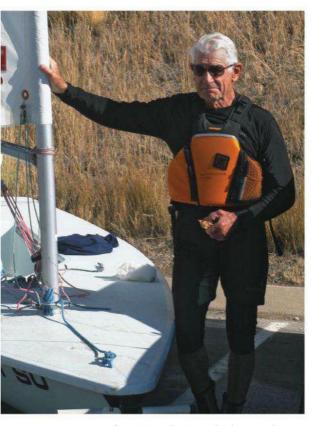
nately, that turned out to be wrong. Not disastrously wrong. But just enough to mean a mid-pack rounding. So much for an easy-to-diagnose race venue.

My first finish was a solid seventh. But as I crossed the line, looked up at the cerulean sky above, sucked in the fresh Wasatch air, and contemplated the surreality of racing Lasers against



a mountainous panorama, I realized something unusual: I really didn't care that much how I did, because nothing could detract from the pure pleasure of the sailing itself.

The wind stayed lightish for both days of the regatta, ranging from about 6 knots up to a comfortably hiked-out 12. I know lots of Laser sailors live only for full-vang, firehose-in-the-face, planing conditions. But as a Chesapeake sailor, I was in my zone. There was plenty of laughter and easy chatter between races. Block and his race committee efficiently fired off race after race



from PCSA's J/22, which served as an understated committee boat. I had mostly good starts and decent boatspeed, and that kept me knocking on the top 10.

On Day 2 it got (briefly) better. In the second race of the day, and seventh of the series, I committed left and carried good pressure all the way to the layline. I tacked onto port and saw a site every racer loves: the entire fleet framed in the window of my sail. I kept my bow on the mark. No light spots, no potholes, just clean air, the pleasant tension of hiked muscles, and a growing realization that I was in the lead. I rounded first, held on over the

course of a run that brought boats up behind me, and rounded the leeward mark still clinging to my lead.

All that remained was a short beat back to the finish. Visions of glory, and an unexpected bonus to the regatta, started to work into my head. All I had to do after rounding was hold my line on port tack, and keep a loose cover on the boats immediately behind and slightly to leeward. Simple. Except maybe I was thinking it was so simple I didn't concentrate fully. Or maybe the Paul Bunyanesque tales I had been hearing about the sailor behind me, 76-year-old Jim Christopher, were true. One moment he was tucked away safely. The next he was serenely sailing through my lee. "Surely he will asphyxiate under there," I told myself. "No way he will get bow-out."

But the chuckle of his bow wave kept advancing, and then, to my amazement, I was in his dirt and I

Jim Christopher, 76, still has what it takes to win a Laser regatta, as evidenced by his commanding performance at the 2011 No Coast Championships.

was the one starting to asphyxiate. I tacked away to clear my air, sailed into a hole, and lost Christopher and three other boats by the

time I limped across the finish.

My zen equanimity was suddenly hard to find. I forced myself to focus on the beauty around me, and tried to remind myself that I was Laser racing in Park City instead of mowing my lawn. Miles sailed past. "Did Christopher just sail through you to leeward?" he asked, with knowing bemusement. "Yep," I answered glumly, losing whatever therapeutic progress I had achieved by staring into mountain spaces for the past 5 minutes.

If anyone was going to snatch away my one shot at glory (brief as it would have been; I finished 10th overall), I'm honored it was Christopher. A great part of the joy of sailing far away from your home waters is meeting new characters, and Christopher was well worth the trip. He stands 5'6", weighs 140 pounds, drove to Park City from his home in Eureka, Ore., and has been racing Lasers since 1978. He has a kindly

face and is as self-effacing as they come. "Well, I just worked my way upwind, picking the shifts," Christopher shrugged when I asked how he was so consistently fast to the first mark. I didn't have the heart to ask how he had smoked me so badly after that leeward-mark rounding.

But Christopher carries himself with quiet confidence, and the ropy muscles which snake down his arms hint at surprising strength. He travels in a beat-up Chevy S10 pickup, camps out at regattas, and keeps a bicycle in the back so he can put in lots of road miles when he's off the water. Converse a bit with him and you'll learn that he has experienced everything from duty aboard an aircraft carrier to a second place in the Grandmaster category at the 1991 Laser Masters Worlds, For his skill at making a Laser go fast, and his embrace of all things outdoors, Christopher is known affectionately among the Park City Laser crowd as "Rambo." Block and the others crack themselves up embellishing his legend, joking that he uses barbed wire for a hiking strap, and has ground glass on the side-decks to improve the non-skid.

When he took home the winner's trophy, the whole boatpark was happy. And when the post-regatta swag raffle was conducted, everyone insisted that a reluctant Christopher claim the sweetest swag on offer: a brand new top cover. Miles and others then helped him install it to protect the road- and battle-scarred deck of his well-traveled #174350.

That perfectly captured the camaraderie and spirit of friendly competition of the No Coast Regatta (though there was also plenty of fouling—so the Wild West hasn't been completely tamed). Before I left, to head back to my coastal life, I asked Block why the Park City Sailing Association is thriving in its remote mountain hideaway. "There is no multi-generational legacy here," he told me. "We all came from Marblehead or France or wherever, and brought best practices here to create a melting pot." This March, when I look down at the Jordanelle from the top of a chairlift, for the first time I'll be thinking of Park City not just as a mecca for ski bums, but for Laser sailors, too.



WE SAIL FOR MOM



Lawrence R. Conlin, Captain, Team Casa del Mar, Columbia Yacht Club

When my Mom Virginia was fighting to beat Acute Myeloid Leukemia, her courage and determination were truly inspiring. Although she lost her battle, her courageous spirit continues to motivate us as Team Casa del Mar sets sail in the Leukemia Cup Regatta. We sail in honor of Mom and all cancer patients who everyday carry on the fight to beat cancer.

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The New Science of Sail Trim

Sail Tech by Andrew Scott

The integration of cameras, computers, and trimmers takes the guesswork out of getting sails set up correctly.

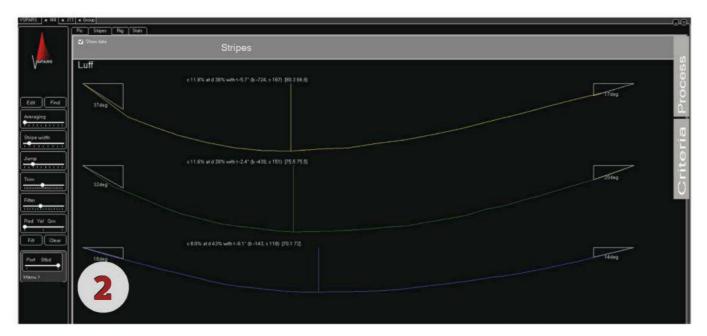
ith seven teams, the 2011 Audi MedCup TP52 fleet was smaller than previous years. But with fewer boats mistakes were magnified, and passing even a single boat was difficult. Going into the fifth and final regatta, Quantum Racing had just a 3.5-point lead, but we had a secret weapon we'd been developing for more than five months.

Halfway up one beat in that final regatta, the boat was going great on starboard tack. We tacked to port, and after sailing for a minute, sensed we weren't going as well. Realizing something wasn't right with our sail trim, Brett Jones looked at his wrist-top PDA, then relayed to main trimmer, Skip Baxter, that the mainsail was half a percent flatter on port tack, specifically at the middle draft stripe, and that he needed to power up the sail. A couple of slight adjustments later, we were back to full speed. The data on the trimmer's PDA was a feed from our VSpars RealTime system, a groundbreaking technology that streams sail-shape and trim analysis straight to the trimmers. The benefits of this technology are substantial.

Professional trimmers and sailmakers typically take pictures of sails in action and then later process these images on shore using a computer program that determines the sail's depth, draft position, and twist. Finding the correct setting for any given wind and sea state is a mix of art and science, and usually involves a lot of experimentation. The ability to quickly replicate fast settings is what separates the best boats from the pack, and that's where the VSpars program is so powerful.

For all its utility, the VSpars RealTime system is very light and non-obtrusive. Onboard Quantum Racing, we had a dedicated fit-PC—a compact, highly energy-efficient computer—stored below decks and three VSpars high-definition cameras, two for the mainsail and one for the headsail. The fit-PC is wired into the boat's network, so it receives all of our performance data—boatspeed, windspeed, true- and apparent-wind angles, heel, forestay load, performance percentages based on polars—and it time-stamps





- 1. BEFORE RACING, and when a new sail is hoisted, the first stop is the "Main" page (left) where the VSpars program can be tweaked to ensure it's picking up correct draft stripes. The three dots (above the head, above the lower spreader, and above the "B" in Sebago) frame the working area where the program looks for the draft stripes, which are bright orange or vellow. The vellow, blue, and green dots along the draft stripes are the data points the program uses to analyze the sail shape.
- 2. WHILE RACING, the program captures and digitizes a picture every three seconds, creating a draft profile for each sail. This information, for both sails, in text form, is relayed to the wrist-mounted PDA worn by one of the trimmers, allowing the them to access to precise sail-shape analysis during the race. This information can be used to ensure the sails are setting up the same on both tacks or to show where the sail shape requires adjustment when the boat doesn't feel fast.
- **3. AFTER RACING**, VSpars allows the team to sort through every photo of a particular sail and save those taken when the boat was going exceptionally well, or very poorly, for further analysis and future reference.

each picture so we can later call up the boat's performance data for any picture. Our mainsail cameras are mounted into the cockpit sidewall just underneath the mainsheet winches. The jib camera is recessed into the foredeck, just behind the forward hatch. That's it for the hardware.

Once the cameras were mounted, the



team took a full set of measurements to determine the precise locations of the cameras, using the center of the mast at deck level as the reference point. They also took measurements of the draftstripe locations on each sail and entered them into the computer, along with the sail type: jib, main, or spinnaker. Each camera has a calibration file to compensate for distortion caused by the curvature of the wide-angle lens.

When hoisting a new sail for the first time, we recorded initial pictures without any load on the backstay or sheets. This established where the draft stripes intersected the mast and headstay. This information enables the program to determine how much headstay sag or mast bend we are sailing with at any given time.

When the VSpars system is active, the cameras take a picture every three seconds and digitizes them, saving the pictures, sail-shape analysis, and the boat's performance data to a folder associated with the specific sail.

The software computes the sail's camber depth, location of maximum camber along the chord, twist, entry angle, exit angle, headstay sag, mast bend, and sag at each draft stripe in the sail. To take full advantage of the technology, we built the mainsails and headsails with three draft stripes each to give us the best overview of the sail while racing. The wireless PDA (which could be an iPhone or tablet) enables the trimmers to have real-time access to the sail-shape information.

Another powerful application is postrace evaluation of sail shapes, based on the boat's performance. We can load all the images from the day into one folder and, using filters, extract the pictures we



TECH REVIEW

need. By selecting specific pictures of sail shapes when the boat is going best (according to the boat's instrumentation), we are able to build a library of fast sail shapes. When the boat is underperforming, we are able to observe sail shape at that moment and determine if there's anything wrong with our setup.

Since the VSpars RealTime system saves the X, Y, and Z coordinates in

true dimensions, we are also able to take the draft-stripe data of the actual flying shapes and overlay them with our design-file shapes. We can then use this data to refine shape files for the next generation of sails.

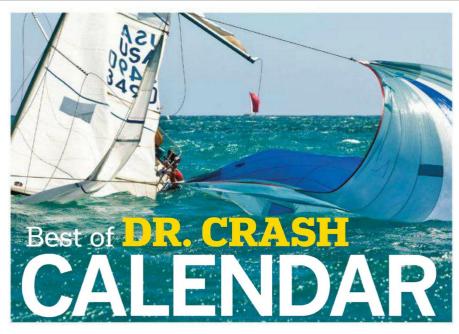
During the first MedCup event we only analyzed our sail shapes and setups at the end of the day, never looking at the VSpars data in real time, but by the



The heart of the VSpars system is a fit-PC and three cameras. Two mainsail cameras are mounted into the cockpit walls (above) while the jib/spinnaker camera is recessed into the foredeck just aft of the hatch. Each camera takes and stores a picture every 3 seconds.

time we were out for the first practice day at the second event in Marseille, France, we had a new mainsail to look at. To everyone's eye, the mainsail looked slightly different from tack to tack, and we needed to get the mast and sail setup perfect before we went in for the day. So, I grabbed my screen while we were sailing upwind, and sure enough, the entry angle at the top draft stripe was 5 degrees steeper on one tack over the other, and the main was setting up 0.5-percent fuller. We had real data backing up what we were all seeing. We adjusted the top spreader sweep and "D" tensions and went upwind again. The VSpars data showed us that this was a step in the right direction. We did this several more times and got the sail to set up identically on both tacks, with real data to confirm it. Without the VSpars system, we would've made slight adjustments on the water to get it close, but not perfect. We would've sailed in at the end of the day and then digitized all of the pictures. The following day, we would've had to go out and to do more rig adjustments to accommodate for any issues we saw in the digitized pictures.

The next step was to create a system that allowed the trimmers to view that information while racing, and once we did that we had one of the most advanced sail-trim tools ever created.



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TECH REVIEW

Shoot to Thrill

Electronics by Michael Lovett

Just hit "record" on these user-friendly, waterproof video cameras to bring your next race to your living room—and beyond.

ver the course of a yearlong test of compact video cameras, we recorded hours of racing, and reviewing the results confirmed the adage that our sport involves "hours of boredom punctuated with moments of sheer terror." You can view the highlights online (www.sailingworld.com/1201video), but we left most of the footage on the cutting room floor, where it belongs.

Of the cameras we tested—GE's DV1, GoPro's Hero, Drift's 170 Stealth, Contour's HD, and SailPro's Onboard Cameraeach weighs next to nothing and delivers crisp footage, stored on an SD or mini SD memory card. The cameras are either waterproof (GE, SailPro) or come with a waterproof case (GoPro, Contour, Drift).

The differences are in the lenses, the user interfaces, and the mounting options. Cameras with a wide-angle lens (GoPro, Drift, Contour, SailPro) can provide a broad view of what's happening on and around your boat. Those with detailed LCD screens (GE, Drift) are the most intuitive to operate, since you can scroll through menus with multi-directional

keypads, switch between still and video mode, and review your footage. On models without built-in LCD screens (GoPro, Contour, SailPro), testers found it hard to tell whether the camera was recording.

When choosing a camera, consider the type of boat(s) you'll be sailing, and where you'll mount the device. In our experience, the most practical location for mounting a camera on a keelboat is the stern pulpit, where it can capture all the action. No stern rail? SailPro makes customized stern mounts. The GoPro, Drift, Contour, and SailPro cameras came with several mount-



GE DV1

Cons:

Video Format: MOV (QuickTime movie)

File Storage: SD Card

Resolution: From 480 to 1080p HD

Price: \$129

www.general-imaging.com

Also consider: Coleman Xtreme HD

(www.coleman.com)

Pros: User friendly

Large LCD monitor

Waterproof Narrow field of view

So-so photo quality

Only an hour of battery life



GO PRO HERO

Video Format: MP4 (MPEG-4 movie)

File Storage: SD Card

Resolution: From 480 to 1080p HD **Price:** \$300 www.gopro.com

Also consider: Swann Freestyle HD (www.swann.com)

Pros: 170-degree, wide

angle lens

Compact size

Many mounting options

Cons: Tricky to operate

Proprietary mounting

system

Poor audio quality



SAIL PRO ONBOARD CAMERA

Video Format: AVI (Audio Video Interleave)

File Storage: Micro SD Card Resolution: 720p HD

Price: \$380

www.sailprocameras.com

Pros: Waterproof

Great for dinghies Lens sheds water

Cons: No LCD screen

Stern mount is unrefined

Hard to use

"I love working with Quantum because they have the technological horsepower to come up with the kind of fast, accurate solutions that are needed at this level. You can't fake the results they've achieved; you can only get those with

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Marcelino Botin, Yacht Designer & Partner Founder, Botin Partners

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TECH REVIEW

ing accessories. The GoPro mounts attach to the camera housing with a system of thumb screws and clips, which worked fine until we lost a screw overboard. Over time, we came to appreciate cameras with a tripod tripod socket (GE, Drift, and on Contour's waterproof case), which allows more flexibility with mounting accessories.

Of all the cameras in our test, the GE **DV1** is the easiest to use. Don't bother reading the manual; just turn on this Blackberry-shaped gadget and use your intuition—and the multidirectional keypad—to select your desired resolution, toggle between video and 5-megapixel camera mode, and review your footage. A flip-out USB connector lets you charge the device and download videos directly to your computer, or you can power up via the supplied AC adapter and access images from the SD card itself. One convenient feature of this shockproof, waterproof camcorder is the standard, 1/4-inch tripod socket, which gives you unlimited mounting options. The DV1's main drawback is



DRIFT HD170 STEALTH

Video Format: MOV (QuickTime movie)

File Storage: SD Card

Price:

Pros:

Resolution: From 720 to 1080p HD

\$349

www.driftinnovation.com

Lens rotates

Remote operation

Universal mount

Small LCD screen

Awkward waterproof case

Feels a little flimsy



CONTOUR HD

Video Format: MP4 (MPEG-4 movie)

File Storage: Micro SD Card
Resolution: From 480 to 1080p HD
Price: \$130 www.contour.com

Also consider: Replay XD 1080

(www.replayxd.com)

Pros: Rugged, low-profile

construction Rotating lens

Long battery life
No LCD screen

Hard to tell if it's record-

ing on sunny days
No still images

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its narrow field of view.

The **GoPro Hero** is the most compact camera we found, and it's no wonder this model is so popular with racers: the image quality is excellent, the wide-angle lens captures all the action on deck, and its waterproof housing can handle even the roughest, wettest conditions. But the absence of a detailed LCD screen means you need to study the manual, otherwise you'll have a hard time knowing whether you're in photo or video mode, or whether you're even recording at all.

As its name implies, the Sail Pro Onboard Camera is built for sailing, combining a lightweight, waterproof, bullet-shaped camera body with stern mounts designed specifically for the Laser, Optimist, Finn, 420, and 470. The carbon-fiber wand provides a coach-boat perspective and stays free of spray—and the mainsheet. The 170-degree, fisheye lens allows you to see the entire boat, distortion-free, and you can see yourself, too, even when fully hiked. One drawback is the difficulty of determining whether

the camera is recording. Press the button once, and a green light appears. Hold it down again, and there's a subtle sound signal and a red light starts flashing. Problem is, the green and red lights are hard to see in bright sunlight.

The Drift HD170 Stealth has all the features we want in an onboard camera: the LCD screen and multi-directional but-

tons make it simple and worryfree to operate, the 170-degree lens provides a wide-angle view and delivers high-quality footage, and the rotating lens and universal mount let you attach the device to your boat in

creative ways. The remote control comes in handy, eliminating trips to the camera in order to start recording. A minor flaw is that it's not easy to slip the camera inside the waterproof case. The company recently launched a smaller version, the Drift HD.

We put the Contour HD through a workout, strapping it to the booms of a Laser and Sunfish. With its waterproof case, it's practically indestructible.

Using the supplied software, you can connect to the camera's preferences and tinker with the resolution (there are four available: a switch on the back of the camera allows you to toggle between any two while filming), adjust the microphone sensitivity, and change the exposure.

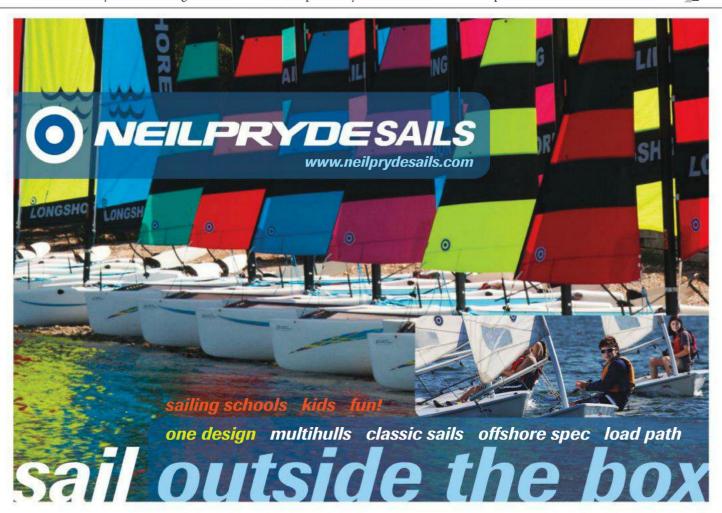
The microphone is all but useless when the camera is inside the waterproof case.

> The lights indicating the state of the camera (on, recording, error, etc.) are tough to see in sunlight, especially, for example, when mounted to the end of your boom. The camera does beep when

it changes status, but the alerts can be inaudible when it's windy and the camera is in its case.

SAILINGWORLD.COM

The video quality is crisp, and the shape of the camera makes it easy to mount and unlikely to interfere with your sailing. Since we began our test, Contour has discontinued the HD and launched the upgraded ROAM, which is waterproof to 3 feet without the case.





The Value of a Group Effort

Winner's Debrief by Craig Leweck

The long road to a world championship is often thought of as a lonely one. But it doesn't have to be.

he member lounge in the San Diego YC is typically the site of quiet conversations or restful reading. Last spring, it served as Ground Zero for five teams taking steps to excel in the 2011 Etchells World Championship.

The genesis for the group was earlier in the year when Bill Hardesty, who won the Worlds in 2008, started to focus his efforts on winning another title. I had the good fortune of joining Bill for this campaign, and I saw firsthand how he integrated a group of sailors and expert coach Ed

Adams, and how everyone benefitted.

While the purpose of our group was to be prepared to compete in the Worlds, our goal was really to be our very best for one week. It could have been any event. As with everything, what you put in controls what you get out. By working as a group, the end result was a cheaper and more effective effort than a one-on-one relationship between a coach and a single team.

One early key to the program's success was establishing a routine. At our morning meeting we would







10 Keys For Successful Group Training

- 1. Groups need leaders. Training time will be wasted without effective leadership, and everyone must buy into the chain of command.
- 2. Spend the necessary time planning. Create a training schedule that focuses on the ultimate goal.
- 3. Commitment is as important as ability. Every team doesn't have to be on the same skill level. However, too much disparity will negatively impact the group.
- **4.** Everyone must benefit for a group to succeed.
- 5. Be transparent on program costs.
- **6.** Every training day must have a purpose. Plan it well in advance.
- **7.** Establish systems and protocol—whether it's how to hook up the tow, how to line up for speed testing, or the length of practice-race starting sequences—to ensure time on the water has the maximum benefit.
- 8. Practice races are as important as speed tuning.
- 9. When it comes to group size, more isn't always better.
- 10. Develop routines for training and racing days. Try to make the two as similar as possible.

discuss the goals of the day. On the water, Ed would lead us toward fulfilling these goals. The afternoon debrief included observations, video, photos, and the plan for the next day. During a four-month period, we had 15 days of training and 12 days of competition. All of it was at the Worlds venue. The routine never varied.

Ed was there for 18 of those days. While we were able to move the program forward without him, we always got more accomplished with him present. We were more focused, more organized, and the days were often longer.

"There is no magic to this process," Adams said. "Just make every hour count. Get comfortable and confident in your sails and settings. Identify weaknesses,

whether it is with speed, tactics, strategy, or communications, and come up with solutions. Review each day thoroughly so the lessons become instinctive."

To maximize training time, we developed plans for things as trivial as picking up the towline to get out to the course, and getting our sails ready. Once we arrived at the training location, every boat had to be ready to sail. We didn't tolerate stragglers, and it soon became a test to see who would be ready first. Each boat carried a handheld radio to expedite communication. And while not every team in our group was at our level, each was fast enough to win a race at a major regatta. Everyone had qualified for the Worlds, and they were all committed to the process.

It's easy to get consumed by speed testing. It's a vital variable, but it's one of many. There were days we tested sails and other days when we tested rig tune. But nearly every training day on the water also included practice races. It's one thing to be fast when tuning, but it is much harder to carry the same pace into a race. Settings that work in a coordinated tuning line-up might not work as well when boats are tight off the start line. And the distraction of competition affects concentration.

John Pedlow had worked with Bill and Ed during the lead up to the 2008 regatta, and was back again for the 2011 Worlds. "Bill runs a tight program and served as a good role model for the rest of us," said Pedlow. "Ed has a



FROM THE EXPERTS



no-nonsense approach and is not shy about giving very direct feedback when you need it. We would sort of cringe when the coach boat approached us during a tuning leg, knowing that something wasn't right on the boat. Then we would fix it and go a little faster."

By pooling the resources of five teams, we were able to hire the best coach we could find. Ed is a two-time Rolex Yachtsman of the Year, a Star and Laser Masters

world champion, and an accomplished coach with an amazing eye for detail. For example, during one group tuning session, we moved our mast butt 5 mm back while Ed was helping another boat. When we lined up again, Ed noticed our main looked flatter down low. Heck, we couldn't even see the difference, and we were looking for it. He didn't know we made the change and he spotted it. Credibility is key for a coach. Ed has it.

2011 Sailing Schedule

March 3 to 6, 2 days of practice, 2 days of racing

April 7 to 10, 1 day of practice and 3 days of racing

April 19, 21-22, 3 days of sail testing and tuning

May 21-26, 2 days of racing and 4 days of tuning and practice races

June 8-18, 5 days of tuning and practice races and 6 days of racing

Totals: 15 days training and 12 days of racing

Having upwards of five boats in our program meant that we were not reliant on who else might be training on any given day. We always had the critical mass needed for tuning, upwind splits, practice starts, and short-course racing. We knew each other, and we all knew how to execute each plan. And while not everyone had the same needs, everyone's needs were met during the course of our practice sessions. Structure and routine ruled.





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FROM THE EXPERTS

Over the course of the program, there grew a sense of togetherness. With everyone attending the meetings, speaking openly of their experiences, and respecting each other, tiers were erased. It was not always apparent we were moving forward—relative to each other there wasn't a tremendous amount of change—but the group was always experiencing their sport at a heightened level as a team.

While our routine was vital, we also tried to manage our energy levels. The additional meeting time before and after

made any day on the water quite long. And, we were all balancing our sailing commitment against our other responsibilities. Balanced rest and practice time was an important consideration leading into the Worlds. The activity in the final

week at the regatta venue is intoxicating, and can lead to training even harder. But for a nine-race, six-day regatta, with



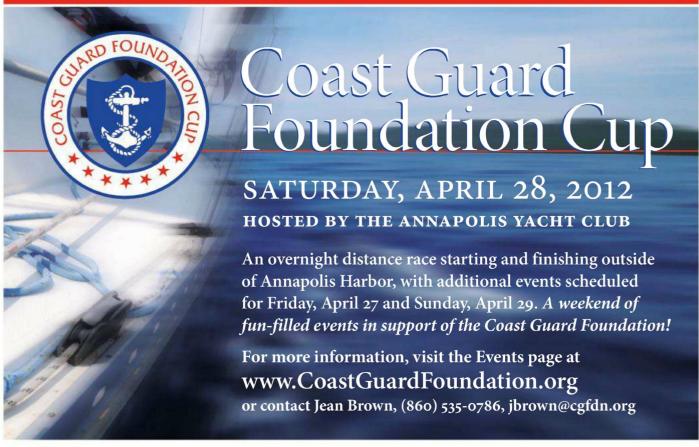
The author, along with skipper Bill Hardesty, Mandi Markee, and Steve Hunt (left to right) won the 2011 Etchells Worlds with one race to spare.

upwind legs in excess of 2 miles, it is also important to be mentally and physically strong throughout the event. We took a couple breaks in the week leading up to the worlds.

Bill had put together a program to win the 81-boat championship, and that is what we did with a day to spare. It was a bit bizarre

attending the afternoon debrief the day we clinched the regatta; popping champagne and swimming in the bay seemed more appropriate. But our routine was our routine. What I remember about that meeting was the genuine support that existed in the room. It was as if we had all won the Worlds, not just one boat. And when working with a group training program, that is the ultimate goal.

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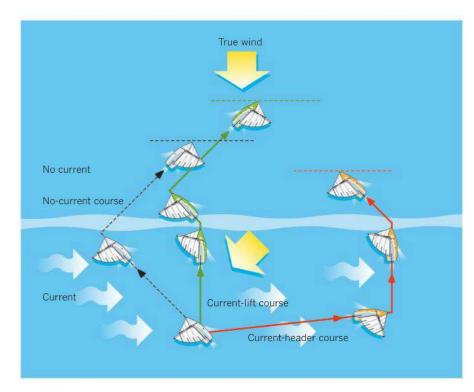


FROM THE EXPERTS

Current Affairs

Strategy by Dr. Gavin Dagley

The Doc and Racer Rob explore the vagaries of racing in current and get to the bottom of the myth of the leebow effect.



DOC: It's not very often I get to come out on the start boat.

ROB: It's not very often I get to come out on the start boat, either. In fact, if it comes to a choice, I'd rather be racing. But duty calls.

DOC: So how do you think they all look now with only a minute to go?

ROB: It's going to be a shambles. A pin-biased line and current running with the wind are going to create a pile of boats that won't make the pin-end layline. Then someone will panic and tack to port and ... What did I tell you? Why is it always *Godzilla* that creates all the grief?

DOC: You could see that coming, couldn't you?

ROB: I know a bit about how to sail in current.

DOC: Oh? Do tell.

ROB: I grew up sailing in the upper harbor, so there was always lots of current and often not a lot of wind. You sort of get a knack for it after a while. We'd get these hotshot sailors coming up to our club once a year thinking they could show us a thing or two. But Boris—he

must have been in his 80s—was about as cunning as they come, and he really knew how to sail in current. They never beat him.

DOC: So how do you make sense of what he did?

ROB: Boris had a great way of explaining how current worked. You see, racing in current is just ... well, there's no way of making it simple, really. But

Boris seemed to be able to explain it to us. He had these little sayings.

DOC: Yes?

ROB: He used to say that there were four things you need to understand if you wanted to sail current well. The first one was about exactly what we saw a moment ago on the start line. "Laylines tell lies when the current flies." You have to realize—and constantly make allowance for the fact—that current alters the shape of the racetrack.

DOC: How do you mean?

ROB: What you have to remember is you're sailing around marks that are fixed to the bottom. When there's current, sailing on the course is like being on a treadmill—and not just walking forward. This treadmill can run in any direction. Let me give you an example. On a start like the one we just watched, because of the current running the same direction as the wind, it seems as though you're slipping sideways—to leeward really fast, because you are. It looks as if the mark is moving upwind. It's not; you're moving downwind. But that's what it feels like. If you want to make it past the mark, then you have to set up a lot further to windward. If you use a layline based on where the bow is pointing, there' no way you'll make it around

DOC: Like *Godzilla*—then they panicked when they couldn't make

When current flows

across the course.

results. Because of

current at the bot-

tom of the course,

wind is stronger

and shifted right.

the boat's apparent

a current-gen-

erated windshift

it, and tacked on to port. Whammo! There's carnage at the pin.

ROB: So, any time you have current, it will affect laylines to anything that's fixed to the bottom, and that means you can't just point the boat at the mark—the boat will be crabbing one way or the other.

DOC: That's what hap-

pens on downwind legs when boats point straight at the mark, but end up sailing a huge curve.

ROB: Exactly. Sailing downwind, irrespective of where the boat is pointing, you need to work out what course to sail so that the combination of your heading and the current will move you directly toward the mark.

DOC: What is Rule No. 2?

The Viper 640 North American Championships 2012- 2014



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FROM THE EXPERTS

ROB: This one also catches people out all the time. Boris would say, "The less you heel, the more current you feel." That is, the effects of current change with the speed of the boat.

DOC: [pauses, eyebrows knitted] Go on.

ROB: How often have you seen a boat laying the top mark in adverse current, and then another boat tacks onto its air? The boat slows down and is no longer making the mark. As the boat slows, the current exerts a greater influence on its course.

changes with boatspeed. It was a Snipe race in light wind, and because the breeze was dying, the race committee decided to finish at the wing mark. The current was pushing up the course, against the wind. As the boats came down the final reach, they got slower and slower as the wind dropped, and compensated by pointing lower in order to hold bearing on the finish line. Boats were noticing the effects of the current and sailing lower to get some down-current distance "in the bank." The problem was, if they squared up too much, the boat slowed down to the point that they stopped stemming the current. In the dying breeze, only one boat realized that they had to stay high enough to maintain speed. They didn't try to put any "in the bank," they just went for speed, and managed to sneak across the line before the breeze dropped out.

ROB: I guess that shows how weird it can get. You really need to keep your wits about you, particularly in light winds and current.

DOC: And the third rule?

ROB: The only time you can exploit an advantage from current is when its strength or direction varies in different parts of the course. If the current is the same all over the course, then all you need is Rule No. 1. But usually there's some variation.

DOC: And to understand that you need to know about the contours of the bottom and the sources of the flow, like at a river mouth.

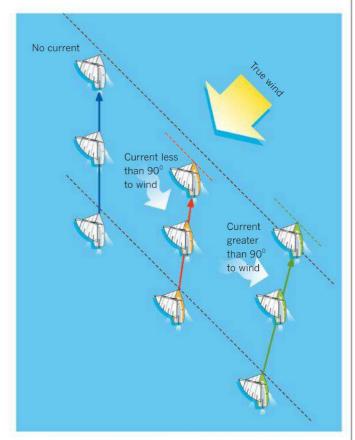
ROB: Bingo! The funny thing is, when you first think about how current flows, you would logically imagine it to be similar to how wind flows. Actually, it's quite different. When you compare wind flow to current flow, you'll see that you get much bigger changes, proportional, in both strength and direction of current flow than you ever do with wind. For example, between neighboring currents, you'll see speed differentials of 100 percent and direction varying by as much as 180 degrees. You wouldn't normally see such drastic differences with wind—well, that is except in very light winds with lots of obstacles. I suppose that's what current flow is most like—a very light wind flowing around lots of obstacles.

DOC: I'm betting that was Boris' strong point.

ROB: It really was. He knew every little change and wrinkle. When you get the sort of obstacles we had on that track combined with the current generated by tidal flows—which turn 180 degrees every six hours—then you can have current simultaneously flowing in opposite directions on different parts of the course.

DOC: So the rule is stay in the more "helpful" current, i.e., the stuff that pushes you toward the mark, at least a little, and out of the more "unhelpful" stuff. But if it's all the same—if there's no variation—then just sail the boat.

| WorldMags



Current creates a lift in the apparent wind, but when the current angle is less than 90 degrees to the true-wind angle it's not enough of a shift to compenstate for current flow pushing you away from the mark (center). When the current is greater than 90 degrees to the wind (right), it creates a shift in the apparent wind and is either neutral or helping you progress toward the mark.

ROB: Sounds easy, doesn't it? As Boris put it, "Current is like an old grudge. The only good current is behind you."

The trouble is, we think that trying to track the wind is hard, but working out what is going on with the current is harder. Even though we cant see the wind, at least we have sails and wind indicators to give us good information about which direction its blowing. But we don't have those tools for current. The only way to know for sure what's going on is to do the research—either with a current stick and fixed markers, information from hydrological services, or long years of experience.

DOC: As in Boris?

ROB: Boris.

DOC: OK. But none of this has been rocket science, really and you seem to have covered it all already. So what is this

ROB: Ah! Rule No. 4 is a tricky little devil, and it mostly applies in slower boats and light winds. The tricky part is that current effectively creates another wind flow, albeit a gentle one. Imagine you're sitting in your boat and there's no wind at all, but a 2-knots current is pushing you along. It will feel like you have 2 knots of wind coming from the opposite direction of the current—apparent wind. That's why, when you have a strong current flying up the course, it feels like you're sailing in great pressure; and if the current is flowing down the course in the same direction as the wind, you feel like you're down pressure all day.

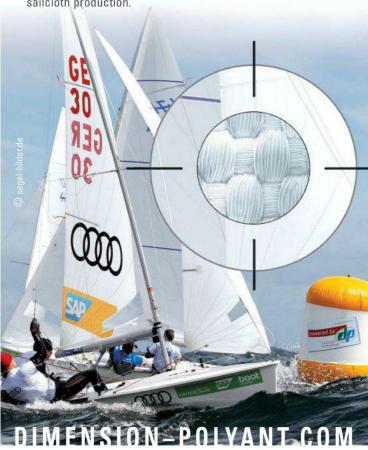


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FROM THE EXPERTS

DOC: So my reaction is, "Big deal!" **ROB:** Well, it can be a big deal in a cross current. A strong cross current creates a windshift—actually it's only a shift in your apparent wind, but it's real enough on the boat. Have a look at this picture [see diagram, p. 64]. Because of the current, the breeze is shifted right and strengthened at the bottom of the course, and is left-shifted and weaker when out of the current at the top of the course.

DOC: So the deal in this case is to head left until you are out of the current.

ROB: Yes, and the effect is more significant with stronger current, lighter wind, and a slower boat.

DOC: Don't you make a gain by taking the stronger current on the leebow anyway? It has nothing to do with a windshift, does it?

ROB: If it was nothing to do with a windshift, then we should see the same effect on motorboats as sail boats. In fact, there's no difference between going leebow first versus weather bow firstyou end making the same amount of

"A strong cross current creates a windshift actually it's only a shift in your apparent wind, but it's real enough on the boat."

progress upwind, albeit you end up a little further to the right in this case.

DOC: OK, so where did the "go for the leebow" belief come from then?

ROB: It's a bit like centrifugal force the fictional force. It's a question of really understanding the angle of the current. Let me explain. For there to be an overall benefit when current is between 45 degrees and 90 degrees to the wind, you have to get enough benefit from the changes to your apparent wind to overcome the fact that the current is actually pushing you backward down the course. Once you get the current to more than 90 degrees to your course axis—or 45 degrees or more to the boat's course—then you're laughing [see diagram, p. 67].

DOC: So upwind, current anywhere aft of 45 degrees to the bow [i.e., greater than 90 degrees to the wind is good.

ROB: Yes, because, by definition, it's helpful current—pushing you upwind. You see, the leebow myth arises because current on the leebow always feels great because you think you're getting a free elevator ride to windward. But you might actually be going backward, at least in terms of progress toward the mark.

DOC: Did Boris have a saying about

ROB: "A skinny leebow is just another way of going slow!"

DOC: But that isn't a rhyme or a metaphor.

ROB: Yeah, that always bugged me, too.



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FROM THE EXPERTS

In the Interest of Fair Play

Rules by Dick Rose

In an effort to improve rules compliance, rules experts are proposing changes that make protest resolution easier, swifter, and more equitable.

rom fleet to fleet, and event to event, there's tremendous variability in the level of compliance with "Sportsmanship and the Rules," the very basic principle underlying our sport. In some fleets, competitors adhere strictly to the turns penalties set out in Rule 44, while in other fleets compliance is spotty or even nonexistent. At some regattas quite a few protests may be heard, while at other events hardly any protests are ever filed. Consequently, the US SAIL-ING Racing Rules Committees has been studying this issue and discussing why there's not a higher and more uniform level of rules compliance.

The committee believes this is a serious problem for the sport, and, in an effort to improve compliance, is developing a set of alternative experimental rules. In the coming months, the committee will propose that these experimental rules be added as an appendix in the 2013 US SAILING edition of the racing rules, thereby improving the current rules in the following three ways in order to get at what it believes are the roots of the problem:

>> On-water penalties should more appropriately "fit the crime."

>> Alternative penalties that are substantially less than disqualifica-

SPORTSMANSHIP

Competitors in the sport of sailing are fundamental principle of sportsmanship tion should be available to competitors that come ashore after a race, consult a rulebook or a trusted rules expert and, before any official protest hearing, decide that they broke a rule and should accept a penalty.

>> A shorter, streamlined alternative to a full-fledged protest hearing should be available, particularly when several races are sailed each day.

In an effort to increase the acceptance of penalties and encourage the filing of protests, the racing rules committee drafted two alternative procedures for dispute resolution. The

first of these procedures is a system of optional penalties available to competitors that realize they've broken a rule. It's designed to encourage such competitors to take one of the penalties listed (see the box on p. 67). After an incident, the severity of the penalty increases in three "steps"

over time.

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Experimental Rule A1 would change the on-the-water penalty for breaking a rule of Part 2 to a One-Turn Penalty for most incidents. However, if the incident occurs in the three-length zone around a mark (other than a starting mark), the penalty remains a Two-Turns Penalty. This simple change is already in use in several fleets and clubs. It's an effort to make the penalty "fit the crime" better than the universal Two-Turns Penalty. If a boat causes injury or serious damage or gains a significant advantage in the race or series, her penalty will still be to retire.

Experimental Rule A2 would provide for a graduating penalty system that applies once a competitor comes ashore after racing. If the competitor reports to the race committee that he or she wishes to take a penalty, the competitor would receive a Scoring Penalty.

If the competitor files the penalty acceptance before the end of protest time, then the penalty would be a 20-percent Scoring Penalty. If the competitor requests the penalty after the protest time limit expires, but before a protest hearing on the incident, then the penalty would be a 30-percent Scoring Penalty.

A second, alternative procedure (in Section B) is an expedited hearing procedure similar to one used successfully in intercollegiate sailing. Rule B1 requires a competitor to notify the race committee at the finish if he or she intends to protest or request redress based on an incident on the water in the racing area. This enables a hearing to get underway sooner.

Rule B2 allows for substantially sim-

plified and shortened protest hearings that can be held at any time— on the water between races, on the dock when boats come in for the day, or in a protest room at the usual time for hearings. The purpose of the expedited hearings is to resolve

disagreements about the rules quickly and decisively. Organizers could use one or both of these alternative procedures by simply including rules A1 and A2, or B1 and B2, or all four, in the sailing instructions.

The Racing Rules Committee is currently asking regatta organizers and fleet captains to test either or both of the alternatives. Those who do try them are asked to report whether the changes helped achieve better compliance with the Basic Principle.

The committee is also seeking suggestions for improving these rules or for other approaches that might help improve compliance. So if compliance is an issue in your fleet, I encourage you to try them and send comments and feedback to rules@ussailing.org by May 1.

governed by a body of rules that they are expected to follow and enforce. A is that when competitors break a rule they will promptly take a penalty, which may be to retire.



ALTERNATIVE PROCEDURES FOR DISPUTE RESOLUTION

One or both of these alternative procedures apply only if the rules of Section A, Section B, or both, are included in the sailing instructions.

SECTION A

OPTIONAL PENALTIES A1 PENALTIES AT THE TIME OF THE INCIDENT

The first two sentences of rule 44.1 are changed to: "A boat may take a One-Turn Penalty when she may have broken a rule of Part 2 or rule 31 while racing. However, when she may have broken a rule of Part 2 while in the zone around a mark other than a starting mark, her penalty shall be a Two-Turns Penalty."

A2 PENALTIES TAKEN AFTER A RACE

- (a) After a race, a boat that may have broken a rule of Part 2 or rule 31 while racing may take a Scoring Penalty. Rules 44.1(a) and (b) apply when such a penalty is taken. Rules 44.3(a) and
- (b) are deleted and replaced by: "A boat takes a Scoring Penalty by informing the race committee in writing, identifying the race number and when and where the incident occurred."
- (b) If taken before the protest time limit, the penalty shall be a 20-percent Scoring Penalty. If taken after the protest time limit but before the start of a hearing of a protest involving the incident, the penalty shall be a 30% Scoring Penalty. The penalty shall be calculated as stated in rule 44.3(c).

SECTION B

EXPEDITED HEARINGS B1 INFORMING THE RACE COMMITTEE

A boat intending to protest or request redress based on an incident in the racing area that she is involved in or sees shall, at the first reasonable opportunity after she finishes, inform the race committee at the finishing line of her intent to protest or request redress and, when applicable, the identity of the protestee.

B2 CHANGES IN HEARING PROCEDURES

This rule applies to all hearings except hearings under rule 69. (a) If the protest committee is able to assemble the parties to a hearing before the protest or redress time limit, it may begin the hearing and may waive the requirements of rule 61.2 or 62.2.

- (b) Rule 63.5 is changed to: "At the beginning of the hearing, if there is no objection, the protest or request is valid and the hearing shall be continued. If an objection is made, the protest committee shall take any evidence . . . [no further change]."
- (c) Insert a new sentence after the third sentence of rule 63.6: "However, the committee may limit the number of witnesses, and the time during which parties may present evidence and ask questions."
- (d) The first sentence of rule 65.2 is changed to: "A party to the hearing is entitled to receive the above information in writing, provided she asks the protest committee for it no later than 30 minutes after being informed of the decision or coming ashore following the last race of the day, whichever is later."
- (e) The US SAILING prescriptions to rules 60, 63.2 and 63.4 are deleted.
- (f) Change the third sentence of rule 66 to: "A party to the hearing may not ask for a reopening."



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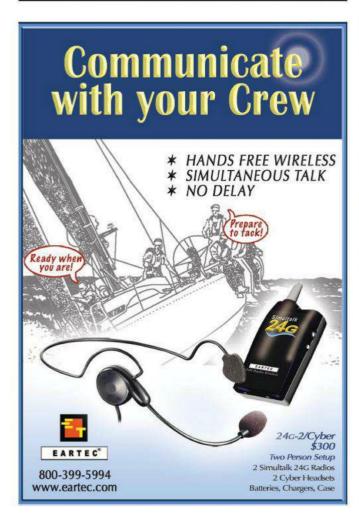
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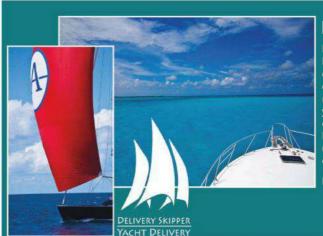
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Dear Dr. Crash,

We'd been practicing our aerials for months when fortune sailed into view in the form of a blue and white behemoth. We launched off a bit of chop, trimmed the sheets, and—to the amazement of the ship's crew—flew up and over the bridge. It was the best jump of our careers, but no one believes us, and the only photo was taken by a passing boater at lift off. How can we prove we pulled off the feat?

-BLASTED IN BALLYMORE

Dear Blasted,

Some moments in life are meant to remain private. Clearly, this is one of them. The general population isn't equipped to handle your exploits. In fact, you ought to be cautious with your story—such loose lips could be dangerous. The men in white suits are always lurking.

-DR. CRASH





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