David Dellenbaugh's
SPEED&Smarts™
The newsletter of how-to tips for racing sailors Nov/Dec 2009

An introduction from Greg Fisher

During a recent chat with David Dellenbaugh, I suggested he devote an entire issue of *Speed and Smarts* to how he won the 2009 Thistle Nationals. I thought that every sailor could benefit by hearing how David approached the regatta, which he won in convincing fashion. Actually, that's not entirely accurate. David and crew dominated the 84-boat event, beating the second-place boat by 42 points and winning five of the seven races!

Displaying his normal modesty, David wasn't totally comfortable writing about a regatta he had won. However, I guess I convinced him it would be valuable to do.

Rick Bernstein photo

Greg Fisher: Thistle sailor, sailmaker, multi-class world and national champion

What David has shared here is his step-by-step prescription for how to win a major championship. As a fellow competitor, I witnessed his team's pre-regatta boat preparation, the incredible and consistent boatspeed that came as a result, their equally consistent and low-risk starting approaches, and finally, their impeccable ability to nail a conservative tactical game.

David's comments will provide helpful info no matter what kind of sailing you do, whether your goal is indeed a national championship or your local Sunday fleet race series at home.

PhotoBoat.com

Greg Fisher is a five-time Thistle National champion. This year he sailed the Nationals with his wife Jo Ann and middle crew Jeff Eiber.

The story behind a championship win

This issue of *Speed & Smarts* is quite different from all previous 108 issues. It does not focus on one aspect of racing your boat around the course – instead, it tells the story of how my crew and I sailed the Thistle Nationals last summer.

The idea for this approach came from my long-time friend Greg Fisher, who raced against us in the Nationals. Greg suggested, and I eventually agreed, that it might be interesting and valuable to explain how we prepared for and sailed this week-long championship.

If you're wondering what a Thistle is, think of an International 14 on steroids, except there's no trapeze. It is 17 feet of light-air performance, and there were 84 of them at this year's Nationals.

But this issue is not about Thistles. It's about all the ingredients that went into what turned out to be a successful regatta. The story inside describes our thought processes and the lessons we learned about strategizing, starting, boat prep, tactical moves, speed testing and much more! All of these are important no matter what kind of boat you sail. •

ISSUE #109

Championship analysis

2009 Thistle Nationals

A strategic overview

Before sailing any regatta, I try to think about all the factors that could affect the way I race. Every sailing event is different and has a unique set of conditions that will impact the sailors. So it's important to piece together an overall strategic plan for how to sail that regatta.

Here are the factors that were on my checklist during the weeks and days before Thistle Nationals:

No throwout races – This is a fixture at Thistle regattas. It places a huge premium on consistency and meant we would have to avoid any major mistakes. We couldn't risk an OCS at the start, sail into the wrong corner on an upwind leg, or have an equipment failure. We needed to be conservative by staying clean and generally in the middle, aiming to finish in the top five or eight rather than top three.

Light air likelihood – The setting for the 2009 Thistle Nationals was Long Island Sound during the first week of August. It is hot and almost never windy there during that time. Therefore, our boat, brains and bodies would have to be optimized for racing in light air and heat. In addition, the wind would likely be spotty and/or shifty. So we'd have to be attentive and work extra hard to be consistent.

Home waters – I grew up sailing on Long Island Sound near host Cedar Point Yacht Club, so in theory I had a "home field" advantage. Even though I have not spent much time sailing there in the past 20 years, my familiarity with that area made me feel more comfortable.

Tough competition – This regatta was shaping up to be one of the tougher Thistle Nationals I have sailed. There were five other former national champions racing, and two of those (Greg Fisher and Mike Ingham) had won this event five times each! There were also a bunch of other very good sailors, so we had to come out of the starting gate fast, and we couldn't focus on beating just one or two other boats.

Current – We knew the current would be relatively strong during the times we were racing, especially farther out in the Sound where our course would be set. If the wind was light, the current would be even more of a factor. This didn't affect our overall strategy, but meant we would have to prepare our mind-set to deal with moving water.

The course – Thistles always sail the same course at Nationals (*see left*). Two things are significant:

- The length of the first windward leg is required to be between 1.2 and 1.5 miles. This is pretty long, especially in light air, and it had two implications: 1) Speed would be important; and 2) The boats were going to get very far apart on the beats (with a lot of leverage).
- There would be two long reaches in the early part of each race, and these would present a challenge for any boats who weren't among the leaders at the first mark.

The Course: The Thistle Nationals course is always a triangle - windward - leeward - windward with the start below the leeward gate mark and the finish about a third of the way up the beat. The first leg must be between 1.2 and 1.5 miles long, and courses cannot be shortened. The only flexibility is that the turning angle at the jibe mark can be either 90° (right isosceles triangle) or 60° (equilateral).

Format and Scoring: The boats at Nationals are divided into four groups that sail three qualifying races (every group races each of the other three groups once). These scores are then used to divide the fleet into a Championship Division (top half) and a President's Division (bottom half). Both of these divisions then sail four more races amongst themselves (both fleets on the same course). The Championship fleet keeps all their scores from the qualifying series, and there are no discards.

The 2009 Thistle Nationals were sailed on Long Island Sound out of Cedar Point Yacht Club in Westport, CT. I raced with my wife, Susan, as forward crew and Jay Lurie in the middle. Susan has sailed eight previous Nationals with me. Last summer was the first time Jay and I had sailed together, but he has raced many boats very successfully including Lightnings, V15s, Interclub Dinghies and Thistles. My Thistle (#3825) is more than 20 years old! PhotoBoat.com

The importance of speed – Because the windward legs were so long, good upwind boatspeed would be critical. This was accentuated by two factors: 1) The wind was light, which made the beats even longer; and 2) In many races, the current was going with the wind, so the beats were longer still.

Since most Thistles go about the same speed upwind (this is one reason why they are a fun, tactical boat), even a small edge in speed or pointing could be significant. And speed was also important during the series for getting from one area of pressure to another.

Regatta format – Though the first three races of the regatta were used to qualify for a Championship and a President's fleet, the top boats had to count all these scores. Therefore, it would be important to sail smart from the beginning and to give each race equal importance.

Another traditional feature of Thistle Nationals is that both fleets race on the course at the same time (each with a separate start). This meant a couple of things: First, we would likely be able to use boats in the fleet ahead to help see what the wind was going to do. Second, there were going to be times when we'd catch up to the fleet ahead, and our most useful tactic might be some sort of 'traffic management.'

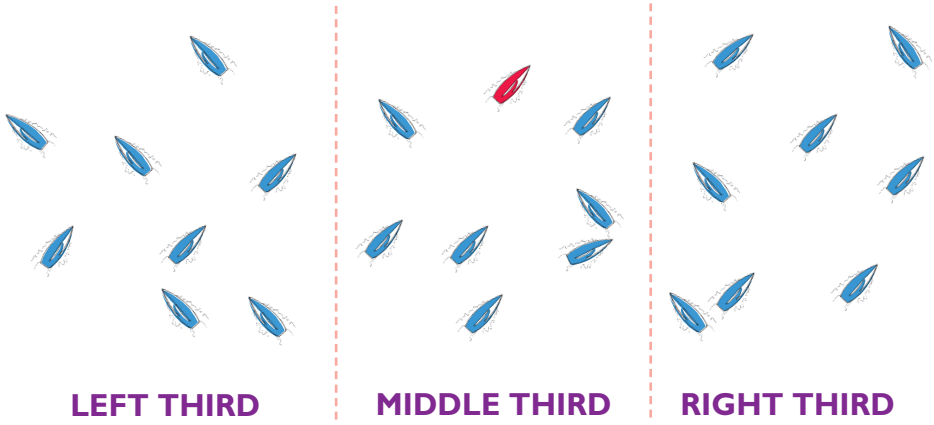
The rules – Between the class rules, notice of race and sailing instructions, certain rules affect how we sail a regatta. Here are two examples from Thistle Nationals:

• Hailing OCS – The race committee was planning to hail boats that were over the line early. This was good news for people like me who tend to start close to the line and want to avoid an OCS.

• PFDs – Though every boat was required to carry PFDs, these did not have to be worn. I felt strange sailing without a life jacket, but it kept catching on the boom during tacks so I raced without it.

All of these factors (and others not listed) are things we considered as we prepared for and sailed in the Thistle Nationals. In the end, our essential strategy sounded a lot like many other regattas – go fast and avoid risk. If only it was that easy to do on the water!

Upwind positioning to minimize risk



One of the regattas we sailed to practice for the Nationals was the Thistle Atlantic Coast Championship in Annapolis. In that regatta, we lost a lot of boats in two races by getting too far to one side of the last beat. We allowed the boats behind us to get too much leverage, and when the wind shifted they passed us.

We knew that with our good speed we didn't need to take chances like this, so one of our goals for the Nationals was to better defend ourselves against the boats behind. There were two ways we planned to do this. The first was simply to be more aware of the location of the rest of the fleet. The second was to do a better job of staying between those boats and the next mark.

My target was to sail in the middle third of the fleet as much as possible (above). Since each race at Nationals had about 40 boats (half the boats in the regatta), we tried to keep at least 10-15 boats (one third of our fleet) on each side of us during the beats. In other words, we tried not to let more than 20 to 25 boats get very far to either side of us. This helped us keep track of the other boats and avoid being too far on the wrong side of a windshift.

In hindsight there were a couple beats when we might have been better off going farther to one side, but at the time that seemed unnecessarily risky. Our plan to minimize risk, get to the windward mark in the top pack and slowly gain boats from there worked pretty well. Of course, this was a lot easier because of our speed.

Preparation is everything *(almost)*

A number of years ago, I read a quote from four-time Olympic gold medalist Paul Elvstrom. His words seemed so true they have stuck with me ever since. He said, "The good sailors all know how to race very well, but the champions have won the regatta before the racing even begins." In other words, preparation (i.e. everything you do to get ready for the start of the first race) is super important.

Unfortunately, I didn't have time to do a ton of sailing before the 2009 Thistle Nationals. We did race two regattas earlier in the summer and spent several days practicing. But for the most part I had to rely on what I learned during many prior years of sailing Thistles.

However, in the weeks leading up to the regatta I did spend a lot of time preparing my boat and mind. Here are some of the things I did.

PhotoBoat.com

From current and tide charts, we knew the moon would be full exactly in the middle of the Nationals and that maximum ebb current would happen during the middle of each race day. Therefore we expected to be sailing in a lot of current (maybe more than a knot) in our racing area on Long Island Sound.

This did not really change how we prepared our boat, but it did get me ready mentally for the possibility that current could be a significant factor during the regatta (especially since the prediction was generally for light wind during the week).

Working on boatspeed

Good boatspeed wins races and also provides a confidence boost, so I spent most of my preparation time trying to make my boat faster.

Sails – I bought new sails in early summer (the class allows only one new suit of sails per year) and used them in one light-to-moderate weekend regatta. They were fast (and were 'broken in' just enough), so we saved them for Nationals.

Tuning – I spent a lot of time getting the rig tension, rake and mast bend just right. Then I marked all the settings clearly and carefully taped everything in place.

Hull – Three days before the Nationals, we turned the boat over on the grass and did a thorough bottom job using 800-grit wet/dry sandpaper, rubbing compound and teflon polish. Then, each day on the way out to the race course we used our sponge to wipe harbor scum off the waterline. We also worked hard to prepare the boat for light air (*see next page*) and to make sure the hull was at minimum weight.

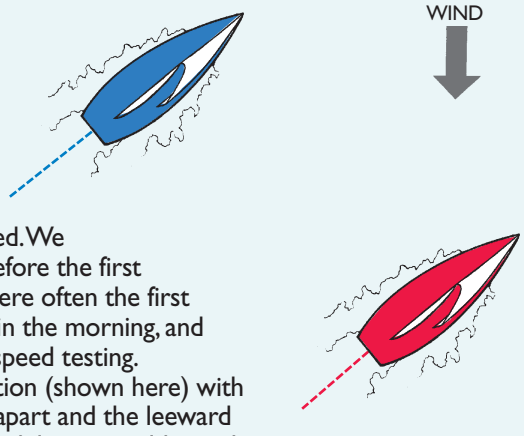
Avoiding breakdowns

In a no-throwout series (or any other series for that matter), the last thing you want is a breakdown while racing. So we spent a lot of time before the regatta going over anything on the boat that might possibly break.

We replaced the vang line, checked all the hiking strap knots, installed a new universal for the hiking stick, used a retainer line at the end of the boom in case the outhaul broke, taped over any place where the spinnaker could have snagged and so on. We went over many of these things each day after sailing (and especially on the last morning when it was windy).

Even though I was on a mission to reduce weight in the boat, we always carried extra battens (in case

Speed testing for breakfast



In my opinion, good boatspeed is the key to almost every racing success. Because of this, we spent a lot of time making sure we were going fast. A couple weeks before the regatta, I talked with another fast team about working together on speed. We arranged to tune up together before the first start every day. The two of us were often the first boats to reach the race course in the morning, and then we spent a bunch of time speed testing.

We set up in the classic position (shown here) with the boats two or three lengths apart and the leeward boat slightly bow ahead. After a while we would switch positions and then switch tacks. In between tests we would sail downwind and discuss the test results, plus anything we learned about going fast in the existing conditions.

We also used these speed tests to learn about the wind. If the boat on the right side always gained, for example, we knew there was a good chance that side would be favored. I don't normally split tacks with another boat to see which side is favored because a) I don't trust the results of a one-shot test well before the race; and b) I'd rather spend my time working on speed. However, I do pay very close attention to what the wind is doing while we are testing, and I certainly watch other boats when they do splits!

Although I'm looking up at the mainsail in this photo, I didn't spend a lot of time doing that. During practice before the series I put a very visible reference mark on the mainsheet (using a black magic marker). With the mainsheet trimmed in, this mark was positioned near the turning block at the middle of the boom (so I could see it easily without looking up or down).

By the time the series started I knew right where this mark should be for acceleration, high pointing and so on. For example, I always trimmed the mark to a certain spot coming out of a light air tack, which meant I could look around at other things that were important. We did the same thing with the jib sheets.

Note that our weight is positioned very low in the boat. This didn't make so much difference in the flat water here, but it was very helpful when there was chop. Also, my crew are doing a great job of keeping their heads out of the boat, and each is focused on one of the helmsman's blind spots (behind the jib and behind my back). PhotoBoat.com

one broke or popped out of the sail), some tools and an extra spinnaker pole (in case our primary pole broke or went for a swim!).

Preparing mentally

I do not feel ready to start a regatta until I know my boat is fast and I have taken care of all loose ends. One of my favorite days of all last year was the Saturday before the Nationals when I spent eight hours working on my boat and tweaking every little thing that I had been meaning to do for a long time. At the end of that day I felt relaxed and confident and ready to go.

Besides the psychology of being prepared, there are a few other things I usually do to get ready mentally. One is to develop a broad strategic plan for the regatta (*see pages 2-3*). Another is to have a thorough understanding of all the rules that govern the event (e.g. the SIs, NOR, racing rules, class rules).

Finally, for long regattas like this it is very helpful for me to have certain routines, both on the water and off. For example, every morning I went to the club early so I could put the boat in the water without a hassle. This started the day calmly and let me relax before going out.

Getting ready for a light-air regatta

I grew up sailing on Long Island Sound and I know that summer regattas are usually light-air affairs. We guessed that the Thistle Nationals would not be too windy, so we optimized our boat for these conditions. Here are some of the things we did:

- Replaced the main and jib sheets with line that was lightweight, thin-diameter, low-stretch and tapered. The goal was to reduce friction (especially in the jib sheets) and weight (in the main and spinnaker sheets). We went with the thinnest sheets that we could still trim if it got windy.
- Removed the masthead wind pennant. We never really used this so we got rid of weight and windage at the top of the mast. We added ultra-sensitive cassette tape telltales on the shrouds.
- Sailed with a light crew. We weren't super-light, but our total team weight of about 455 pounds was slightly below the average crew weight at the regatta.
- Shortened my hiking stick. When we practiced in light air before the regatta, I had a hard time doing good roll tacks because the hiking stick kept getting stuck where the mainsheet meets the boom. So I cut several inches off the hiking stick (in a couple steps, testing each time) until it was easy for tacking but not too short for hiking. This made our tacks much better. In light air, tacking is key and a long hiking stick is not critical because the skipper doesn't need to hike.
- Kept our crew weight low and forward (*see photo*). We actually tied off the forward hiking straps so they were out of the way. This made it much easier for the forward crew to move around (e.g. during tacks) and to sit on the cockpit floor while we were racing upwind.
- Used silicone spray and teflon tape to reduce friction all over the boat.
- Carried a sponge while racing. Thistles have automatic bailers and are required to carry bailing buckets, but neither of those work very well when the boat is going slowly and there's just a little water in the bilge. A sponge is essential for keeping the boat dry and lightweight (and we kept it dry in a plastic bag until we used it)!
- Reduced weight in the boat. Before the regatta, we worked on the hull and mast to make sure they were at minimum legal weight. On the water, we carried as little gear as possible while racing. The same applied to food. We could get water bottles from the RC boats so we carried just a couple and drank mostly in between races. Our gear and life jackets (which did not have to be worn) were stored (in the middle of the boat) in a plastic garbage bag to keep them dry and light.
- Practiced in light air. All our practice days were fairly light, so we had a good chance to work on roll tacks, spinnaker sets, jibes and takedowns in these conditions.

2009 Thistle Nationals

RACE 1

Monday: First qualifying race. Southeast wind 3-6 knots. Mild right-to-left cross-current. Pin end favored. We started near the pin and immediately tacked to port. Slight left shift on the first beat. We rounded first. Just after rounding we rolled over the last boat from the fleet ahead, which then slowed the rest of our fleet, so we were able to sail low and extend a lot. We finished first.

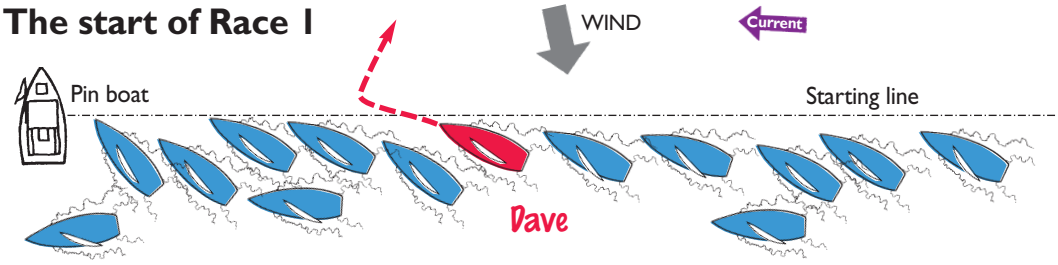
Even though I have sailed about 15 Thistle Nationals in the past, the first race always feels like a big deal. It is the culmination of our team's practice and preparation, plus it's the first chance to measure our boatspeed against sailors from all over the country.

In the Thistle Class, all races count and all are equally important. There is no preliminary series that you drop later, and there are never any throwout races. Therefore, you have to jump into the fire and treat the first race like all the other six.

Our goal for Race 1 was simply to start the series on a positive note. We wanted to get a good finish on our scorecard and not make any major mistakes. We also wanted to learn anything that might help us during the series. For example, how did our boatspeed compare to the top boats? If we weren't faster or at least equal, how could we improve our speed? We wanted to sort this out as early as possible.

Strategically, we decided to be pretty conservative. The first race of a series is not usually the time to take a lot of chances, and it made sense to minimize risk here for several reasons. First, we wanted to measure and work on boatspeed, ☛

The start of Race 1



The pin (port) end of the line was quite a bit favored in four of the seven races at the Thistle Nationals, including Race 1. Here's how we approached the first start:

The Situation The wind at the start of Race 1 was about 6 knots and the pin end was favored by 10 to 15 degrees. We had a moderate preference for the right side of the beat. There was a half-knot current flowing right to left as we looked upwind.

- The starting line was about 40 boatlengths long. If the pin end was favored by 10 degrees, a boat starting at that end would be about 10 boatlengths ahead of a boat starting at the other (starboard) end.
- The pin end of the line was a small anchored committee boat. The anchorline entered the water about 15 to 20 feet forward of the position of the orange flag. There were no good line sights visible beyond either end.

Analysis and Strategy Even though we liked the right side of the beat, we couldn't afford to start very far away from the pin end with such a substantial (10° to 15°) line bias. However, we did not want to start too close to the pin because:

- There would likely be a mess of boats right at that end;
- The pin-end committee boat would make it hard to get a clean start there;
- The problems at the pin boat would be compounded by the current; and
- We wanted to go right, so we needed to be able to tack just after the start.

For all these reasons, we decided to start just to windward of the pack at the pin and look for our first opportunity to tack and head right.

What happened Since the current was pushing us down the line, we set up on starboard a little farther from the pin than usual. We didn't have a line sight, but I was close enough to the pin to see the eyes of the person sighting the line. Usually I spend most of my time watching the competitor just to leeward of me, but since we wanted to tack right away I worked hard to stay up in front of the boat to windward. At the gun we were six boats from the pin and rolled into a tack right away!

Mike Ingham (#3969, the first boat on port tack) has started exactly where I like to be when the pin end is favored – just to windward of the pack at the pin end with the option to tack right away and cross the rest of the fleet.

PhotoBoat.com

In Race 1 we rounded the windward mark first and extended our lead by sailing the rhumbline on the first and second reaches. It was a huge advantage to be able to sail straight down the leg because the wind was light – the boats behind that tried to follow us got rolled by boats sailing high and fell into bad air.

In addition, the current was setting everyone to windward on the first reach. As a result, the fleet sailed a huge windward arc, with many boats having to jibe to get to the reach mark.

We were lucky to escape from the bad air of boats behind us, and we stayed on the rhumbline (in spite of the current) by using a range on shore behind the reach mark. This helped us sail a much shorter course than other boats.

so we had to be near other boats. That meant sailing in the middle of the fleet, not off to one side.

Second, there were six more races after this one, which meant we were certainly not desperate enough to take chances yet. If we had a fair or even a mediocre first race, we could still win the series. But if we banged the corner and finished 30th, that would be tough.

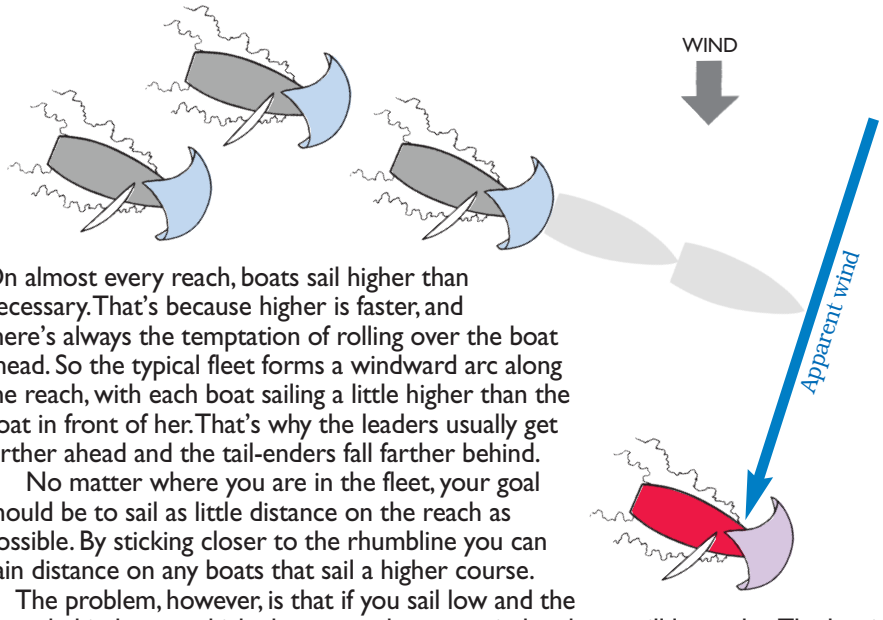
Third, there were no throwout races in the series! This is the main reason why we decided to play it safe by not pushing the starting line, staying away from corners, and avoiding any possible fouls.

The first chance to implement this strategy in Race 1 came about two thirds of the way up the first beat. We had started near the pin, tacked at the gun and led the fleet off the line on port tack.

After a few minutes on port, we began to get slowly lifted. A lot of boats had crossed our wake and headed left on starboard tack. In fact, half way up the beat there were only about 10 boats remaining to the right of us and 25 boats on our windward hip to the left!

Even though we did not have a great angle on starboard tack, we decided to 'spend' some of our lead to get between the pack and the first mark. This was lucky because the boats on the left kept gaining.

RACE 1: Strategy for gaining on the reaching legs



On almost every reach, boats sail higher than necessary. That's because higher is faster, and there's always the temptation of rolling over the boat ahead. So the typical fleet forms a windward arc along the reach, with each boat sailing a little higher than the boat in front of her. That's why the leaders usually get farther ahead and the tail-enders fall farther behind.

No matter where you are in the fleet, your goal should be to sail as little distance on the reach as possible. By sticking closer to the rhumbline you can gain distance on any boats that sail a higher course.

The problem, however, is that if you sail low and the boats behind you go high, they may take your wind and you will lose a lot. The key is to sail as low as possible while still keeping clear air in front of the boat(s) behind you. (There are also times, especially on broader reaches, when you might purposely sail lower than the fleet but we aren't considering those here.)

Reaching strategy at Thistle Nationals: With regard to boats behind us, my first priority on the reaching legs was simply to stay ahead of them. My second goal was to extend our lead as much as possible. In other words, we constantly tried to get farther ahead without taking a very big risk of being passed. This strategy was the same whether we were in first place or tenth. (We also had a plan for dealing with boats ahead of us – *see Race 4 on page 11.*)

To implement this strategy, I kept our apparent wind in front of the boat behind us by at least a certain distance. In steady wind, for example, I wanted to keep our apparent wind a minimum of two boatlengths ahead of the other boat's spinnaker (in shifty, puffy or surfing conditions this distance would be greater). Then I tried to gain on them by sailing a little lower than they were, keeping my apparent wind safely in front. This required constant effort and attention but often we could gradually pull away by staying closer to the rhumbline.

2009 Thistle Nationals
RACE 2

Tuesday: South wind 4-7 knots. Moderate right-to-left cross-current. Pin end slightly favored. We started toward the pin end and soon tacked to port. We played the middle of the first beat and were leading the race until we got a clump of weeds on our rudder. Rounded the windward mark sixth. Caught everyone but Greg Fisher on the second beat. We finished second.

Greg Fisher sailed very smartly around the course to win this race, and we finished just behind him. The critical moment came on the second beat when Greg was on our weather hip and got enough of a lift (*see next page*) to pass us.

I've spent a lot of time thinking about that situation. Specifically, could we have done a better job of 'covering' him? To be fair, there was one other boat in the picture, so we couldn't simply match race Greg. However, I think there were some psychological factors at work here.

When I have a chance to make gains on other boats, I usually try to get as far ahead as possible. This makes sense because the farther I am in front of them, the harder it is for them to pass me.

However, sometimes I probably try to get too far ahead or gain too much distance all at once. This can lead to problems because it is hard to make a large gain without taking a significant risk. And whenever you take a significant risk you can easily lose distance.

In the situation with Greg, all we had to do was stay ahead of him by a slight bit. But instead I allowed (actually, forced) him to split tacks. We thought we were going the right way and we wanted to get farther ahead so we wouldn't have to worry about Greg so much. Instead, we lost the gamble – he passed us and stayed there until the finish.

The moral is that, when you're racing one-designs, you only need to be ahead by a little. It is much stronger to be just slightly ahead of another boat than to be behind them. Once you get even a slight lead, you can sail conservatively and build this into a bigger lead.

That's one thing I've learned recently from match racing. As soon as you have a chance to get in front of the other boat, take it! This puts you in a very strong position with great odds of winning the race.

The same principle works when you are racing in a fleet. It doesn't matter how far you are ahead of other boats – you just have to beat them. I see a lot of boats sail to the side of a fleet, and then keep going! This doesn't make much sense.

If your side is favored, you don't have to go very far into the corner because you are already in good shape. And if that side isn't favored, then obviously you shouldn't go any farther that way than you have to.

PhotoBoat.com photos

Tacking to leeward and ahead of other boats

In Race 2, we had a good start and played the middle of the first beat. We also tried to stay in the middle of the fleet by keeping roughly the same number of boats on each side of us. When boats on the left side started tacking toward the middle (above), we tacked to leeward and ahead. This kept us fairly close to them and gave us the option of staying on their right side or tacking and going left. That's why I feel the "fleet lee-bow" is often a strong tactical position.

It's a good time to tack to leeward and ahead of other boats when:

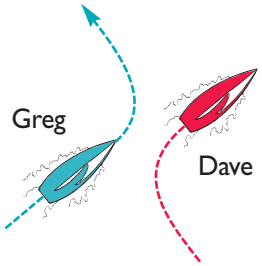
- They are on the longer tack to the mark. The closer you are to a side of the course, the more important it is to tack and lead the other boats back to the mark. The last thing you usually want to do is cross them and let them have clear air with their bow ahead of yours on the longer tack.
- They are lifted and you are headed. In an oscillating breeze, don't let other boats cross you. Tack to leeward and ahead so you will beat them to the next shift.
- You want to protect your side of the course. If you are on starboard tack and you think the right side of the beat is favored, for example, tack to leeward and ahead of port tackers so you stay on their right.
- That is your best chance to get a lane of clear air. When you converge with boats on the opposite tack, the most important thing is often keeping your air clear. This is especially true in light air. Before you let another boat cross you, look beyond them to make sure there will be a lane for you – otherwise tack to leeward.

RACE 2: Covering on the second beat

Part of my overall regatta plan was to avoid tactical maneuvering (e.g. tacking duels and luffing matches) with individual competitors. It's clear that focusing too much on any single boat means losing distance to every other boat in the fleet, so I tried to minimize these maneuvers, especially in the early part of each race. Our general strategy was to put ourselves in positions where we could use our speed, and to sail our own race as much as possible.

But three quarters of the way up the second beat of Race 2, we had a tactical opportunity and probably made a mistake. At that point we were one of three boats fighting for the race lead. The fourth-place boat was far enough back that we could afford a bit of tactical maneuvering. Here's the situation:

What we did

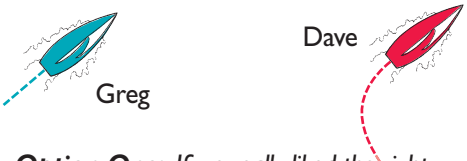


Tacking right on top of your competition may seem like a good way to 'cover' them, but all you do is force them to tack and sail away from you. That is usually just the opposite of what you want.

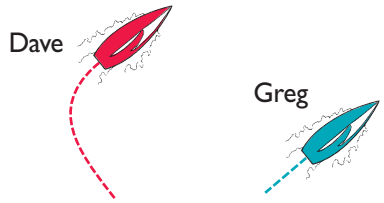
We were on starboard tack near the middle of the course, converging with Greg Fisher who was on port tack and about one boatlength behind us. Since we liked the right side (for pressure) and wanted to protect our starboard-tack advantage at the top of the beat, we tacked right in front of Greg. This forced Greg to tack for clear air; a minute later he tacked back to port on our weather hip.

For the next few minutes, we sailed fast. Unfortunately, the wind went a little left and Greg lifted up slightly inside us. When we tacked shortly before the starboard-tack layline, Greg crossed us by two lengths. He stayed ahead of us for the rest of the race and we finished second.

We were certainly happy with this good finish, but I couldn't help but wonder if we might have done even better if we had handled the last part of the second beat differently. Here are two options we had (*see right*).



***Option One**: If we really liked the right side and wanted to stay close to Greg, we could have tacked to leeward and ahead of him. This would have kept us on his right side with the starboard-tack advantage when we converged again. However, it would have meant doing two extra tacks before we finally converged, and he might have been able to lee-bow us on starboard tack.*



***Option Two**: The other way for us to stay in touch with Greg is to give him a 'loose cover' by crossing and tacking to windward. Though we give up the right side and a possible starboard-tack advantage, this is not a big risk if we tack before he gets too much leverage (i.e. separation from us).*

Picking a good time to tack and consolidate

After tacking to leeward and ahead of the boats coming from the left, we sailed on port tack for a while. During this time we focused on sailing fast and high, and we watched boats on both sides of us to see what the wind was doing. When we got to the right side of the beat and the boats on our right started tacking, we looked for a good place to tack ourselves. We waited for a puff that filled in to our left and then tacked to consolidate our lead on the left-hand boats.

It's good to tack and sail toward the boats to windward when:

- The boats to windward look like they are gaining. Another way to think of this is to sail in the direction where boats are more threatening (which usually means they have better wind). This does not apply to oscillating shifts – in that case it's better to sail toward the *less-threatening* boats so you are on the lifted tack.
- There are more boats to windward of you than to leeward. When you are doing well, protect yourself in the direction where you have more to lose. Even if you have to 'spend' some of your lead, it's often wise to put yourself in a position between the next mark and the bulk of the boats behind you.
- The wind is oscillating, you have just been headed and you can cross the boats to windward by tacking and sailing on a lift.
- The other tack becomes the longer tack. After sailing on port tack for a while, you will get to the point where you have farther to sail on starboard tack. The closer you get to the starboard layline, the more urgent it becomes to tack.

2009 Thistle Nationals

RACE 3

Tuesday: Last qualifying race. South wind 5 knots building to 10. Moderate right-to-left cross-current. We started near the pin and immediately tacked. Most of the fleet went left and we followed. Later we tacked to leeward and ahead of the pack on port tack, many of whom had overstood with the current. We rounded the windward mark first and stayed there to the finish.

Before this race, we didn't have a strong preference for either side of the beat, so we started near the pin because it was 'favored' by about 10 degrees. We were able to tack and cross all the boats that started above us and we continued on port for a little while.

However, we had a dilemma. It felt like we were lifted on port tack, but at least two-thirds of the fleet were on starboard tack, headed toward the left side. Every moment we continued they were getting more separation and leverage on us.

Among our crew, we had a non-stop discussion about which side of the course looked better. My daughter Becca, who replaced my wife as forward crew for the day, felt there was more pressure to the left. That, combined with our overall plan of staying near other boats and using our speed, convinced me to tack.

We sailed a long starboard tack by ourselves, trying to get back in touch with the pack going toward the left. Instead of sailing a normal high mode, I tried to foot slightly to get to the left faster.

As we continued on starboard tack, the boats on the left were gaining and it was clear we had to keep going that way. It must have been clear to everyone else, too, because nobody tacked and the pack sailed into the left corner together.

However, most boats went too far. With a left shift and moderate current going right to left, they were very close to the layline and there was still a lot of port tack! That's when we made a key move to lee-bow the fleet (*see below*).

The breeze built slowly during this race to about 10 knots by the finish, so once we got ahead on the first beat it was easier to stay there.

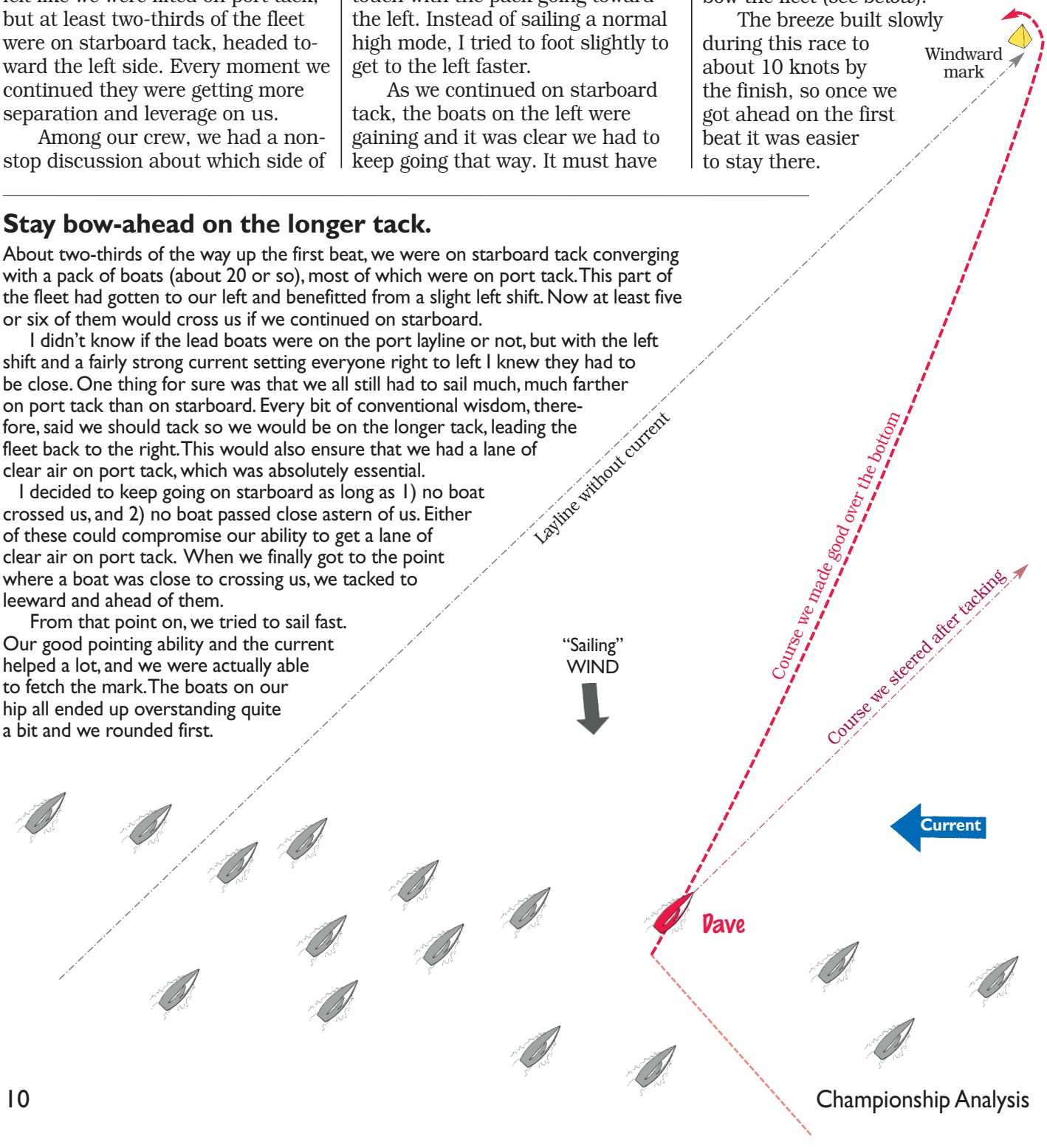
Stay bow-ahead on the longer tack.

About two-thirds of the way up the first beat, we were on starboard tack converging with a pack of boats (about 20 or so), most of which were on port tack. This part of the fleet had gotten to our left and benefitted from a slight left shift. Now at least five or six of them would cross us if we continued on starboard.

I didn't know if the lead boats were on the port layline or not, but with the left shift and a fairly strong current setting everyone right to left I knew they had to be close. One thing for sure was that we all still had to sail much, much farther on port tack than on starboard. Every bit of conventional wisdom, therefore, said we should tack so we would be on the longer tack, leading the fleet back to the right. This would also ensure that we had a lane of clear air on port tack, which was absolutely essential.

I decided to keep going on starboard as long as 1) no boat crossed us, and 2) no boat passed close astern of us. Either of these could compromise our ability to get a lane of clear air on port tack. When we finally got to the point where a boat was close to crossing us, we tacked to leeward and ahead of them.

From that point on, we tried to sail fast. Our good pointing ability and the current helped a lot, and we were actually able to fetch the mark. The boats on our hip all ended up overstanding quite a bit and we rounded first.



2009 Thistle Nationals

RACE 4

Wednesday: First race after fleet split. Southwest wind 3-7 knots. Slight current with the wind. Line even. We had a mediocre start near the middle and were just able to hold a lane to the left, but the wind shifted right. We rounded the first three marks 10th, then we passed 9 boats by staying in pressure on the second beat. We finished first; many top boats had double-digit scores.

This race was the turning point of the regatta for us. Though we had done well in the first three races, most of the other top boats had good scores, too.

Race 4 was the first race in the championship fleet, and we wanted to get off to a good start. But that didn't happen. We were late to "pull the trigger" at the gun, so the boats on either side got their bows ahead of us. Luckily we had a thin lane of clear air, and with our good speed we were eventually able to work our way back into the front row.

However, while we were doing this we got slowly and slightly lifted. This put us in good shape with the 15 boats to leeward of us, but we weren't looking so good on the 25 boats to our right.

Now we had to make a choice: Stay on the left, or tack and "bite the bullet" (i.e. take sterns) to go right. I thought I saw a little more pressure to the left and I wasn't convinced that the wind would shift farther right, so we kept going.

It's hard to say if this was the right decision. At one point we were as deep as 15th, but on our final approach to the windward mark we got a small lefty and rounded 10th.

The best news was that we had a little space between ourselves and the boat behind us. So when they went high on the first reach to defend against boats behind, we were able to hold low, keep our air clear in front of them and follow the first nine boats (*see diagram*).

This proved to be a critical move because it meant we were still in touch with the leaders when we all rounded the leeward mark. At that point the wind was quite light and spotty, so it may actually have been better to be 10th than top three.

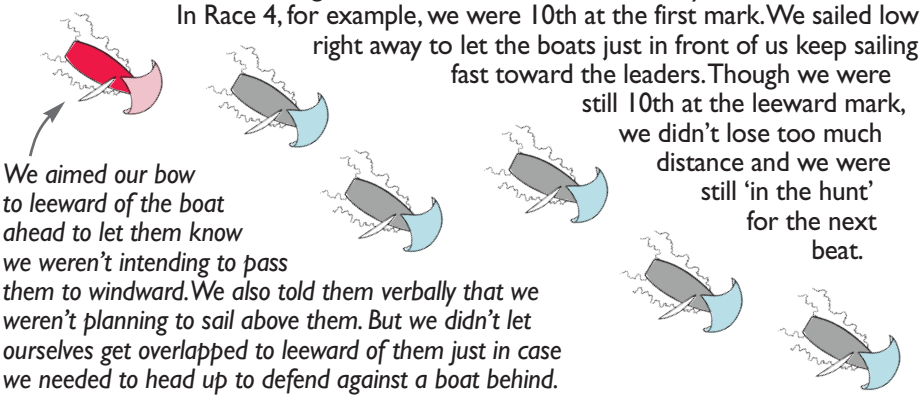
By watching the boats ahead, we positioned ourselves in the best pressure (*see right*) and caught all nine boats. This was huge for the series because we not only avoided disaster, but ended up first. Some of our rivals were not so lucky.

Following down the reaches

Most reaching legs are parades, but unlike a typical parade the line of boats keeps getting longer and farther apart. Reaches are great if you're ahead and bad if you're behind, and there are usually few opportunities to pass. That's exactly what happened on most of the reaching legs at the Thistle Nationals.

Our strategy for the regatta was never to try and pass other boats on reaches. If we were not leading the fleet at the windward mark, our only goal was to stay as close as possible to the boats in front of us. We hoped this would give us the best chance of catching those boats later, and that's usually how it worked out.

In Race 4, for example, we were 10th at the first mark. We sailed low right away to let the boats just in front of us keep sailing fast toward the leaders. Though we were still 10th at the leeward mark, we didn't lose too much distance and we were still 'in the hunt' for the next beat.



We aimed our bow to leeward of the boat ahead to let them know we weren't intending to pass them to windward. We also told them verbally that we weren't planning to sail above them. But we didn't let ourselves get overlapped to leeward of them just in case we needed to head up to defend against a boat behind.

PhotoBoat.com

Watch other boats to gauge wind pressure

On the light-air second beat of Race 4, we went from 10th to first by watching the boats ahead of us and using them to stay in the best pressure. You can learn a lot by seeing where other boats have their crew weight. In this photo, for example, both Thistles have the same amount of heel with their crew weight in almost exactly the same position. Therefore, they have roughly the same wind pressure.

On the second reach of Race 4, we looked ahead at the next beat and saw slightly more pressure on the left side. We guessed that most boats would go right because that side had paid off on the first beat. So our plan was to stay just left of the pack, go fast and try to 'connect the dots' between puffs.

This strategy worked almost perfectly. We got slightly left of the boats ahead of us, and we could see the pressure starting to fade on the leaders in the right corner. We ended up crossing them two-thirds of the way up the beat; at that point the boats on our left started losing pressure so we continued right and that paid off big.

2009 Thistle Nationals
RACE 5

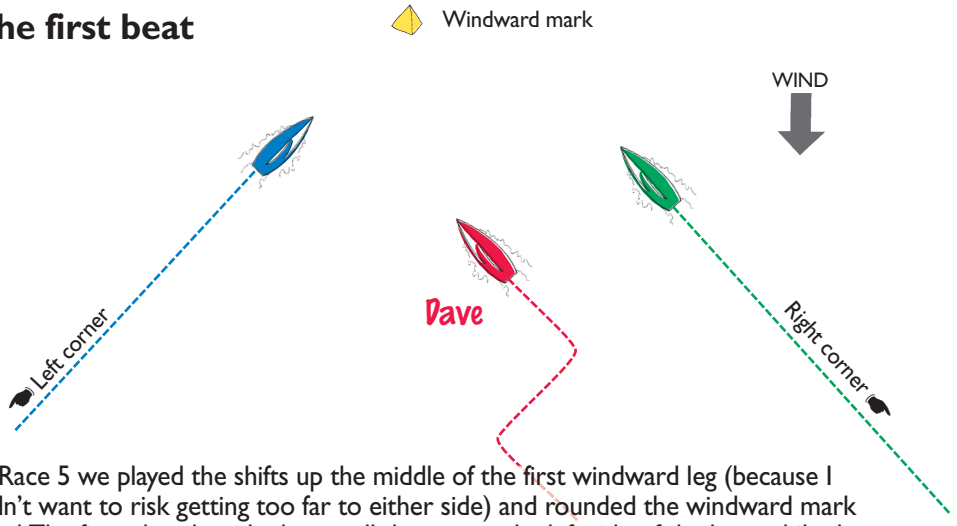
Thursday: West-southwest wind 4-8 knots. Slight current running in the same direction as the wind. Starting line even. We started poorly near mid-line and had to tack several times to get clear air. We found some good shifts in the middle and rounded the windward mark third. Stayed there on the reaches and passed two boats playing the middle of the second beat. We finished first.

We might have had a good start in this race, but 20 seconds before the gun a boat came from behind and squeezed into the hole below us. I guess, in hindsight, that we were trying to protect too much space to leeward. In any case, we should have been more proactive about discouraging the other boat from going in there (by bearing off earlier so they would go above us).

We had to tack shortly after the start and then we had to tack again to avoid a couple starboard tackers. Fortunately, we had really good roll tacks and we must have been in phase with the wind because after a couple more tacks we were near the front of the fleet.

My original bail-out plan was to head for the right corner, but once we were able to sail into clear air I decided to be more conservative. We had been making gains by tacking up the middle and this is often a sign that the wind is oscillating, so it felt OK to stick with this strategy.

The first beat



In Race 5 we played the shifts up the middle of the first windward leg (because I didn't want to risk getting too far to either side) and rounded the windward mark third. The first-place boat had gone all the way to the left side of the beat while the second boat went hard right. It wasn't completely surprising that boats beat us from both sides. In light air the wind sees the fleet as one large, long obstruction and tends to lift up over the sails. As a result, there is often less wind in the middle and more on either side.

We were able to make the middle work because we had good speed and, more importantly, because we were in the front row. This meant we were always sailing in clear air and could play every shift. If we were not able to do this, the middle may not have worked at all. In that case, I would have chosen one side (based on which way I could go with clear air and where I thought there was better pressure) and headed there as quickly as possible. However, that would have been much more risky than sailing up the middle and maintaining the ability to go either way.

PhotoBoat.com

Our goal in almost every race was to get a start that allowed us the option of continuing on starboard tack as long as we wanted. This meant we needed clear air and speed at the gun, of course. It also meant having enough space on our leeward side so we wouldn't get pinched off (but we tried not to hog too much space as we approached the start since that would attract other boats). We also set up for the start so we didn't have a fast boat to leeward. The last thing we wanted was to come off the line with someone like Greg Fisher on our leebow. We usually started in the middle third of the line, and if I didn't have a good line sight I would try to stay hidden just behind boats on either side of us. In this general recall before Race 5, we are slightly behind the Blue and Yellow boats, but we still have a great hole to leeward. However, we were probably over the line early so this may have been too risky a start.

2009 Thistle Nationals

RACE 6

Thursday. West-southwest wind 5 knots building to 10 by the finish. Strongest current of the week flowing with the wind. Starting line even. There was a significant line sag because of the current. We had a good line sight and a great start ahead of the fleet in the middle of the line. Played some shifts and pressure up the middle of the first beat and rounded every mark first.

With a good pin-end line sight (and current pushing the fleet away from the line), we had our best start of the series and stayed ahead the whole race. Two factors helped us. First, the wind was relatively steady, so we could use our speed and sail conservatively up the middle. Second, once we got around the windward mark, the current gave us a lot of separation from the boats behind. It's always easier, in light air, to have a gap behind on the downwind legs.

However, we also made some mistakes in the current. At both windward marks we had to double-tack to round the mark. Luckily, we were ahead by enough that it didn't matter, but this could have been a big mistake. If we were in a pack of boats, the key is overstanding by a couple lengths to make sure you avoid the mess at the mark.

Getting and using a line sight

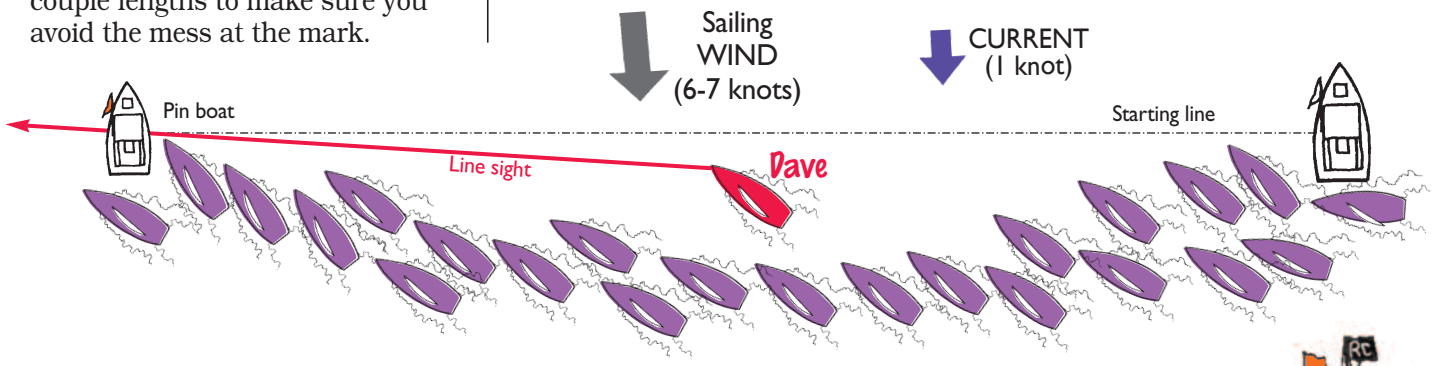
If it's possible to get a line sight at the starting line (by using land behind either end), I always get one. I like to start in the middle a lot, which means it's critical to know exactly where the line is. At the Thistle Nationals there were 42 boats in each start, so the line was longer than two football fields! That's way too long (for me, at least) to judge accurately when my boat is close to, but not over, the starting line.

Race 6 was the first race where we had any kind of line sight looking through the leeward end. All previous races had been sailed in a thick haze with nothing to see beyond the pin boat. But in Race 6 the haze mostly cleared, and the starting line was perfectly lined up with a large building ten miles away on Long Island.

Race 6 also had the most current of the series. The water was moving at least a knot in the same direction as the wind. Since the wind was still fairly light, I guessed that a lot of the fleet would be late for the start. The combination of strong current (flowing with the wind), light air, a slight pin favor and a long starting line usually produces a significant 'sag' in the fleet at the start.

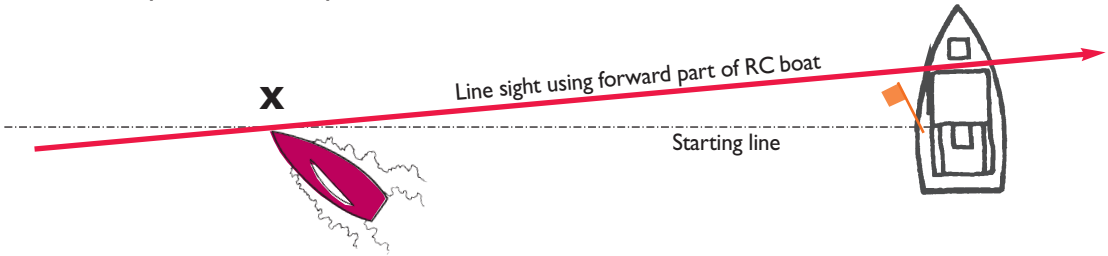
That's why I was very happy to see the pin end line up with that large building on shore. With a great line sight (and resulting high confidence in the position of the line), I decided to start right in the middle where the sag is usually greatest.

With a minute to go before the start, the boats were setting up way below the line and it was clear that most would be late. I like to hang back in the crowd until I have just enough time to trim in and get to the line on time, and that's what I did. At the start we were at least two lengths to windward of all the boats near us (and we were still 1 or 2 lengths below the line because I was being conservative)!



When you can't get a line sight through the pin end

In five of seven races at the Thistle Nationals, there was no way to get a line sight using the port end of the starting line because it was too hazy to see the distant land. Therefore, we had to do our best with a sight through the committee boat at the starboard end. This wasn't easy because the orange flag was located on the cabin house and we couldn't see through that part of the boat to the shore behind it. Instead, we used the front (vertical) edge of the cabin house. Since this part of the boat was well forward of the orange flag, we had to be careful. If we got our line sight from outside the pin end, we would be slightly over the line if we used this sight anywhere else along the line. Instead, we took the sight from below the pin end. Ideally, you want to take this sight so it crosses the starting line near the point (X) where you want to start the race. Then, if you approach the line near point X, you know you will be on the line roughly when your sight lines up. 'Roughly' is the key word here, so you have to allow a little room for error to be safe.



There are two typical problems with using a line sight through the committee boat (starboard) end of the starting line:

1) Since you usually start the race on starboard tack, it's a lot harder to turn and look toward the committee boat than to look straight ahead at the pin;

2) The committee boat for the Thistle Nationals was large, and the orange flag was located on the cabintop. As a result, it was hard to see through the boat and get a range with land, especially if you were starting anywhere near the boat end.

2009 Thistle Nationals

RACE 7

Friday: Last championship race. Northwest wind 8-16 knots, very shifty and puffy. Current not a factor. Pin end quite favored at the start. We started about a third of the way up from the pin and tacked immediately with most of the fleet. Tried to play the shifts but rounded the windward mark in the top 15. Had some great planing rides on the reaches, and finished 7th.

By the time we got to Race 7, we had a pretty good series lead. Only two boats could possibly beat us overall, and to do so they would have to finish 31 boats ahead of us (in a 40-boat fleet). Therefore, our low-risk regatta game plan became even more conservative.

I was worried about two things: First, the wind was shifty enough that it was certainly possible for other boats to get way ahead of us. Second, it was windy enough that capsizing was not out of the question (especially since our team had little recent heavy air practice). In Thistle racing, a capsize is often the 'kiss of death.' It's possible to right the boat and keep racing, but often the entire fleet is gone by then. So this is something to avoid.

As we sailed up the first beat, we were not doing so well. After a fairly conservative start and a fear about getting too far to either side of the course, we were somewhere around 12th as we approached the windward mark. At that point I noticed our two main competitors well behind us. I hadn't thought about them during the start and first beat since there were two of them and it was too shifty to cover very well.

As we rounded the windward mark, it seemed the only way we could lose the series would be to capsize or have a breakdown. So we basically switched into the mode of 'disaster avoidance.'

We did have one hairy moment when we rounded the jibe mark in a big puff near a capsized boat. After that I considered the possibility of sailing the second reach or run without a spinnaker. Though this seemed cowardly, I had already done it during the windy last race of two Nationals I had won. We kept the chute up this time, but we were ready to drop it if that was the best way to win the series.

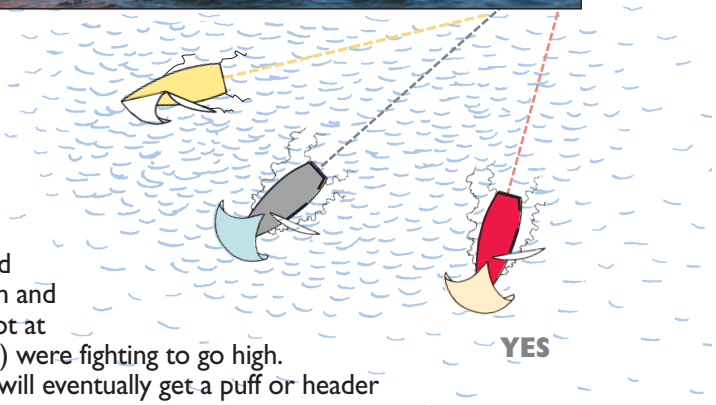
PhotoBoat.com

Strategy for a planing reach

The planing reaches in Race 7 were a lot different than the light-air parades in the previous six races. We rounded the first windward mark 12th or 14th in a pretty good puff. Many boats ahead of us went high, so we popped the chute right away, bore off on a plane and passed five or six boats (you can see us taking the low road in the photo above).

A few notes about reaching in shifty and puffy conditions:

• Before rounding the windward mark, look ahead at the reach and find the jibe mark. Can you hold a spinnaker? If so, don't waste time going high and slow after the mark. Bear off and get on a plane right away. We gained a lot at the beginning of the reach when boats ahead of us (some without chutes) were fighting to go high.



• It may work to go high because you'll be in the passing lane and you will eventually get a puff or header to sail down to the mark with speed. But in Race 7 a lot of boats went high and ended up pushing each other too high. We stayed pretty close to the rhumbline while others (especially those to the left of this photo) sailed a huge windward arc.

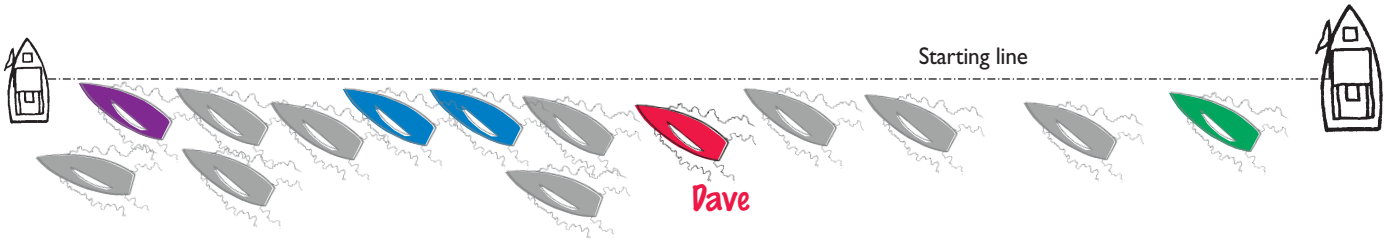
• It's usually OK to sail low on a shifty, puffy reach. Even if you are aiming low of the reach mark, you will probably get a lift or a lull to help you head up. Sometimes going low puts you in bad air, but this is much less costly in heavy air than light air.

• If you decide to go low, do this aggressively and immediately (Red boat in diagram). The object is to get away from other boats quickly to minimize the effects of their bad air and wake. You can see in the photo that we are well free of other boats and thus able to sail any course we want to keep the boat going fast.

RACE 7: Where to start in an oscillating breeze

Race 7 started in a strong northwesterly breeze blowing almost straight offshore. This created classic oscillating conditions on Long Island Sound with shifts up to 30 degrees every few minutes. We tested the starting line before the race and found the following: When the wind was in a right phase, the starboard end was slightly favored. But when the wind direction was shifted left, boats could barely cross the line on starboard tack. This made it tempting to start right near the pin. My experience, though, is that it's usually better to start closer to the middle of the fleet. This keeps you away from the laylines as long as possible with the ability to play each shift.

The first beat of Race 7 was pretty windy, so there was not a problem with playing the middle, even if you had to sail in bad air for short periods. And neither side of the course was significantly closer to land, so there were minimal geographic wind effects.



Purple Boat – The pin is a pretty good place to start in an oscillating breeze which favors that end. If the breeze is in a right phase at the start, Purple can keep sailing on the lift without the risk of getting pinched off. If the breeze at the start is left, Purple can tack and cross the fleet.

The main problem (and it's a big one) is that Purple is on the extreme left side of the fleet. This makes it hard to stay ahead of boats in the middle that can play every shift up the beat. She will usually run out of room to play the shifts before she reaches the windward mark.

Blue Boats – In my opinion, these boats are starting in the best position because they have found a good compromise. They are not too far from the end of the line that is farther upwind, while at the same time they are close to the middle of the fleet. By starting here, they should be able to play every shift almost all the way up the first windward leg.

Red Boat – This is where I started. It was OK, but perhaps a bit conservative – we were too far from the favored pin end and too far below the line (to avoid any chance of being OCS). Though we were able to tack at the start in the left-hand shift, about two thirds of the fleet started closer to the favored pin end. They all tacked simultaneously with us and were pretty far to windward (i.e. ahead) of us. This made it difficult to find a good lane when we got the next right shift.

Green Boat – Unless there is a strong reason to go right, this is not a great place to start. Perhaps Green tested the wind in a right phase and thinks that end is farther to windward. But the pin end is favored most of the time here (sometimes by a lot), so Green gives up a huge distance right away to boats that start close to the pin. In addition, Green is on the extreme right side of the fleet and will have a hard time working to the middle when the breeze is oscillating.

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2009 Thistle Nationals – Final Results (84 boats)

Skipper	Race 1	2	3	4	5	6	7	Total
1. Dellenbaugh	1	2	1	1	1	1	7	14
2. B. Kitchin	3	1	4	10	13	22	3	56
3. Ingham	5	6	3	19	2	2	21	58
4. Barbehenn	14	8	2	23	8	4	1	60
5. Kreitler	12	13	2	6	12	10	5	60
6. Fisher	2	1	1	21	17	18	2	62
7. Gruver	15	2	6	8	7	5	20	63
8. J. Finefrock	12	12	3	3	14	14	6	64
9. S. Griffin	13	5	7	5	15	13	15	73
10. Lawton	9	4	7	7	9	25	16	77

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2009 Melges 24 Worlds

Lesson learned from a tale of two regattas

A few days after the regatta was over, I pulled out my sailing notebook, as usual, and started writing things I learned during the week. The subject of 'boatspeed' was at the top of the list.

During the Nationals we were always going at least as fast through the water as other boats, and we were often able to point slightly higher too. This made us look very smart tactically and strategically. For example, it was easier to hold our lane off the starting line, we could beat other boats to puffs and shifts, and we almost always came out ahead in one-on-one battles.

With good speed, we were able to make the middle of the course work well even when one of the sides was a little better. That meant we could be more conservative and didn't have to take as many risks as other boats. As long as we avoided major mistakes, we would be OK.

About two months later I had a very different experience when I steered a boat at the Melges 24 Worlds. This was basically my first time in a Melges 24 and we had just two days to practice, so needless to say we were a bit off the pace.

Unlike the Thistle Nationals, we were almost never able to hold a lane off the start, we lost most of our battles with other boats and we resorted to high-risk options like sailing toward corners.

The main difference was speed. Without speed, I had no confidence and we did not look smart tactically nor strategically.

So I guess the moral of the story is that going faster should always be a major objective. Do everything you can to improve your boatspeed, and good results will follow.

No matter how you are doing in a regatta, adopt what I call a "no-lose approach." In other words, you can't win every race or regatta, but you can always learn something in the process. And that will give you a better chance of winning the next time around. Good luck! •

Sara Proctor/www.Sailfastphoto.com

Here is my team (Boat #16) rounding the windward mark during the first race of the 2009 Melges 24 Worlds in Annapolis. The regatta was a lot of fun and I learned a ton. But we were not nearly as successful as at the Thistle Nationals due to tough competition and my lack of time in the boat.