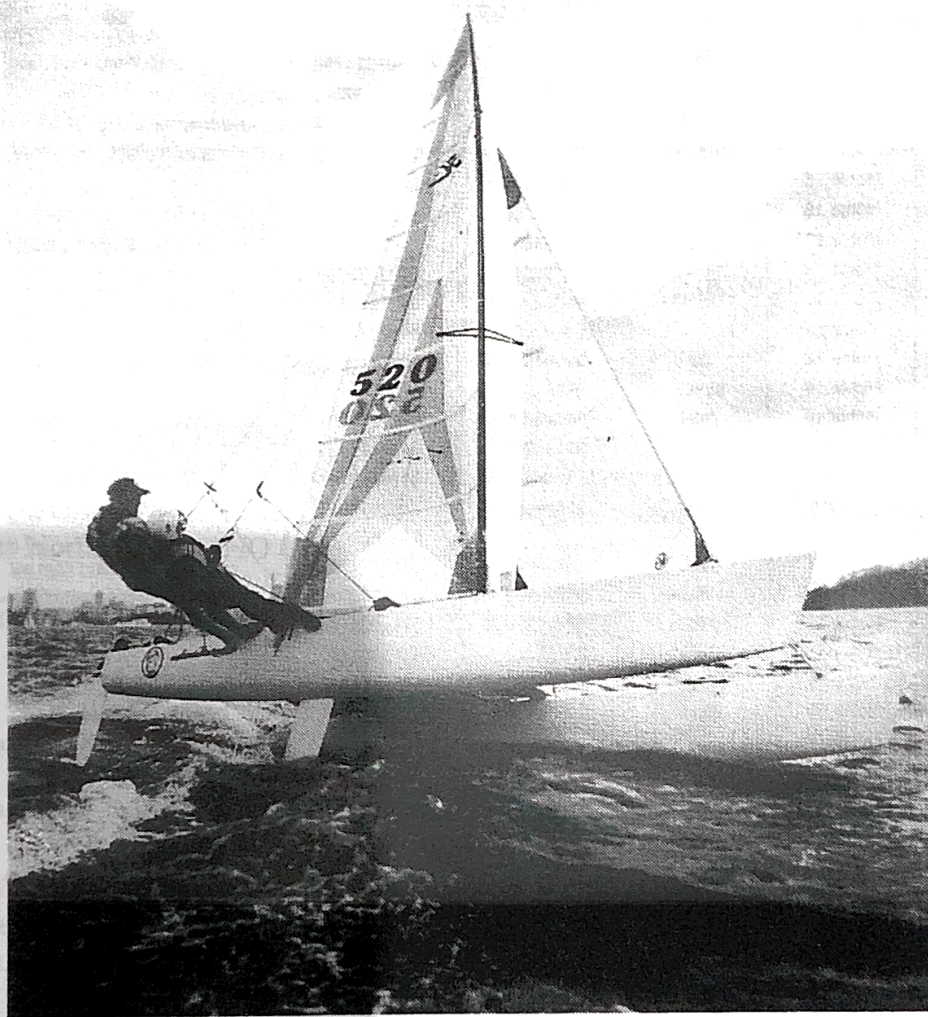


MAINSHEET



APRIL/MAY/JUNE 2000

Pittwater Catamaran Club

www.pcc.org.au

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Please advise Brad Ashmore of any changes.

MAINSHEET

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FEBRUARY - MARCH

APRIL - MAY - JUNE

JULY - AUGUST - SEPTEMBER

OCTOBER - NOVEMBER

DECEMBER - JANUARY

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DAYLIGHT SAVING

With the finish of Daylight Saving racing now commences at 1.30 p.m., winter sailing goes right through for those hardy souls to the Heartstarter in early September.

ROSTERED BOAT CREW please take note.

PICKING UP THE FUEL TANK

When you are on boat duty, pick up fuel tank from Mike Warren's home at 34 Binburra Ave, North Avalon. Go down the drive on the left hand side of the house, around the corner and hey presto!!!.

Fuel from BP at North Avalon (NO OIL), reimbursement, if you so desire from esky money box.

HOBIE 16 WORLDS IN GUADELOUPE 10 - 22 APRIL

The clubs best wishes go with Belinda - bring home the bacon.

Event Website : <http://www.sailing.gp/>

CREWS

We are still short of crews, if you know of anybody who may be interested please contact Upu.

ANNUAL GENERAL MEETING and CLUB DINNER

AGM will be held Saturday 26 th August, at a venue to be decided, there will be no racing that Saturday so we can have the AGM earlier than usual before the dinner.

CLUB FLEECY SWEAT SHIRTS

With winter fast approaching its time to purchase your fleecy lined sweatshirt.

Available in grey or white, only \$30.

See Jan or Upu, bring your money with you.

The club needs to move some of these, we invested nearly \$2,500 in T-Shirts and sweatshirts because members complained their old ones were worn out, but have not purchased new ones.

AUSTRALIA DAY MARATHON

Winners Rod and Kerry Waterhouse and Guy Machan will receive their prizes at the Sydney Town Hall on Tuesday 11 th April - well done.

TELLTALE SIGNS

And How To Use Them

Telltale are aptly named, because they do just that — tell us what we cannot yet see. They indicate what the wind is doing on the sail.

WHERE TO PUT THEM

On your jib, place a pair of telltales (one telltale on each side of the sail) on each vertical third of the sail, approximately 9-12 inches back from the luff. (See Diagram.)

On the main, place telltales on the first panel above the hounds, or the area where the sidestays and forestay join on the upper portion of your mast. (You want these telltales above the jib so they will get undisturbed air.) Place one telltale on each side approximately 12 inches aft of the luff. From that position go about halfway down to the tack, and place another set of telltales approximately 12 inches aft of the luff.

That's it for telltales on the sails. You need no more — these will do it all.

WHAT TALES TELL US

Assuming you are sitting on the windward side of the boat, if the telltale on your windward side or the front telltales act up, they indicate the sail is luffing. If the telltales on the back side act up, the sail is stalling.

Corrections for the luff could be to sheet the sail in tighter, or steer the boat away from the wind. Corrections for the stall could be to ease the sheet for the sail, or steer the boat closer to the wind.

Obviously, there are two options to correct the angle of the wind to the sail, either by trimming the sheet to the sail, or by leaving the trim alone and steering to make the correction.

These are the basic principles of telltales. Following the rules would be easy, except for one thing. We are not dealing with just one set of telltales — we have two sets on the jib and two sets on the mainsail. All four sets must be tuned to each other — like a barbershop quartet.

TUNING THE SAIL BY TELLTALES

Going Downwind

To sail most efficiently downwind, you need to set your sails perfectly and then steer by the telltales, leaving the sails in one position. You have two sets of mainsail telltales, upper and lower. The lower set is controlled by the traveler, and the upper set is controlled by the mainsheet.

Ready? First, ease all your sails and traveler and begin sailing with the apparent wind at 90 degrees. In other words, keep your bridle fly pointing at 90 degrees to your boat.

Then bring your traveler in until the lower backside telltale on the mainsail is

acting up (stalling). As soon as it starts to act up a bit, ease the traveler off until that telltale begins to flow; then cleat it.

Next, trim in the mainsheet until the upper backside telltale begins to act up; then ease the sheet until that telltale begins to flow; and cleat it. Your main is now set perfectly to get the most power for that point of sail.

Follow the same procedure with your jib. Either by hand-holding the jib or by barberhauled, trim the clew of the jib in until

little, and flowing all the time. The sails are set uniformly to each other in their most powerful position, so you simply use them.

Going To Weather

The same technique applies to the boat. However, you do not have to worry about the traveler telltales. Simply bring the traveler to center while going to weather (unless you have to ease it in heavy air to depower, of course). Otherwise, the traveler always will be centered.

With the boat sailing close-hauled, trim the mainsheet until the upper backside telltale acts up; then ease the sheet until that telltale flows; and set it. The main is at the optimum power setting. As for the jib, run your travelers in and/or aft until the lower backside telltale begins to act up; then ease it back until that telltale flows; and set it.

The next step is the sheet. Trim in until the upper backside telltale begins to act up; then ease until it flows; and cleat it.

Congratulations — now you have optimum power to go to weather. All the telltales are doing the same thing — luffing, stalling or flowing in unison. What's left for you to do? Simply steer the boat.

TELLTALE HINTS

Steering To Control Flow

- If the windward telltales act up, turn away from the wind (head down).
- If the backside telltales act up, turn into the wind (head up).

Sheeting To Control Flow

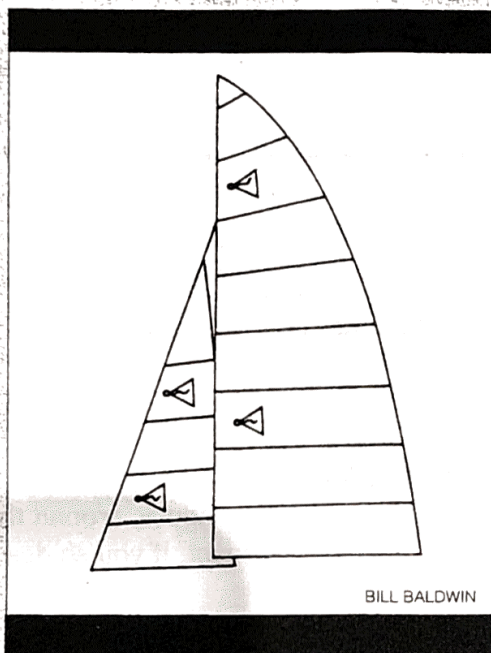
- If the windward telltales act up, sheet in tighter.
- If the backside telltales act up, ease the sheets.

Easy Ways To Remember What To Do

• If you are sheeting to control flow, move the sail TOWARD the telltale that is acting up. In other words, if the back telltale acts up, let the sail out (toward the culprit); if the front side acts up, pull the sail in (toward the bad telltale).

• If you are steering to control flow, turn the bows away from the telltales that are acting up. If the back telltale acts up, turn more into the wind (away from the bad telltale). If the front-side telltale acts up, turn the bows away from the wind (away from that telltale acting up).

• In still another variation of steering to control flow, move your tiller toward the side acting up. If the backside telltale acts up, push your tiller away from you; if the front one acts up, pull your tiller toward you.



The four sets of telltales must be tuned to each other like a barbershop quartet.

the bottom backside telltale acts up; ease the tack back out until that telltale flows; then set it. Next, trim down on the jib until the upper backside telltale begins to act up; then ease up until that telltale begins to flow; then set it.

Now your jib is set perfectly also. It should be set exactly the same as the mainsail. That means all telltales, on both the main and jib, either should be flowing all at the same time, stalling all at the same time, or luffing all at the same time. Simply by watching any convenient set of telltales, you in effect watch all of them.

All you have to do is steer by the telltales and keep them flowing. You want to keep them from stalling at all cost, luffing very

Commodore's Report.

March, 2000.

Neptunus Rex was unkind to us on the first day of our Sand Point Regatta and whilst the company, food and grog was convivial under a dry marquee, we would have been happier sailing even in the rain had the wind arrived from whatever direction. The second day saw an improvement with light winds arriving about noon from the S.E. even though at one stage it looked like the outboard was going to fail us. However after an intelligent approach by a committee of engineering brains the problem was temporarily solved for the day, and we had a start boat albeit a bit on the slow side.

The race secretary became quite excited as did a few others when a few zephyrs rippled across Pittwater and this slowly building to 5/8 knots thus enabling the sailors to get three races in, back to back. During the bull shit sessions after the races it was reported the racing was tight and challenging. It was noted that the secretary arrived back bloodied, and whilst he tried to assure us that his bloody eye was the result of an altercation with the boom during a chinese jibe, we were not convinced that matters had not got out of hand during a close encounter at a mark!

Thanks are extended to the organising team for their efficient planning and also to Sailing Scene for again sponsoring some of the prizes. Our next regatta is planned for late November, and it appears that our new planning and organising procedures will ensure it is successful, subject to Neptunus Rex being more friendly.

On matters of management and the compound, by now most members will be aware that the Pittwater Council has given consent, on behalf of the PBSC for the construction of a building in the compound, but have placed severe restrictions on its use. In view of the fact that the PBSC is an unincorporated body, does not have its name registered and is therefore not a legal entity, we approached the Solicitors Roper and Steggals for advice as to our legal standing with the building and our security of tenure. Their report is available for perusal by club members. A copy of this report together with an internal memo to the PCC committee was sent to the trustees of the PBSC and a meeting took place on March 28th between them, myself and Guy Machan, the objective being to seek their views on how to allay our concerns and discuss financing of the building. A summary of the this meeting is as follows:

- ◆ They agreed in principle to the construction of the building on the compound as soon as practical.
- ◆ There being no other clubs in the PBSC, the PCC would have exclusive use, however should Storm Riders have a rebirth they would also have a right of use.
- ◆ Several alternatives were put forward by the Trustees to overcome the legal problems and our concerns over security of tenure, none of which solved the problems.
- ◆ We then put forward our proposal that most of the perceived and imagined problems could be overcome if the PCC changed its name to the PBSC. This would require us to make changes to our constitution and it would then become the constitution of the PBSC as amended. There would also be legal matters to consider and how the trustees would fit into the management of the new structure.
- ◆ The trustees agreed this was a good idea and that once the minutes had been circulated they would discuss the idea and plan another meeting in about two weeks. We made the point that we would expect the PBSC to finance the construction of the building etc., and whilst not in total agreement conceded they would be prepared to allocate some funds to the building.

Generally speaking the meeting was positive and went well with a general consensus that the PCC and the PBSC should work together for the future development and support of "off the beach sailing" in the Pittwater area. There are obviously many matters of detail to consider from a legal and management aspect and the PCC committee will be giving them careful consideration at our next meeting and will keep members advised.

March's Nautical Quiz.

- 1 What is a Spanish windlass?
2. Where is the Tratic Stay?
3. Who is the farmer on a ship?

Answers to February Quiz.

1. **A Fid.** Is a large wooden marlin spike made of Lignum Vitea used when splicing large diameter ropes
2. **Worming.** Tar impregnated rope (marline) is laid into the strands of wire rope splices prior to parcelling.
3. **Soogy.** A detergent concoction made up by the Bosun, for washing down and cleaning paintwork (usually removes skin and bones) - a Mariner's sugar soap.

Don Petersen.

NEW !!!!! CLUB SHIRTS

NEW MULTI COLOUR DESIGN

**AVAILABLE FROM JAN or UPU at
Sand Point
PHONE JAN 9905 4869 FOR COURIER
DELIVERY**

T-SHIRT - WHITE - \$20

LARGE/EXTRA LARGE/EXTRA EXTRA LARGE

POLO COLLAR SHIRT - WHITE - \$25

**MEDIUM/LARGE/EXTRA LARGE/EXTRA EXTRA
LARGE**

SWEAT SHIRT - WHITE or GREY - \$30

**MEDIUM/LARGE/EXTRA LARGE/EXTRA EXTRA
LARGE**



BOAT ROSTER

REMEMBER WHEN YOU ARE ON BOAT DUTY:

1. Pick up keys from Mike Warren at 34 Binburra Rd, Avalon. (99187024) Sandstock double storey. Go down left side of house, kept under cover to your right.
2. Dont leave trailer hooked to your car in compound.
3. Put in bungs!!!! Before you reverse onto the beach.
4. Check oil level in motor.
5. Wash out motor and thoroughly wash down boat/remove bungs.
6. Replace cover and elevate front of trailer.

| DATE | ON DUTY |
|-------------|--------------------------------|
| 8 TH APRIL | UPU KILA/KYLE AMADIO |
| 15 TH | JOHN GOLDSMITH/ROHAN BERRY |
| 22 ND | NO SAILING |
| 29 TH | MARK JOHNSON/ANGELA GOODWIN |
| 6 TH MAY | GREG CLYNICK/FRANK CONSTANZO |
| 13 TH | GEOFF WATSON/CHRIS DOIG |
| 20 TH | GRAHAM ALLEN/MIKE WARREN |
| 27 TH | STEVE HOWE/PETER O'DONNELL |
| 3 RD JUNE | PAUL BARNES/SIMON TAYLOR |
| 10 TH | RUSSELL SHEPPARD/TONY HODSON |
| 17 TH | JAN JENSEN/BOB FORBES |
| 24 TH | BILL and BILLY SYKES |
| 1 ST JULY | DAN and ALI CORLETT |
| 8 TH | GUY MACHAN/SAM WOOD |
| 15 TH | MATT WYNDHAM/MARK OASTLER |
| 22 ND | KEVIN MOFFATT/MICHAEL JONES |
| 29 TH | BRAD ASHMORE/PETER STUCKEN |
| 5 TH AUGUST | CHRIS DE VEYRAC/ROD WATERHOUSE |
| 12 TH | GARTH FISHER/DAMIEN MILLER |
| 19 TH | MARK UREN/JOHN McCORMICK |

RACE SECRETARY - MATT WYNDHAM 0416 242339

PLEASE REMEMBER ITS YOUR RESPONSIBILITY TO ORGANISE A REPLACEMENT IF YOU ARE UNAVAILABLE
 - DONT LEAVE IT UNTIL FRIDAY NIGHT - Matthew Wyndham 0416 242339/94892603 IF ALL ELSE FAILS
 - REMEMBER HOW PISSED OFF YOU GET WHEN YOUR READY TO RACE AND THE START BOAT DOESN'T TURN UP. PLEASE WASH OUT MOTOR AND THE BOAT INSIDE AND OUT, CLEAN OUT THE RUBBISH AND PLACE ON COVER BEFORE YOU RUSH UP TO THE PARK TO HAVE YOUR FREE BEER.



HOBIE RACING RACER'S EDGE

Finishing School

Where To Finish... And Why

BY WICK SMITH
DIAGRAMS BY BILL BALDWIN

We all exhibit strengths and weaknesses out on the race course. Some competitors get off the starting line well. Some can point upwind like a 12 Meter. Others are rockets downwind. How often, however, have you admired someone for his/her ability to cross the finish line well? This sounds like a crazy question, but think back on the number of times you've seen the following scenario unfold:

Ralph has been racing for some time and considers himself a good racer. He gets out to the course early to look at the wind and study its shifting patterns. He tests the starting line the minute they anchor it. He works the line several times to determine the favored end. It is heavily starboard-favored, and he gets a good start at the committee boat.

He sails a solid race and is third rounding C-mark the last time around, with the lead boats 150 yards ahead and two competitors just behind him. He is already polishing that third-place trophy, knowing he will out-sail those clowns behind him. After all, he has held them off the entire race!

The leaders sail out from C on port until they can tack and finish on starboard at the committee boat. They must know something because they are ahead of him, so he follows them and tacks on their line. He will pass just under the committee boat. Maybe the local news will be taking video. Won't his mamma be proud?

As he tacks, he notices the two boats behind him have already tacked! Don't they know you are supposed to finish at the committee boat? They couldn't possibly lay the finish line from there!

You know the story. "Those clowns" beat Ralph to the line for one reason: the leeward pin end was the favored end of the finish line. His boat traveled across the water 100 yards farther than theirs did. How in the world could this be?

PLAYING FAVORITES

Just like the starting line, the finish line

usually has a favored end. In a race around buoys, 99 times out of 100 you will be finishing upwind from a leeward mark. The finish line is either the same as the starting line or another line set off the opposite side of the committee boat.

In an ideal world, the race committee sets the line perpendicular to the direction of the wind. In reality, this angle is rarely the case, due to shifting winds or a lazy committee.

This situation can provide you with an opportunity! Let's look at a typical finish line. (See Diagram 1.)

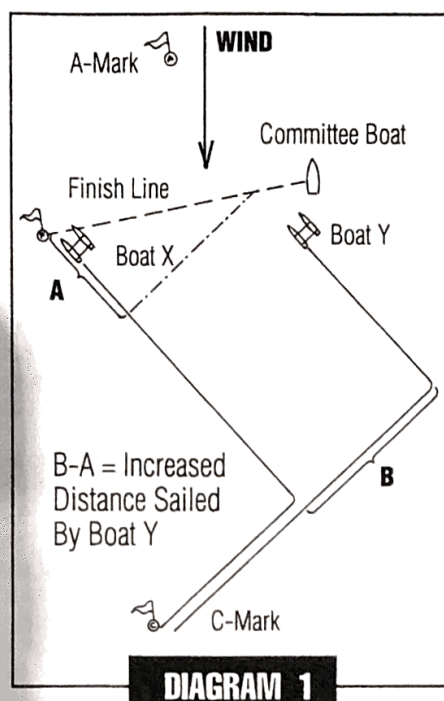


DIAGRAM 1

The line in this diagram is not square to the wind. If this were a starting line, you would quickly see the committee boat was favored because it was farther upwind (you would travel less distance to get to A-mark from that end). Using the same logic, the leeward pin end of the finish line is favored in the example shown because it is farther downwind (closer to C-mark).

Look at the difference in distance sailed by Boat X versus Boat Y, with each sailing out from C-mark. Boat Y sails much farther by not finishing at the pin. If the two boats go up the left side of the course and finish on port at opposite ends, the same thing happens.

For those interested in the geometry of the problem, the increased distance sailed by Boat Y equals distance B minus distance A. As the line becomes square, these distances are more equal; therefore, there is no advantage to either end of the line. (And you thought you had seen the

last of geometry in Ms. Dinglemeister's class!)

The longer course sailed when going to the wrong end of the line will cost you. It doesn't matter which tack you are on when finishing, only that you finish at the end that is favored — even if you split tacks with the competition.

DECISIONS, DECISIONS

This information is great, but how do you decide which end is favored? When you are racing, you don't have the opportunity to call time out, sail over the finish line to check it out, and then resume the race after two minutes in the huddle (although this is an interesting concept). You literally have to judge the line "on the fly."

There are several ways of doing this. The first method is very risky but will do in a pinch if the start and finish lines are the same. Based on the discussion of Diagram 1, finish at the end of the line not favored at the start. You are making two big assumptions when using this method: one, the wind has not shifted since the start (highly unlikely); two, the race committee did not move the pin during the race.

All other methods of judging the finish line require planning. This rules Ralph out immediately. The best time to plan your finish is when sailing downwind to C-mark the last time. You will be able to see the angle of the line versus the wind and make a judgment on which end is farther to leeward.

This strategy is one argument for coming down the middle of the course on this leg. You can sail directly by one end of the line and get a close-up view of the situation.

One way to simplify the process is to imagine the finish line as a starting line. If you are comfortable looking at other boats and flags to determine the favored end for starting, use all the visual evidence available, decide which end you would start from and finish at the opposite end.

After each race, analyze where you finished on the line and ask yourself if there was room for improvement. Doing so will help you understand the dynamics of the finish line.

Everyone on the course has access to this visual evidence. Only a few use it to their advantage, and those guys are usually out front. Here are some specifics on what to look for and what to do with it.

THE EYES HAVE IT

To judge the line, you can "eyeball" it or use what almost every committee boat in the world uses - flags! If the race committee flag is flying above or in front of the committee boat and in clean air, it will give

you a true reading of the wind at the line. It will point to the end of the finish line that is favored! (See Diagram 2.)

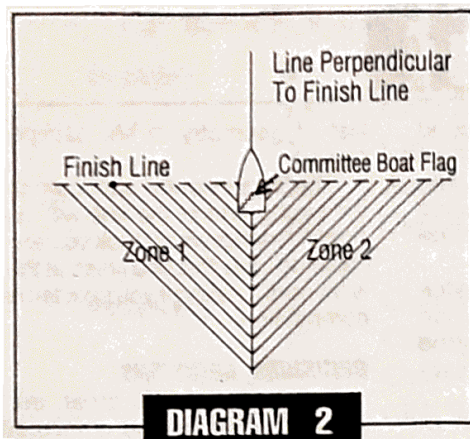


DIAGRAM 2

If it points toward the leeward pin (Zone 1), plan your final tack to the line so you finish at the pin. If it points away from the pin (Zone 2), tack so you finish at the committee boat. If it favors neither end, the line is square in the current wind and there is no advantage to either end.

In the absence of flags or your ability to see them, look at the course other boats are sailing upwind near the line. Their angle to the line will tell you a lot. (See Diagram 3.) Try to imagine them sailing that course across the finish line.

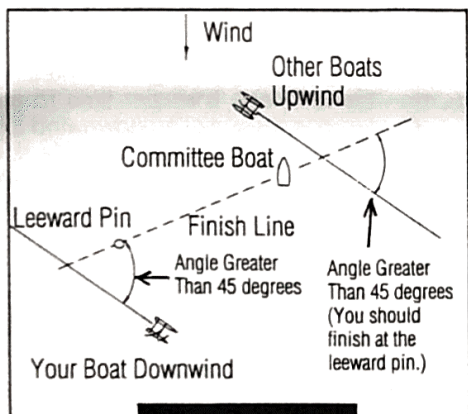


DIAGRAM 3

If they are on starboard and the angle they are sailing to the line is less than 45 degrees, finish at the committee boat. If it is more than 45 degrees, finish at the pin. If they are on port, reverse the appropriate finishing ends.

Another device is to use your own course downwind to determine the favored end. When going downwind on a Hobie, you normally will sail it with the apparent wind striking the boat at a 90-degree angle. This technique means you will be sailing about

45 degrees off the true wind (dead downwind).

If you were to jibe and sail upwind on the opposite tack, you would be sailing approximately 45 degrees off the true wind angle (head-to-wind). This strategy would put you on the same course as downwind, but in the opposite direction!

You can use the above method to determine by your downwind course the angle you will be sailing upwind at the finish. It can get very confusing until you think about it for a while. Try sailing downwind on either tack with your apparent wind at 90 degrees.

Make a mental note of where your sterns are pointing. Jibe, sail upwind on the opposite tack, and your bows will be pointing at the same spot!

FINAL WORDS OF ADVICE

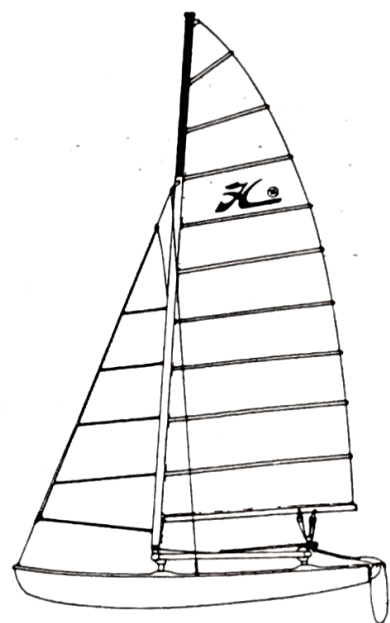
Be careful of wind shifts. If you check the line halfway down the downwind leg, and later the wind swings in either direction, the favored end may have shifted. If the wind is jumping back and forth every three minutes (this condition is spelled L-A-K-E), don't attempt to judge the line until you are within three-to-four minutes of crossing it. Any earlier, and it all will change.

The longer the line, the more important finishing at the correct end will be. The distances gained (or lost) are increased greatly as the finish line is lengthened. If you have done your research and can't determine which end is favored, don't worry about it. You can finish on a square line at any point and know you haven't sailed too far.

Those who spend a little time looking at the line can really pick up finish positions by concentrating until the end. Many sailors have snatched defeat from the jaws of victory by being lulled to sleep on the last leg. They "fall in the groove" of sailing to the committee boat layline and tacking.

You work very hard to get the best starting slot possible. Put the same energy into achieving the best finish you can. After all, you've held those clowns off for the entire race, haven't you?

By the way, the next time you see Ralph, tell him I said hello (and thanks for the trophy)!



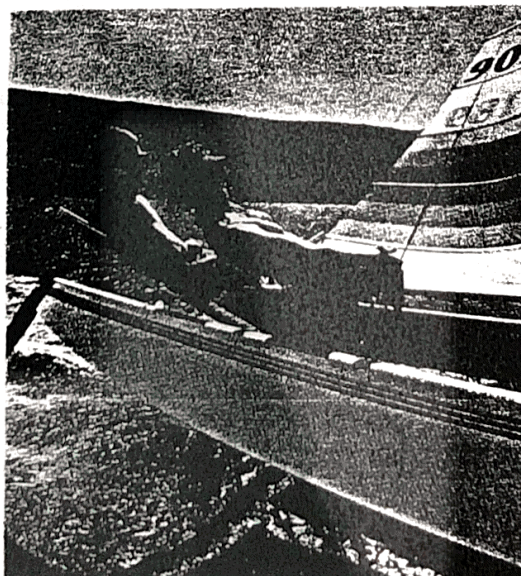
SPECIFICATIONS

| | |
|---------------------------|--------------------------|
| L.O.A. | 16 ft 7 in/5.05 |
| Beam | 7 ft 11 in/2.41 |
| Minimum Boat Class Weight | 320 lbs/145.1 kg |
| Draft | 10 in/25 cm |
| Mast Length | 26 ft 6 in/8.08 m |
| Mast Sailing Height | 28 ft 6 in/8.67 m |
| Sail Area | 218 sq. ft/20.25 sq. m |
| Hull Material | Fibreglass/Foam Sandwich |
| Maximum Load | 800 lbs/363 kg |

STANDARD FEATURES

- Patented, adjustable kick-up rudders for easy beaching.
- Roller bearing main traveler.
- Flanged deck construction for a stronger, drier boat.
- Corrosion-resistant, anodized aluminium extrusions and stainless steel fittings.
- Fully-battened main and jib sails for focused power.
- Improved mast step for simplified riggings.
- Raised trampoline for dry, comfortable sailing and easy trapezing.
- Asymmetrical hulls eliminate daggerboards for easy sailing.
- An exclusive, 1 year, limited transferable hull warranty and 1 year components warranty.
- Colored hulls.
- Multi-colored sails.
- Polyvinyl, colored trampoline.
- Epoxy rudder blades.

HOBIE HOTLINE



PITTWATER CATAMARAN CLUB

SUMMER RACE SERIES

| | | |
|-----------------|--------------|---|
| January | 8 | Club Races |
| | 15 | Club Races/Point score 1&2 |
| | 22 | Club Races/ Club Championship 7&8 /Point score 3&4 |
| | 26 | Australia Day Regatta |
| | 29 | Club Races Taipan State Titles |
| February | 5 | Club Races Hobie state titles NSW |
| | 12 | Club Races/Point score 5&6 |
| | 19 | Club Races/ Club Championship 9&10 /Point score 7&8 |
| | 26 | Club Races/Point score 9&10 |
| March | 4 | Club Races/Point score 11&12 |
| | 11/12 | March regatta |
| | 18 | Club Races/ Club Championship 10&11 /Point score 13&14 |
| | 25 | Club Races/Point score 15&16 |
| April | 1 | Club Races/Point score 17&18 |
| | 8 | Club Races/Point score 19&20 |
| | 15 | Club Races/ Club Championship 11&12 /Point score 21&22 |
| | 22 | Club Races Hobie state titles Queensland |
| | 29 | Club Races/ Club Championship if needed |

WINTER RACING NOW COMMENCES

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Beam supported double trailer with very large sail box (enough room for the gear of 2 boats), Goodall full and half boat covers (paid \$600), kevlar hulls, dyform rigging, Lewmar mainsheet system, Holt Allen pressure sensitive headsail blocks, spare rudder, beach rollers, Goodall main and 3 jibs, boat approx. 5-6 years old, loads of extras and all good gear. **\$10,500.**

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Kyla Macdonald
PO Box 731
Gympie QLD 4570
07 5483 9285
0418 782 016

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| | |
|--------------------------|-------------------|
| PITTWATER RANGERS | 99627782 |
| WATERWAYS (EAST) | 0418976160 |
| WATERWAYS (WEST) | 0418976023 |
| WATER POLICE | 99794044 |
| PITTWATER POLICE | 99971444 |
| AMBULANCE | 92820920 |

Beginner's forum

Neville Lance

IT DOESN'T MATTER WHAT KIND OF BOAT YOU SAIL, BE IT A PRINDLE, MOSSIE, 40' CRUISING CAT OR HOBIE - IF IT IS YOUR FIRST TIME OUT ON THE RACE TRACK IT CAN BE A DAUNTING EXPERIENCE, IRRESPECTIVE OF HOW MANY TIMES YOU MIGHT HAVE READ THE RULE BOOK OR WATCHED THE ACTION FROM THE SHORE. YOU'RE ON THE WATER AND SUDDENLY NOTHING MAKES SENSE ANY MORE - YOU CAN'T FIND THE WEATHER MARK - THE SHAPES AREN'T THE COLOURS THEY'RE SUPPOSED TO BE (AND WHAT DO ALL THOSE OTHER FLAGS MEAN?) - AND THAT'S NOT THE WORST..... EVERY TIME YOU TACK OR GYBE YOU SEEM TO BE IN SOMEONE'S WAY AND THE AIR TURNS BLUE - BEFORE VERY LONG YOU REALLY ARE BEGINNING TO WONDER WHO YOUR FATHER WAS.

'NEVER MIND,' YOU SAY TO YOURSELF, 'ONCE THE RACE GETS GOING I'LL SHOW THESE SONS OF #%\$@* & NO-ONE CAN SAIL ONE OF THESE THINGS AS FAST AS I CAN.' WRONNNNGGGGGG! ONCE YOU'RE OUT ON THE TRACK YOU SUDDENLY REALISE THAT YOU'RE RIGHT AT THE BACK OF THE PACK AND EVERYONE SEEMS TO BE PULLING FURTHER AND FURTHER AHEAD WITH EACH PASSING MINUTE. 'THERE MUST BE SOMETHING WRONG,' YOU TELL YOURSELF. 'MAYBE I LEFT THE BUNGS OUT?' NO! 'MAYBE THE HALYARD'S COME LOOSE?' NO! THEN SUDDENLY IT COMES TO YOU IN A FLASH 'ITS THIS DAMN USELESS CREW - I'LL JUST HAVE TO CHANGE HIM/HER/IT/THEM NEXT TIME OUT.'

BUT DEEP INSIDE YOU KNOW THAT'S NOT IT - AND AS YOU FALL FURTHER AND FURTHER BEHIND SO YOU FEEL MORE AND MORE INADEQUATE - AND SUDDENLY ITS NOT FUN ANYMORE. YOU TRY TO FINISH IN AN EFFORT TO SALVAGE SOME DEGREE OF DIGNITY BEFORE RETURNING DEJECTEDLY BACK TO THE BEACH OR MOORING - A CLOUD HANGING OVER YOU THAT MAY PREVENT YOU FROM EVER GOING OUT TO SAIL AGAIN - LET ALONE RACE!

PERHAPS I'M WRONG - BUT I BELIEVE THIS TO BE ONE OF THE MAIN REASONS WHY OUR BACK YARDS AND MOORINGS ARE LITTERED WITH A TRILLION UNUSED BOATS AND IT IS YOU, THE DISCOURAGED OWNERS OF THOSE BOATS, THAT I AM HOPING THIS SERIES OF SUGGESTIONS WILL GO A LITTLE WAY TOWARDS HELP GETTING BACK ON THE WATER.

REMEMBER JUST TWO THINGS AS YOU READ THIS - ALL THOSE GUYS OUT FRONT WERE ONCE AT THE BACK LIKE YOU

AND IF SOMEBODY DOESN'T COME LAST, NOBODY CAN COME FIRST!



1. Perhaps the first and most important lesson in your quest to 'reduce the learning curve' is that sailing should be FUN - the more you learn, the more fun it becomes (a little bit like sex) - and there is no better place to learn than out there on the track. How else are you going to gauge the extent of your improvement as a helmsman, a tactician or a crew if you have no yardstick by which to measure?
2. Sailing is a little like riding a horse to be truly proficient you must virtually become 'part of the animal'. Get out there and sail your boat - alone if at all possible - in warm, happy weather. Learn all its idiosyncracies - how high you can fly the weather hull before she finally tips over, and having got her up there - how you go about keeping her there. This won't increase your boat speed, but its a lot of fun and it teaches you about your boat's behaviour - about balance and control. Spend some time in the company of friends on other boats pushing her to the limits on a reach - find out just how far you can go before pitch-poling and if you can prevent it - how to prevent it! Learn to tack and gybe your boat on your own fall over backwards, and fall over forwards but fall over and LEARN. Soon you will become a part of your boat with the confidence that comes from familiarity - no surprises - and you will be able to concentrate your energies on more important things like finding better looking crew, rigging, boatspeed and tactics.
3. So now you think you're ready to get out there and clean up? Not quite! Get out there and race - PLEASE! But don't expect to do a whole lot better than you did last time - not yet. Spend a little time with the rule book - not all of it - just the basic do's and don'ts like knowing the difference between Port and Starboard (basic but important - like knowing the difference between a boy and a girl). If at all possible try to arrange to crew for some of the better sailors and ask them to talk you through a few races (not abuse you - just talk to you) - you will be amazed how much you can learn in a very short period of time about the importance of starting well, about things like lifts and headers, the favoured side of the course, how to approach marks, sailing well downwind, finishing and bad language. Above all, enjoy this early period that you spend at the back of the fleet you tend to meet a much better class of person there.
4. Actually, the guys at the front are not so bad! You must simply learn to tolerate them - remember, you too will be up there some day! More importantly, don't feel intimidated by them - you have as much right to be on the water as they do. Most of the time their cussing is purely tactical anyway - designed to intimidate you into creating a gap that will give them the edge over some other hot-shot. If you're in the wrong, smile and say sorry - if not - shut the son-of-a-#%\$* down. None of this gets taken personally anyway, and once you hit the beach the most important rule of all is that all be forgiven and forgotten. After all, look what good friends Ali and Frazier turned out to be - and they gave each other 44 rounds of pure hell.

THANKS TO SOUTH AFRICAN MULTIHULL MAGAZINE

HOBIE RACING RACER'S EDGE

Up To Speed

Mooneyham Explains How To Get Your Sail In Great Shape

BY WICK SMITH

Wayne Mooneyham has been sailing since 1983, starting out with his son on a Hobie 16. He most recently won the 1992 Hobie 18 Nationals. Previous accomplishments include a second-place finish in the 1991 Alter Cup, a second and two fourths in recent 17 Nationals, and winning his class in the 1987 Worrell 1000.

Wayne has purchased a Hobie 20 and is quickly rising through the ranks in that class. A pilot with United Airlines, He knows a thing or two about wings and lift. Recognizing all these credentials, Racer's Edge decided to obtain Wayne's thoughts on sail shape.

R. E. What makes a sailboat sail?

W.M. The process is an act of lift from the sails, very much like an airplane wing. Instead of a wind lifting you vertically into the sky, the sail drives you forward through the water. You are looking for a variable sail shape, because you do change it on different points of sail. If you trim poorly and fail to get your sails set for the direction in which you are trying to sail, you are not going to go very fast. Assuming the rest of your boat is set up correctly, if you trim perfectly, or anywhere near perfectly, then you'll be very fast.

R.E. Does sail shape make that much difference?

W.M. Very much. I believe the final ingredient in a sailboat's speed is the horsepower, which is the sail. Think of the sail as an engine that is or is not well-tuned. If you have a well-tuned sail and you can sail well, you are going to go fast.

Sailing ability is the other factor, the unknown. A poor skipper on a very fast boat is not going to be very competitive. It has to be a combination of the two. Generally, it takes several years for the skipper to come up to speed, but if you give him a good boat, he has solved half the formula.

R.E. What do you look for in determining whether or not a sail is fast? Do you want a flat sail, a full sail, or one in-between?

W.M. A sail that is too flat lacks power. It also has a very narrow band where it works well. A flat sail is harder to trim; in addition, on wind shifts or velocity changes, it either will luff or stall very easily.

Flat sails like flat water. In any chop a flat sail is a little slower, because the mast constantly weaves about as the boat pitches. This action stalls and luffs the sail, which due to its flatness doesn't have enough shape to generate the power to drive through the slop.

A flat sail is beneficial if certain conditions are in place, such as smooth water and a very finely tuned boat skippered by someone who sails very well with a gentle tiller hand. This combination can be very fast, but it is difficult to keep the boat moving fast. Generally, we are talking about a minimum-weight boat and a minimum-weight crew. Keep in mind that your Cat also will point very high with this shape.

Once you move from a flat sail to one with a little more camber (or curve), more leeway for error exists in your tiller movement and steering of the boat. This sail shape is not quite as quick to stall and it handles the chop. If you are running a heavier crew weight, it also is fast. A sail with this camber probably exemplifies the best overall shape. Teams with very heavy crews, however, may opt for a little more power than this sail shape provides.

The extreme is the bag, or very full sail. This type is not fast anywhere, except on certain points of reach and some downwind. All in all, an extremely full sail is probably the best that it can be only in light air and a light crew downwind. It never will work well upwind.

I recently found a combination that works better on the Hobie 16. I thought I had a very nicely shaped sail; the camber was even all the way up and down the sail, and yet it was not as fast as other boats with similarly shaped sails that weren't quite as full. The battens in my sail were slightly shaved. I found that the 16 upwind was a little faster with a slightly flatter sail, set up with unshaved battens (except for very minor touch-ups to keep the camber in the right place). Until put to the test, I really thought my sail would have been faster.

R.E. What is happening to the air as it flows over a sail, and what do you look for?

W.M. The properly shaped sail has a good laminar flow; that is, air passing over the leeward side of the sail will remain attached (flowing smoothly) longer before it becomes turbulent in relation to the chord of the sail, resulting in drag and loss of boat speed. The flow over the lee side of the sail

generates a low-pressure area, which, as soon as it becomes turbulent, goes back to the static air pressure; thereby not generating any lift for you. Ideally, you try to maintain this flow as far back as possible all the time, both upwind and down.

If you have a really full sail, the air flow tends to remain attached back to the maximum camber point, or the fullest part of the sail. It then becomes detached or turbulent, and loses its laminar flow. A too-full sail has power, but is not as fast, because it can't sustain that critical flow far enough back on the sail.

Some people use leech telltales (telltales flying from the back edge of the sail). I am not a believer in them. If the sail is properly trimmed, you still will get some turbulence by the time the air gets all the way back to the leech.

I have always found leech telltales a bit confusing; by the time you get them streaming or flowing, you will find you are under-trimmed somewhere else on the sail. What you are doing is looking at the after-effect of what you have done with the flow of air, rather than what you are doing with it as it first starts to flow. I think telltales up near the luff of the sail are a lot more valuable. I don't use leech telltales at all.

R.E. Where do you place your telltales, and what do you try to do with them?

W.M. On all classes I sail, I run only three or four telltales on the main. They are basically about 20 percent aft — 20 percent of the distance between the front of the mast and the back edge of the sail. I try to have the leeward telltales streaming back with the airflow. They are positioned so you can tell the second that the front of the sail begins to stall.

This placement applies to upwind work. The windward telltales near the top of the sail will point up at a 45-degree angle, or sometimes actually backwind. The air trying to get around to the low-pressure side of the sail will create an opposite eddy up near the top as the air tries to flow off the top of the sail.

I don't pay much attention to my windward telltales going to weather — as long as the leeward ones are streaming. Some people call this action on the windward telltale lazy or non-productive. The shape of the mast disturbs the air in the forward part of the sail. More mast rotation creates more turbulence in this area.

You want all telltales positioned so they give you an accurate indication of when the leading edge stalls. You should trim the sail so the entire sail, not just the top or bottom, stalls at the same time. Achieving this may

require some twist in the sail. The concept is not necessarily true with the jib, but certainly applies to the main.

R.E. I have seen you use a masthead fly for years. What does it tell you?

W.M. I basically use the masthead fly downwind. In light air upwind, it also is valuable because of the wind gradient. This higher-velocity wind occurs as you get up off the water. It certainly is more pronounced in open areas, such as a big bay or the ocean. Due to velocity difference, the wind gradient can change the apparent wind up to as much as 6-7 degrees in the top of your sail versus the bottom panels. The masthead fly indicates the direction of this "upper" apparent wind.

Sailors are used to looking at the apparent wind and sailing to it off a bridle fly. The masthead fly is just another way of reading the wind at the top of the mast. Look for the same apparent wind angle as seen at the bottom of the sail. If the two are different, trim the top of the sail to the masthead fly, and the bottom of the sail to the bridle fly.

This theory usually applies in lighter winds. There is little or no gradient in heavier winds; besides, you are too busy doing other things to worry about it in these conditions.

Downwind, I use my bridle and masthead flies almost exclusively. I try to keep the sail trimmed such that the wind strikes the chord of the sail at a 25-30 degree angle. The lower part of the main takes care of itself, because the shroud won't let it go out but so far.

Up top, it's a different matter. Many times you may look up and see that the sail is weather-vented, or pointing in the same direction as the masthead fly, meaning you have too much twist in the sail and need to trim the sheet or steer a little deeper. This technique seems to generate the best speed downwind.

One key secret of sailing downwind is to keep the top of the sail working. I sometimes look at my telltales to determine if they still are flowing. Frequently they are not, especially when I am competing and trying to go deep. Your sail will be semi-stalled when sailing this low.

R.E. What do you do differently downwind vs. upwind?

W.M. A relatively full sail is better when going downwind in light to medium air. The most important adjustment to make, and the one you should make first, is rotation of the mast. Get as much rotation in the mast as you possibly can. The arm should be pointing ahead of the front crossbar on the leeward side of the boat, to create a fairly full sail and give you the drive you want downwind.

Another adjustment is to release tension on the downhaul. Doing so lets the pocket of the sail move forward and takes some bend out of the mast, making for a much

fuller sail. I let off some tension to the point of having a couple wrinkles beginning to form in the luff. I also back off the outhaul tension slightly in light and medium air to fill out the bottom of the sail.

In moderate to heavy winds, I don't let my downhaul or my outhaul off. I don't need the power and don't have the time to mess with it.

Often, the presentation of the sail to the wind is as important as trying to get the sail to pull you through the wind.

In downwind sailing, you are trying to generate lift produced by the sail shape. This lift pulls the boat forward. You also have the barn-door effect of the wind just blowing on the windward side of the sail. It's a feature not to be disregarded.

Often, the presentation of the sail to the wind is as important as trying to get the sail to pull you through the wind. I am not an advocate of wing on wing, but sometimes you can stand and lean on your boom, let the sail all the way out, sail deep and have it pay. This tactic works with light air and a minimum-weight crew.

An interesting sidelight is that the outhaul likes to be tight when sailing upwind. I have found this to be true on all boats I sail. Through tuning with other boats, I have discovered that a loose outhaul upwind is not fast, except in light air and very choppy water.

R.E. How can you determine when you have optimized your sail shape?

W.M. The best way is to "brush," or speed-tune with someone. Pair with a colleague whom you know has a fast boat and generally the same sailing style as you. You don't want to be a footer testing against a pincher.

Set both boats up and do some sailing and adjusting to equalize the speed on the boats. Then, make one change on one sail control (downhaul, outhaul, etc.) on one boat, and test for 20 minutes or more. Determine if the change makes any difference in speed. Once you have found the optimum setting, equalize the boats again and test different settings on other sail controls.

R.E. Where do you want the maximum depth or camber in the sail?

W.M. I have experimented extensively with this area, probably reinventing the wheel several times. Upwind on all Cats we sail, I think the camber should be 35-40 percent aft in the upper panels of the sail (above the shroud attachment point). Below that, I begin to work back until I am around 45 percent back at the foot of the sail. On the 17, I like around 35 percent at the top and 40 percent at the bottom; the forward pocket gives a little, less-critical presentation to the apparent wind, making it slightly more forgiving of trim errors.

R.E. Do you include the mast in the percentage calculations?

W.M. Yes. The mast is part of the sail plan. Measure from the leading edge of the mast to the leech. This measurement is known as the chord of the sail. On some boats, the chord is not always parallel to the battens. The battens are not necessarily in line with the wind flow as the boat is moving through the water. Once you have measured the chord at each batten, you must determine the deepest part of the sail along that line.

R.E. Do you lay the boat over to do that?

W.M. I used to. It's probably not a bad method, if done correctly. I used to lay the boat over with the main trimmed in as I wanted it, setting it on a barrel or something at the hounds (the attachment point of the shrouds to the mast). I didn't support the boat at the tip of the mast. When supported at the tip, the weight of the boat bends the mast in the opposite direction to which the wind would bend it, giving your sail a shape contrary to what happens on the water.

The problem with this arrangement is that the weight of the rig and sail distort the shape, so you don't get a true representation of sailing conditions. It's close, but not exact. What works best is to make the big changes by laying the boat over, but then make the final changes by setting up the boat in something similar to an apparent wind. You then can lay on the tramp and sight up the windward and leeward side. Each point of maximum camber should line up in a straight line or smooth curve from the top of the sail to the foot. If parts of the sail have the camber well back and others well forward, the sail will be slow.

R.E. Do you shave your battens to achieve proper placement of the pocket?

W.M. I do. I am a proponent of shaving. An unshaved Hobie batten will bend exactly in the middle at 50 percent. You really want the camber in the batten farther forward. I found that some shaving was necessary, especially on the upper battens. Typically, no shaving is done in the bottom two or three.

In all cases, I try to achieve an even line of maximum camber in the position I want it

coming down the length of the sail. Sail cut has a lot to do with what battens you shave and to what degree. The battens have a great deal of influence on the shape of the sail, even if the sail is cut wrong.

I am not going to say you can make a good sail out of a badly cut one. You can improve on a correctly cut sail by shaving the battens properly. Ideally, you should work with somebody who has done it before. It is very easy to waste a batten or two.

The effort put forth shaving battens is certainly time well spent. All horsepower is generated by the sail.

The effort put forth shaving battens is certainly time well spent. All horsepower is generated by the sail. If you have a poorly shaped sail, you can forget it; I don't care how good a sailor you are, you are not going to do well.

R.E. Do you shave the entire batten or just portions of it?

W.M. I start shaving aft of the front of the batten. I don't shave the first three inches. Leaving that section untouched will prevent the front of the batten from splitting and will ensure a better fit in the luff pocket. I work back to around 50 percent, but never touch the back half of the batten.

R.E. Do you recut your sails?

W.M. I have had some success cutting the tops of sails in the past, but haven't had to do it recently. The sails I have run across in the last three years seem to be a lot better than they used to be. I don't know if I'm becoming less critical or if my idea of the perfect sail is changing. If you buy a new sail, put it up on your mast; if it has no puckers or pooches or strange wrinkles, you should have a good sail. Rarely does a new sail have drastic problems with pocket placement.

R.E. How can you tell if your sail is blown out?

W.M. The vertical cut mains blow out first between the battens along the leech. When sailing in medium to heavy air, look at the back half of the main. If baggy pockets form between the battens, the sail is blown out.

This situation usually occurs first in the top half of the sail. You'll notice it doesn't

have that crisp look to it when sheeted tight. There is nothing to do but get a new sail. If you sail in heavy air a lot, a sail may not last more than two years. If you stick to light and medium air, two to three years are a maximum for peak performance.

R.E. Do you go to flat sails in very light air?

W.M. I do in the bottom part of the sail, but stay with a fuller sail up top. As mentioned before, I keep the forgiveness factor in mind. The air does not stay attached as long in the light stuff. Unless you are in glass-smooth water, the top of the sail is affected a great deal by any hobby-horsing. If it's achievable, flatten the bottom and leave the top a little fuller.

R.E. Is there anything else you think is critical to a fast sail plan?

W.M. I have a tendency to run a loose rig on all my boats. I test the rig tension before I put up the main and attach the boom. With the mast up and the rig tension on it, I rotate the mast as far as it will go. It should rotate three to four inches forward of the crossbar, allowing the mast to rotate easily downwind. If the rig is too tight, the shrouds wrap around the mast as it is rotated, and prevent proper rotation when sailing off the wind. In rough water and heavy air, rig it reasonably tight, because rotation downwind is not as critical in that air and you don't want the rig banging around.

R.E. How can the average sailor best learn more about sail shape?

W.M. Reading is a great learning device. You need to know as much as you can about why and how sails work. Forget all the stuff about genoas and spinnakers. (You can read about them if you want, but they don't apply to catamarans.) "Sail Power" is a very good book. "The Art & Science of Sails" by Tom Whidden has excellent information on what happens to air flowing around sails.

Asking fast sailors what they do with sail shape also is critical. Look at their sails and try to determine what is different in comparison with yours. If any of these racing gurus are so inclined, have them inspect your boat and explain the differences they see.

Usually, fast sailors have arrived at a fast shape and are closer to the optimum than you. I don't believe anyone has found the perfect shape, but some are closer than others. Take heart: there's always room to improve!

Thanks to Wayne for sharing his thoughts on sail shape. The bad news is understanding sails and the wind can be frustrating. The good news is we all have room for improvement!

Stay tuned to Racer's Edge for more insights from top Hobie sailors. 

PCC MONTHLY MEETINGS

ALL CLUB MEMBERS ARE INVITED TO ATTEND DECISIONS THAT AFFECT YOU ARE MADE EVERY LAST WEDNESDAY OF THE MONTH AT THE PITTSWATER R.S.L. CLUB. CNR. MONA VALE ROAD AND FOLEY ST. MONA VALE AT 8.00 P.M. NOT AT SAND POINT.

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