

KISS

Your Dinghy

5th edition © 2015-2022

Al Schonborn **W3854**



simple, elegant and
effective techniques for
successful dinghy racing
and cruising at all levels

Wayfarer North Americans 2000:

Heider Funk and Tom Wharton (*r*) in action
on Toronto's Humber Bay off TS&CC

front cover: Tom Erickson and W275 *Possum*
enjoy a November 2014 exploration of the tidal
flats off Beaufort, North Carolina. Gotta love a
boat that can do this in less than a foot of water.



KISS Your Dinghy!

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Oakville, May 2022

Keep It Simple, Sailor.

This edition of KISS Your Dinghy is updated with my latest knowledge and still not yet calcified opinions.

Best wishes for happy, healthy sailing,

Uncle Al (W3854)

Wayfarer North Americans 2000.

Uncle Al and Frank Goulay lead the pack on Toronto's Humber Bay using the treasured spinnaker given to Al by Mike McNamara at the 1992 Worlds. This number - sewn on no less - belongs to *Cordon Rouge*, the 1992 World Champion Wayfarer.



Who am I to talk?

With great gratitude, I look back on close to 70 fun-filled years of sailing. I feel very lucky to have been a hippie and a sailor in the 1960s and '70s, North America's golden age of dinghy sailing when regattas often attracted 30+ boats while our Nationals sometimes attracted over 50 boats. My early sailing days live in my memory as a fairy tale of Corinthian sailing, reminiscent of the times so lovingly presented by the late Cornelius Shields in *Racing with Cornelius Shields and the Masters* his inspiring book that is still available through amazon.



In 1954 I was born into sailing at the Queen City YC Junior Club on Toronto Island, my childhood home at age 13. I first learned on Brutal Beasts (*above*) given to us after many years' hard work at the Royal Canadian YC. I turned out to be well suited to racing where winning came from better sailing or thinking rather than greater speed.

After Juniors, I crewed with and learned from Canadian Lightning champion, Alf Dutton, who also let me helm his wooden beauty, whenever he had to miss a race. The Lightning introduced me to the art of the spinnaker, in which Alf was a task master, insisting that my eyes be on the luff of the chute 100% of the time. If I wanted to know how we were doing in the race, I could ask for updates.

Five years in the Lightning and its wonderful class association taught me much, but ultimately, I found that its abundance of things to tweak made me too prone to blaming my sailing mistakes on bad tuning. Luckily for me, a simpler boat that handled Humber Bay chop far better came along: the Wayfarer, designed in 1957 by the legendary Ian Proctor.



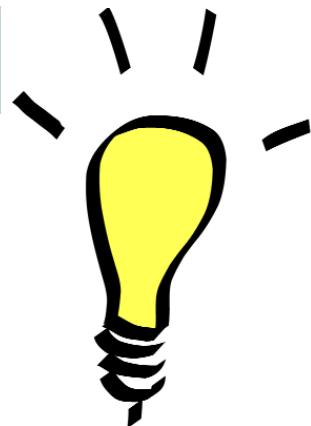
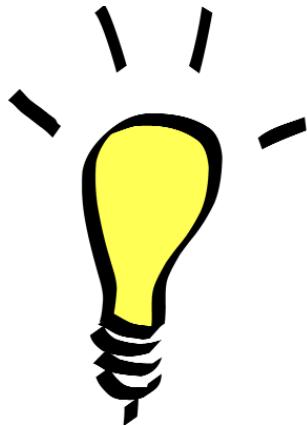
Queen City YC became a hotbed of youthful Wayfarers into which I followed my brother Mike (W276) (*1956 photo above left with Al*). I bought the well used W116 for \$1200 in 1964, and my life has ever since been centred on the boat that does it all and does it very well. Or as the Danes call her: *alletiders båd*, the boat for every occasion. The Wayfarer is perfect for me: a boat that performs superbly without much tuning.

I am also no fan of boat up-keep, doing just enough to keep my sailing gear functional. The same with practice. You don't reach the very top without it, but I'm just not **that** driven to win. And in my defence, I did practise by racing far more regattas than any other sailors of my acquaintance.

Despite my relaxed and simplified approach, I became a competitor to be reckoned with in the world of dinghy racing - dozens of Wayfarer North American and Nationals titles, decent Worlds finishes, a Fireball Midwinters win, and so on. Not the equal of the legends, Mike McNamara or Ian Porter, but not totally out of their league, either.

My temperament always finds me looking for an easier way: *laziness is next to godliness*. My high school language students tolerated my grammar lessons better when I applied *keep it simple* lubricated with fried cats and such. In sailing, keeping it simple is also a big help when I need to make the split-second decisions that bring racing success. In *KISS Your Dinghy* I share the fruits of my fun and experience as simply and light-heartedly as I can.

I have seen the Light!



Each of my sailing days since 1954 has brought me interesting enjoyment of some kind. But a few moments have been strikes of benign lightning if you will. They stand out because they have impacted my sailing life greatly once *the light had gone on*. And I hope that these ten revelations - summarized below and enlarged upon on the indicated pages - will enlighten you as well.



1966: the great Trout Lake shift

A gain of two miles in two seconds, believe it or not (p.84)



1973: mast rake revelation

A simple mast-rake check from Swede, Sten Warfvinge (p.20)



1978: speed test against fast boats

A tip from a Stuart Walker book has paid me fine dividends (p.86)



1988: saved by no board, part 1

Rudder suddenly gone at a start in 20+ knots - what to do (p.73)



1989: leech tension fast in a blow

Spreader sloth in Vallensbæk, Denmark brings unexpected reward (p.20)



1991: no need to move jib leads

Mike McNamara's coaching ultimately leads to my fixed leads (p.41)



1998: above and beyond the call

Marc Bennett, takes mainsheet at leeward mark with spectacular results (p.59)



2003: saved by no board, part 2

Capsize averted with sails still up in a 55-knot squall (p.74)



2013: the perfect favoured-end meter

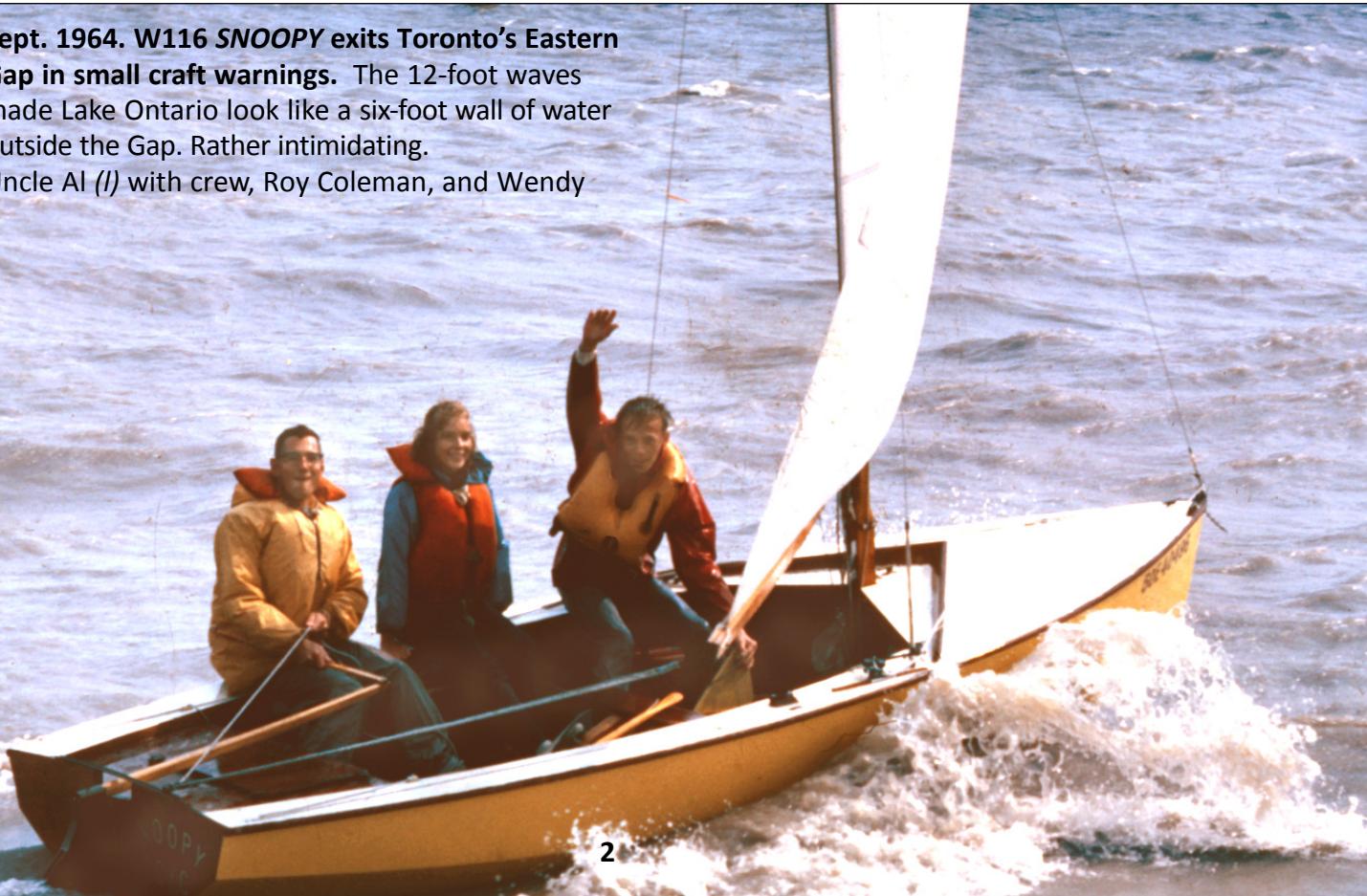
See which end is favoured by how many degrees without being on the line (p.90)



2014: the taming of the wild gybe

Whoever taught me to cushion a windy gybe, I thank you! (p.72)

Sept. 1964. W116 SNOOPY exits Toronto's Eastern Gap in small craft warnings. The 12-foot waves made Lake Ontario look like a six-foot wall of water outside the Gap. Rather intimidating.
Uncle Al (/) with crew, Roy Coleman, and Wendy



1 Boat Set-up and Gear

A Working Man's Dinghy

"This sh*tbox won three races!!??" was the critique overheard by my crew, Erik Yeo (*Fireball hat below*), during the 1971 Canadian W Nationals at the Kingston YC, as he approached three fairly hot U.S. sailors checking out our boat which had won the day's three breezy races.

Erik and Al have just won the 1971 C Nats



Jury rigging became one of my early strengths due to my cheap gear that often broke down. But in my next boat, a high-performance rather delicate Fireball, I fell in love with the joys of functional control lines that run efficiently to both sides of the boat.

When I bought my only new boat ever, a composite Mark 2 Wayfarer specially and lovingly built for me by Gene Smyers of Avon Sailboats in Michigan, W4000 got the Fireball set-up and became the best-rigged North American Wayfarer of its time. Sadly *Beaver Blues* weighed 50+ pounds over minimum and after three semi-successful seasons, I sold her to a cruising sailor. In 1977 I acquired W3854 from Ron Gillespie and I still sail and cherish *SHADES aka Glory Days*.

As a teacher and Canadian Wayfarer Class Coach (1979 >), I started *Uncle Al's Corner*, where I sold and installed gear that made good boat handling easier, especially for weaker crews. Most of the dinghy sailors whom I know are not rolling in money, so I tried and still do recommend thrifty gear options that avoid needless expense - wherever possible.

Gear Priorities

Unless you already have the Hartley Mk4 Racer, with all imaginable "bells and whistles", you may benefit from my lists below: A. gear that, in my experience, matters and B. not so much.

A list:

Crucial Items that are worth money and effort:
more quality > less frustration

- * top of the line **centreboard, rudder & tiller**
- * strong **vang/kicker, jib halyard tension set-up**: thrifty cascade system (*p.7,9*) gives these
- * flawlessly functional **main & jib halyard**
- * high quality **sheets, cleats, low rise mainsheet swivel block** and **durable jib sheet leads**
- * first-class **spinnaker gear**
- * if **furling** is in your plans, see *p.13* and use Ralph Roberts' *Aero Luffspar* system if you can
- * use **shroud adjusting plates** not turnbuckles
- * **compass; hiking straps; spinnaker bags**
- * **uncompromised buoyancy compartments** that at least meet the requirements of the wet test (Rule 34.8) - **my cautionary tale** on *p.81*!
- * large **bailing bucket** (*below*) firmly tied to boat

B list: anything functional will do

- * **outhaul, main and jib cunningham, bridle**



Overview of the gear on Uncle Al's beloved W3854 SHADES a.k.a. *Glory Days*



1. outhaul (p.18)

2. spin pole "ears" (2) (p.16)

3. vang/kicker attachment point on boom (p.7)

4. pole downhaul storage hooks (2) (p.16)

5. main cunningham hook (p.11)

6. spinnaker pole (p.16)

7. pole uphaul (p.15)

8. pole downhaul (p.15)

9. pole end fitting trip line (p.16)

10. furled jib

11. spin sheet catcher (p.19)

12. bow eye & painter (painter removed while racing)

13. jib cunningham (p.18)

14. jib sheet (continuous) (p.10)

15. mainsheet (p.10)

16. skipper throttling preventer



17. spinnaker sheet (continuous) (p.17)

18. balls system barberhauler (p.17)

19. raised spin sheet cleat (p.10,17)

20. fixed jibsheet lead with cleat angled up (p.10)

21. Hans Gottschling net spinnaker bags (18)

22. main cunningham cleat (p.11)

23. spinnaker halyard stored (p.15 #8)

24. spin halyard storage cleat (p.17)

25. compass (the late, great Suunto K-16)

26. low-rise mainsheet swivel cleat (p.11)

27. lever vang/kicker now upgraded to cascade system (p.7)

28. magic box for jib halyard (p.8)

29. 1964 bailing bucket from W116, my first W

30. rubber universal for 38" tiller extension

31. spin halyard block and cleat (p.15 #8)

32. non-adjustable bridle (p.12)



2013 Fanshawe Lake in London
A misty Ontario Sunday morning in
October at the Pumpkin Regatta

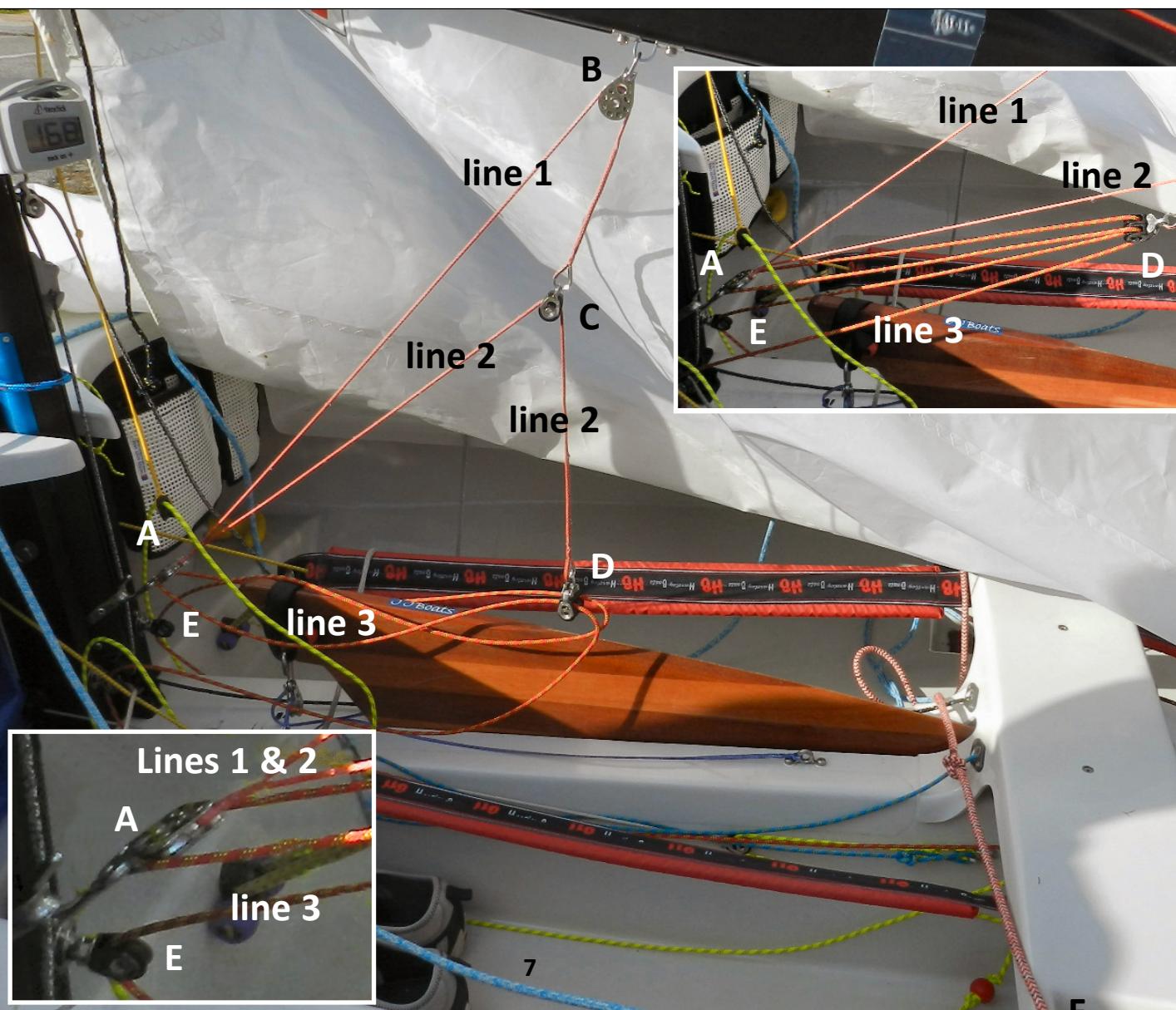
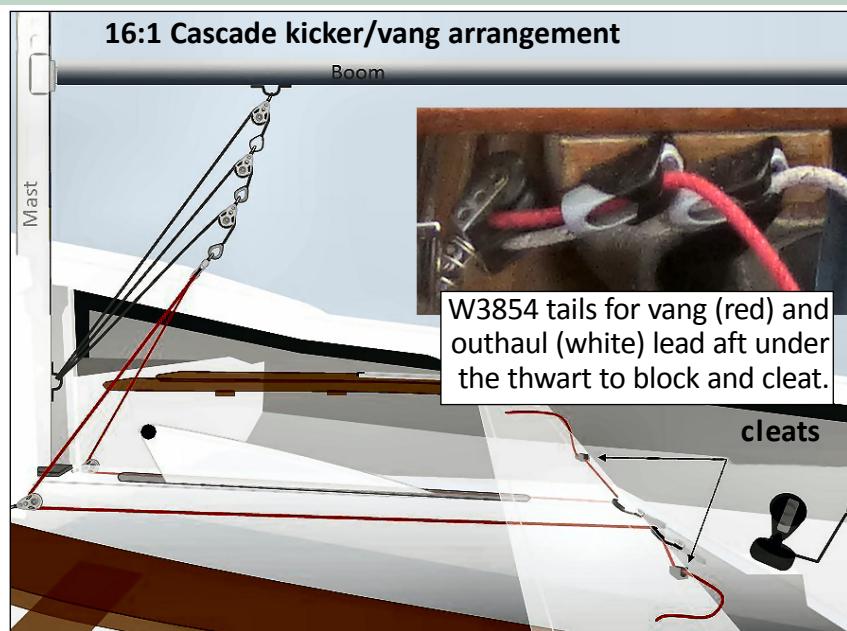
Vital Gear > Top Quality Worth Paying For

Vital #1: Powerful vang/kicker

Without a powerful vang/kicker that is adjustable from both sides by helm and crew, you cannot hope to race successfully. I have replaced my 42:1 lever with the 16:1 cascade system (*right and below*) which is perfect even for a large mainsail like the Wayfarer's.

The Mk4's Cascade Vang:

Becket block A, hooked into kicker eye strap on the mast (*below*), has lines 1 and 2 dead-ended to its becket (*insert below left*). Line 1 runs through block B on boom then ends with block C. Line 2 runs through block C, then ends with double-block D. Line 3 is threaded through block A. Each line 3 end then goes aft through one of the block D sheaves, before it returns forward to one of two blocks E at either side of the mast step. From there, each loose end runs aft along the centreboard box to a turning block under the thwart before exiting to a cleat (*F below right*) on the side of the boat.



Vital #2: Centreboard, rudder/tiller

Your centreboard, rudder and tiller should be the finest example of the art that you can make or buy. Anything less is not good enough. Board, rudder and tiller, more than all else, are the heart of your boat. Top quality and perfect repair are not just crucial for racing but also vital for safety while cruising. **If your foils are not yet glass-coated, your safety and peace of mind demand that they should be.**

Ancillary items - anything foils-related:

Gudgeons, pintles, rudder head, tiller extension and rubber universal should all be first-class and kept in perfect repair. I have switched to the metal rudder head/stock with matching tube tiller and 2:1 downhaul with auto-release cleat (CL257). This brought to an end decades of vain attempts to keep my wooden tiller snug.



Winter 1978: This centreboard brake resolves the issue of brake screws losing their grip. Bolts (*above*) go through original metal plate and car radiator hose. They then pass loosely through about 1/2"/12mm of the board's wood into holes threaded into a fitted piece of 1/8"/3mm aluminum for which I made room with the slot shown above. Excess bolt is accommodated by extending waterproofed bolt holes drilled into the wood about an inch past the added slot.

Vital #3: Main and jib halyard

Live and learn! I have been warned by those who know: Spectra/Dyneema ropes are subject to slow stretching/creep. So now, after ten years of racing with Dyneema jib and main halyards - the latter with occasionally noticeable heavy-air creep - I will return to halyards whose loaded portions are 7 X 19 stainless steel (1/8" for the jib halyard, 3/32" for main). I recommend dyneema halyard tails which are easy to eye-splice through the loop in the each halyard wire (*below*) for an ultra-smooth connection between wire and halyard tail. The very secure brummel lock splice (videos on youtube) is my splice of choice.



You can see below, the same magic/muscle box that I got for \$10 in the remainder bin at Tom Taylor's in 1978 that my jib halyard wire will be looped over. My magic box and main halyard rack (HA23671) are mounted on the mast below the gooseneck where my halyards used to exit from the mainsail groove on the Proctor golden oldies. (They are now doing likewise on my self-customized Selden mast.)

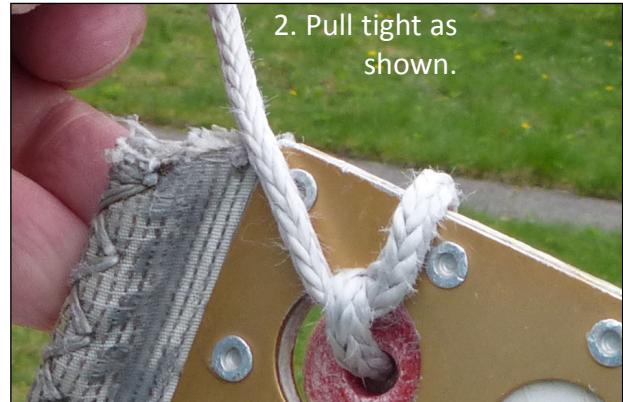
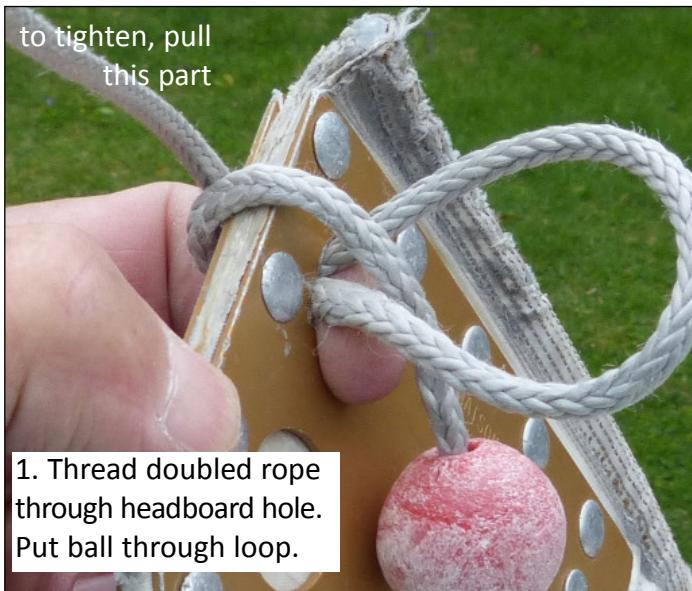
The modern Selden masts are much improved with exit blocks at the mast foot, so nowadays, most people just put their halyard hooks and tensioning system along the centreboard box as shown at the bottom of facing page.

Halyard Length: My main and jib halyards must be fairly precise in length since they loop over relatively fixed hooks: my jib halyard going to my magic box (*left bottom*) while my main halyard loops over one of the hooks on my main halyard rack (*to the right of the Frog at left*).

And speaking of wire ... I may soon change my jib luff's stiff 1 x 19 shroud wire to bendier 7 x 19 halyard wire. I expect my jib will be far easier to roll that way.

A very simple way to end lost halyard shackles:

Our sadly departed and much missed Dutch Wayfarer brother, Ton Jaspers, shared an excellent alternative to the loop and shackle at the sail end of a rope halyard: a ball with a stopper knot. Halyard gets attached and detached as illustrated below.



Vital #4: Adequate Jib Halyard Tension

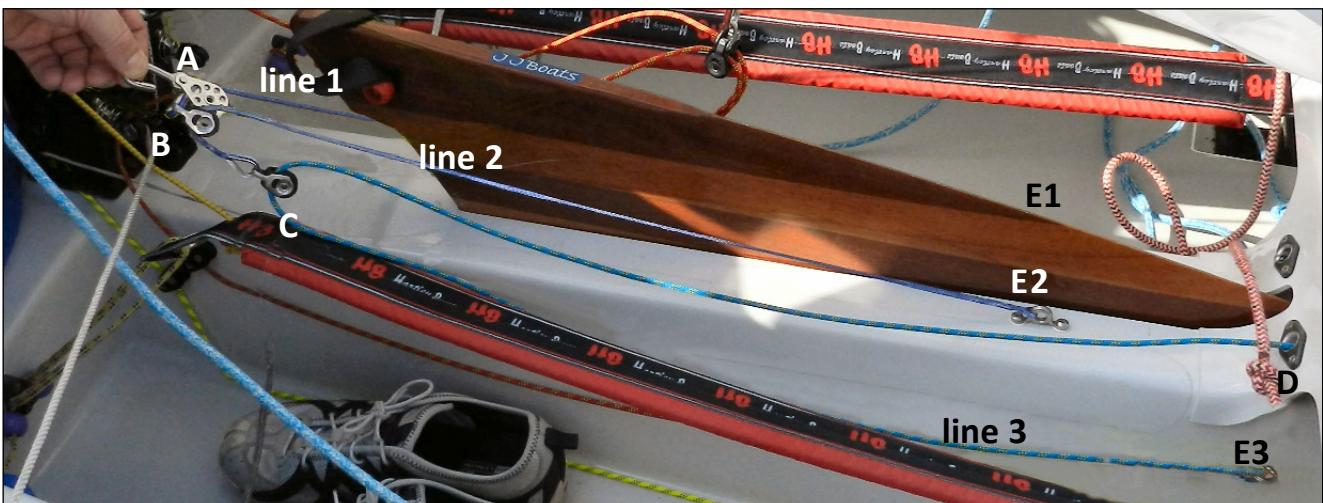
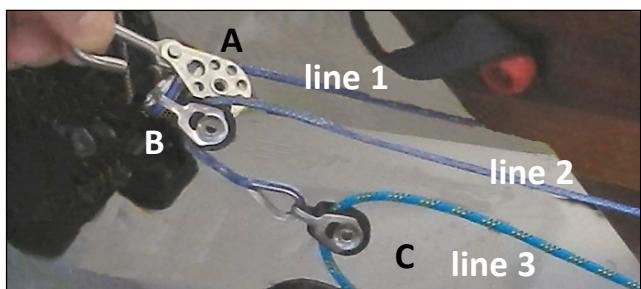
Unless you race purely for the joy of being out on the water with friends, you will want a way of tightening your jib halyard beyond what normal human muscle power can achieve. This because the jib halyard must provide rig tension, taking over from the forestay once the jib is hoisted. The Wayfarers' latest system of choice follows:

The Mk4's 8:1 cascade system.

Line 1 (below) starts at **E1**, the starboard equivalent of eye strap **E2**, and runs through block **A** (which will be hooked into the jib halyard wire loop) to its end at block **B**.

Line 2 starts at eye strap **E2** and runs through block **B** before ending with block **C**.

Line 3 starts at eye-strap **E3** then runs through block **C** before coming aft through /under thwart at **D**. From there the loose end runs to a cam cleat with a becket on the aft face of the centre-board box (*or on the side deck*).



Vital #5: functional sheets and cleats

Cleats that work perfectly and **stay angled up (below)** are essential for good performance. The proper sheets (*main, jib, spi*) are equally vital. Most dinghy main and jib sheets that I see are obese: The maximum diameter needed on most dinghies is $1/4''/6\text{mm}$ (*below*). "My hands!" do I hear you cry? Well, that is why we have the functional cleats. Sailing schools may say never cleat the main, but it works best to cleat and be alert enough to uncleat fast. Keep your hand near the mainsheet and your mind on the job - especially in windy, gusty weather! I cleat and uncleat the main hundreds of times in most races. Ask your chandler for low stretch, hands-friendly wear resistant rope. (*spin sheets p.15*)



Vital #6: jib leads

Chafe-resistant leads and quality cleats are vital, but a moveable set-up is not (*more below*). A fixed lead-and-cleat combination (*like my bespoke set-up above*) is good enough. Keeping crew comfort in mind, I suggest placing the lead at the inside aft end of the front bench where it meets the thwart. The crew is, after all, entitled to "buttoom". Since I permanently moved my jib leads to the position above in 1992, W3854 has won 16 North American titles. I rest my case.

Why is fixed OK? Close-hauled, the upper jib comes in $6''/150\text{mm}$ when you sheet in $1''/25\text{mm}$ at the clew. You can thus bring the whole luff to the

properly twisted attitude to the wind merely by sheeting in until the luff telltales show that both upper and lower sail are trimmed correctly. This works from any lead positioned within reason. (*The only benefit of a movable lead is that the bottom quarter of your jib can be made a bit flatter or fuller by sheeting from further aft or further forward. I have tried this type of adjusting but detected no significant performance advantage. More p.41*)

Trimming and re-trimming the jib until upper and lower telltale (*to which the helm steers*) show luff at same time, as recommended by Mike Mac works in all wind strengths. In **light to medium** airs, a marvellous, very accurate shortcut is a telltale about $3/4$ up the jib leech: sheet in until the telltale is on verge of getting sucked behind the leech. *Never further!!*

Vital #7: pin shroud adjusters

Traditional turnbuckles/bottlescrews are prone to sheering off without warning after repeated encounters with docks and such. And unless secured (*wire or duct tape*), they will also work loose and fall apart at the worst possible times. Use adjusters (*below*) to connect shrouds to their chainplates instead.

Not only safer, adjusters make accurate **length adjustment** simpler. Moving the pin one hole (*below*) on each side of the boat changes mast-head-to-transom rake distance by $4''/10\text{cm}$. With the high tech two-holer (*inset below*), a diagonal move halves that to $2''/5\text{cm}$. So, get rid of the turnbuckles. You'll not regret it.

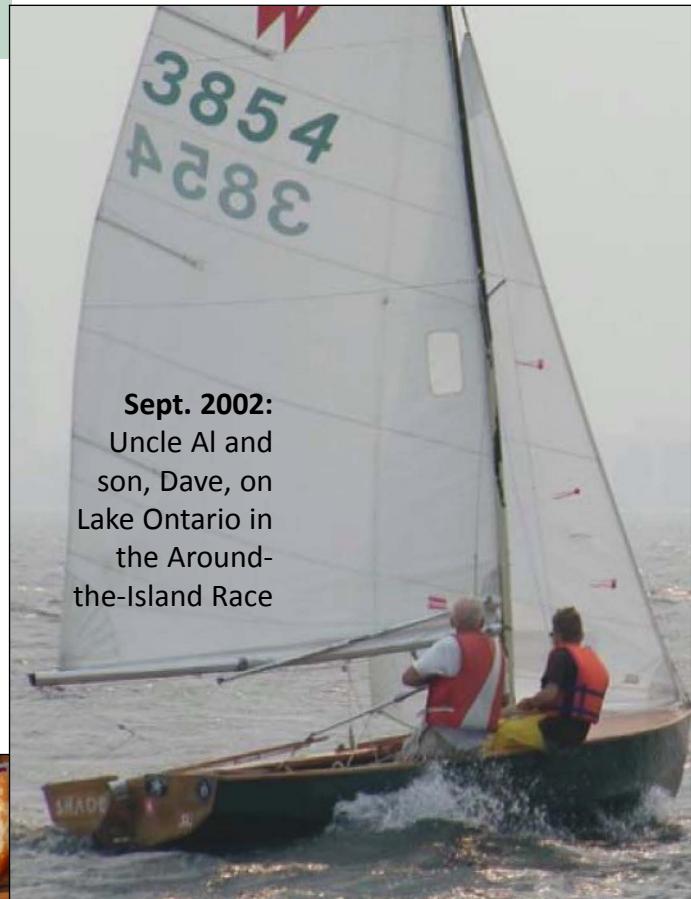


Other mainsail essentials

* **battens** should be sewn into the mainsail which these days will be rolled working down the leech, with battens in.

* strong **boom vang** (p.7) to bend the mast, de-power the main and limit mainsail twist. On a windy run, too much main twist makes gybing harder/dangerous if it causes the mast top to be pushed to windward in a blow, causing the dreaded "death roll" (sudden capsize > inversion to windward on a run).

Overpowered upwind, we must ease main to sail the boat flat enough to avoid harmful helm. Now vang must be used to limit main twist enough to keep top batten parallel to boom. This leech tension provides big gains to windward even if main eased (*right*).

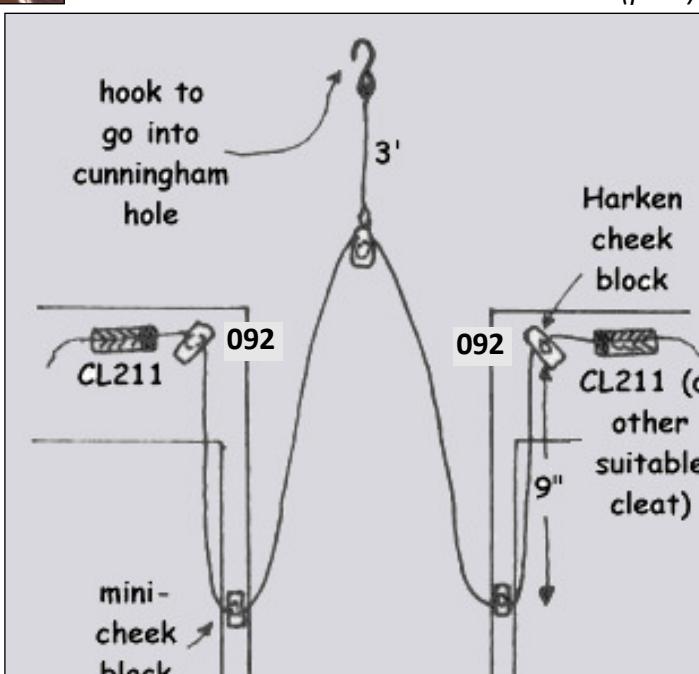


* **mainsheet swivel cleat** that is set so low that it takes conscious effort cleat mainsheet but minimal pull to uncleat it (*left*).

* our **mainsheet** is thin enough (1/4"/6mm) to run easily through its various Harken bullet blocks (*left*) - less expensive and safer, too.

* **outhaul**: rarely adjusted - we pull sail's foot to black boom band unless contra-indicated (p.39)

* **main cunningham** - only used upwind: tension on luff returns sail draft (*blown aft by wind*) to mid-sail (p.39). We attach a small S-hook to about 3ft of 4mil pre-stretched line and tie a bullet block to the other end. This saves having to undo the control system each time sail leaves boat. Our control line (9' of 5-mil softbraid) passes through this block as seen in the diagram. Two cheek blocks go just below deck level on each side of the vertical deck overhang (p.5) beside the mast step. Beside of each of these, is a silver clam cleat with eye (CL 211) or a Lance cleat. The cheek blocks on the mast partners are mini-cheek blocks. The 5mil. soft braid control line (about 9 feet long) is threaded in as shown. Figure-Eight knots go onto each end, of course, with 6" of loose end for better grip.



The bridle has replaced the traveller!

Most Wayfarers have replaced the traveller with a bridle. Today's vang easily gives you all the boom down-pull that the traveller once had to help with. Considering the benefits it brings, the bridle belongs right up there with the items that are vital. Luckily though, it can be rudimentary, cheap and left to its own devices (*page bottom*).

The bridle raises the traveller block towards the boom-end block (*right*). The closer we bring the two blocks together, the easier it becomes to centre the boom for optimum pointing without excessive downpull on the boom and the main leech. But the transom block must not meet the boom block too easily since the mainsheet must be able to provide enough leech tension for optimal pointing. (*If a bridle is too long, vang can be used to add leech tension, but then the boom can no longer be centred.*) **If in doubt, make bridle shorter.**

DIY installation of a bridle is best done with boat on a trailer, sails up, rig tension medium, no vang. Make the rope "legs" a bit too long and use knots until you have established the exact length you want and can switch from knots to splices as your bridle's finishing touch. Do end up with the legs on the short side so that it takes

real effort to sheet block to block, always remembering that we point on main leech tension, i.e. the more leech tension we can *usefully* add, the better. To achieve optimum results on 3854, we use a fixed bridle length that grudgingly goes block to block when we are both hiked out (*p.36*). If we are both sitting on the high side but not leaning out, we leave about 1"/25mm between the blocks, 2"/50mm if the crew is sitting on the windward bench.



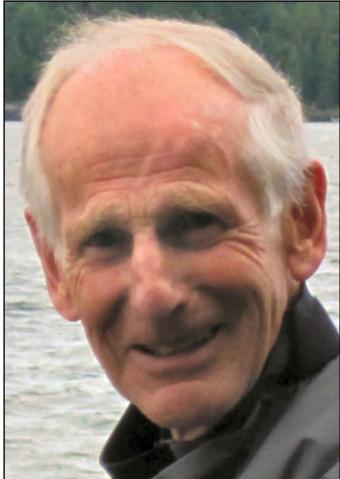
The Hartley Racer (*above*) comes with a flashy adjustable bridle but for me an inexpensive fixed bridle (*below*) is enough: low stretch rope "legs" with eye splices at both ends, floating traveller block fixed in middle, and leg ends fastened to eye straps at corners of transom (*below*).

Smith Island's Big Thorofare 2012

Richard Watterson is ready to tow us if the wind dies. This wire bridle chewed the tiller wood so we switched to two equal-length "legs" of 3-mil Spectra with Brummel splices at both ends.



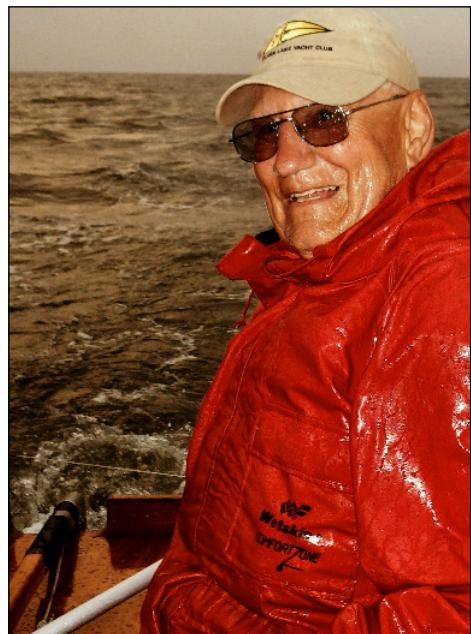
the Aero Luffspar Furling System



At present, furling gear is rarely found on not-so-high-performance dinghies like ours. But now that UK Wayfarer Ralph Roberts (*l*) and his *Aero Luffspar* system are here, that is changing. Furling gear had been too “clunky” to cope with the fine adjustments required by racing up until recently. But the very flexible carbon fibre *Aero luffspar* responds to halyard tension like a luff wire, permitting crucial adjustment of the groove (*p. 27*). Ralph’s spar got its racing baptism of fire in the 2013 Wayfarer Worlds where, says Kit Wallace, it worked very well (*see the luffspar in action on page 49*). The luffspar is unavailable in North America at this time but it may yet become a vital cog as it pays for itself by reducing pre-race wear and tear on your jib. Flying Dutchmen, for instance, don’t unfurl their genoas until the final few seconds before the start of a race.

My own luffspar went to the 2014 Chesapeake Cruise and fit right in. No more winding and unwinding the genoa around our forestay over and over again, untying and re-tying the jib sheets ad nauseam. This is work willingly done because it prolongs the life of the jib, but I’m always open to something easier.

And then there was the rainstorm. As Hans and I reached Crisfield in a cold and windy sunset rain under main alone, our luffspar really stepped up to be counted. Beating through the narrow steel- and condo-lined entrance to Somers Cove after a very long day’s sailing (*right*), I mishandled our main-alone tack. We got into irons and began to drift towards steel pilings in clear view of many condo people. Luffspar to the rescue: Hans got the drum line uncleated fast, pulled in the port jib sheet to back our jib, and tacked us in time to look casually capable and cool.



Ralph’s system
in action.
Note that it is
designed to
also enable
reefing of the
foresail.
Very handy!



2014 North Bay Wayfarer Weekend
Dave Hansman and grandson, Mitchell,
wrestle with a Callander Bay gust.

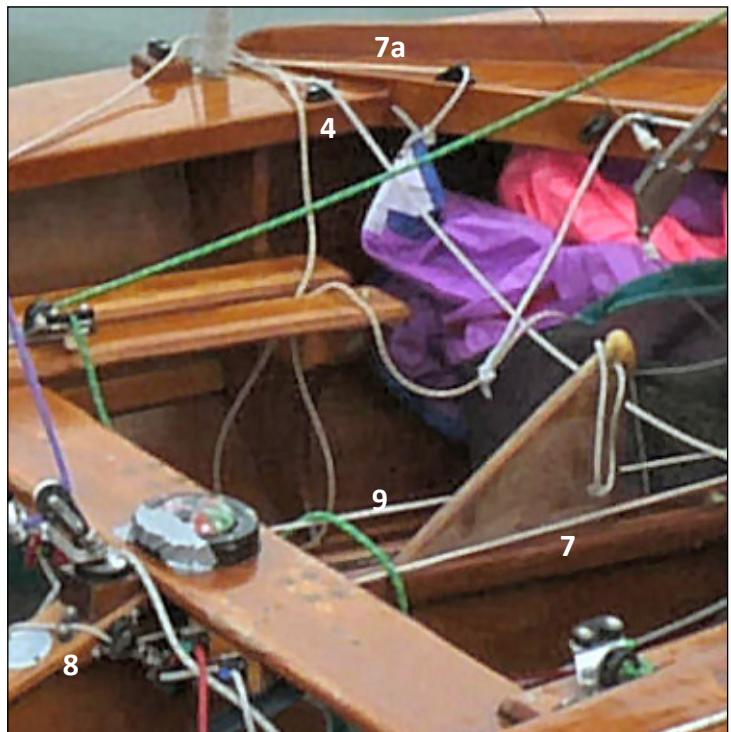
spinnaker gear

Unless you plan to fly the spin only on a sunny picnic sail in 5 to 8 knots, it is worth investing in top-of-the-line spinnaker gear. Anything less than that leads to endless frustration and unwanted swims.



(above)

1. continuous spin sheet: 53ft/16.5m of Marlow Excel Matrix or similar
 2. port and starboard balls free to slide along coverless last 10'/3m of each end of the sheet
 3. 10'/3m 4mm 8-plait one-piece **barber hauler**
 4. barber hauler cleats
 5. cleat for windward spin sheet
 6. barber hauler eye-strap
- (right) 7.** 45'/14m of 4mm 8-plait pre-stretch **spin halyard** exits mast foot, runs along CB box on starboard side **7a.** halyard stowed on port side here; this year my halyard end will have a "let spin untwist ball" to separate spin from mast at slightly slack full hoist
8. spin halyard hoisting cheek block and cleat on aft face of centreboard box
 9. **pole uphaul** (20'6m 4mm 8-plait) runs next to port side of CB box, cleats under thwart



* **halyard (#7) and pole uphaul (#9)** should be inside mast if at all possible > exit at mast foot and lead aft to the helm along the centreboard box.

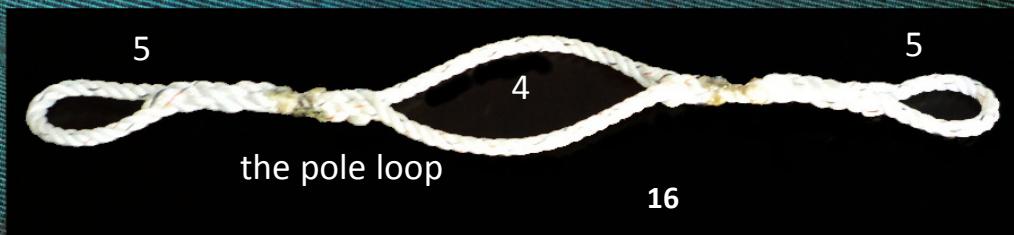
* our **pole downhaul** is in two parts: We insert 17'5m of 1/4"/6mm shock cord into the mast which will take up system slack without too much strain when the pole is pushed onto the mast. The cord enters through the front of the mast tip after getting a pliers-tightened overhand stopper knot. Lower shock cord end has a loop lashed into it, to which is connected 7'/2.2m of 4-mil 8 plait that exits through the forward part of the mast foot, passes through the deck forward of the mast (*p.5 #8*) and goes on to tie into the pole loop (*p.16 #5*). The link between shock cord and rope lives inside the mast. It is provided with a stopper ball which keeps the link from getting wedged into the exit block.

the spinnaker pole



After 30 years away from sailing, Mike Schoenborn (ex-W276) competed in the **2014 North Bay Wayfarer Weekend** with nephew, David, whose dad was happily taking photos while serving his ISAF suspension from racing with a smile/beer. Spinnaker pole details below.

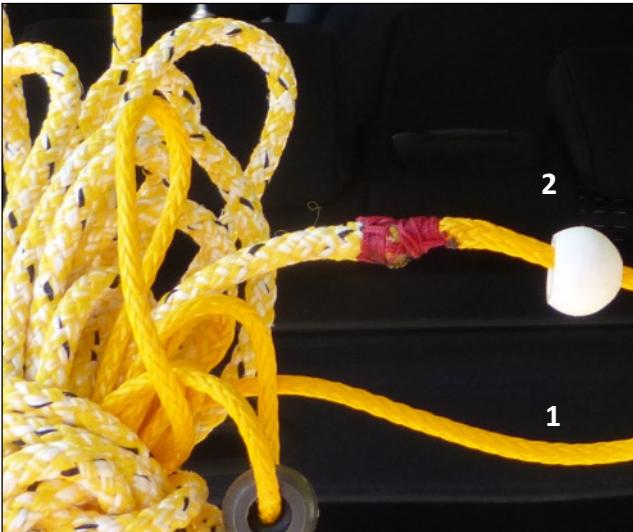
Pole necessities: 1. strong, user-friendly **end fittings** 2. **trip line** tied to both end fittings passes under **eye strap** (#3 below) near each end of pole to keep pole from falling out of **pole loop** (#4 below). **Loop** “lives” on pole, trapped between eye straps (#3) and trip line. Simpler equally functional pole loops can be made by tying a bowline into the uphaul end. Pole uphaul and downhaul tie into the **eye splices** (#5). **Pole ramp** (HA357) (#6 above) faces out one side of the pole. **Pole ears** (#7) and **aft-facing pole storage hooks** (#8) on both sides of boom.



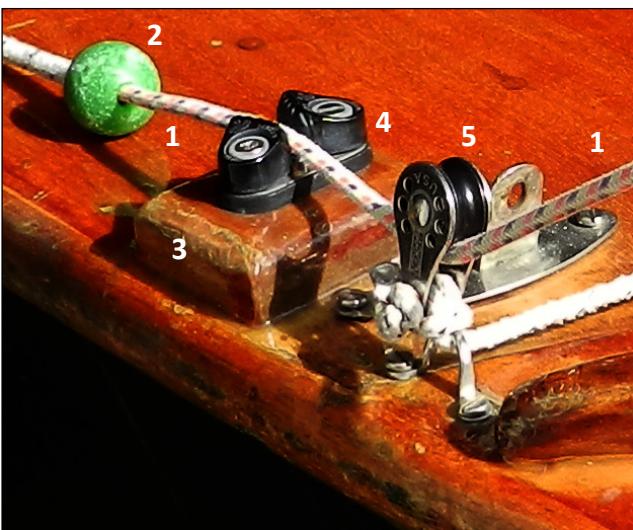
Spinnaker gear set-up and use

* **Spinnaker pole** (*facing page with parts list*) also needs to be functional high-end gear of course.

* **spinnaker sheet:** We use about 53ft/16.5m of *Marlow Excel Matrix* or equivalent as a continuous sheet. This is adapted for the “balls” system by stripping about 10ft/3m of cover from each end of sheet and then fixing the cover in position with a needle-whipping (*red above*) that keeps the ball from sliding aft past that point.



Ball (#2) slides along exposed spin sheet core (#1) to where outer covering has been whipped to the core (*above*). If I now uncleat the guy/windward sheet (#1 below) from elevated (#3) cleat (#4), the ball and sheet stop at pre-cleated barber-hauler and block (#5). Pole (at normal height) is now positioned near the forestay for a close spinnaker reach. Thus, the windward sheet does not need to be cleated during the reach set procedure, which saves one step!



Place whipping so that the spin pole will set just off the jib luff when the windward BH is cleated in. Before cutting, mark the spot where sheet would pass through block (*#5 left below*) on a typical close spinnaker reach. We actually leave a little extra core at each end because we tie our sheets on, too long being fixable with bigger knot.

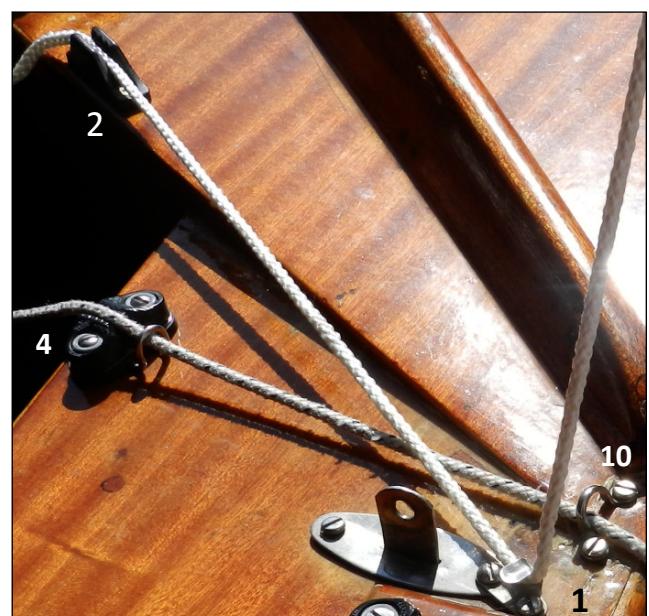


* Our **barberhauler** (#1 *above*) runs right across the boat just forward of the shrouds. On each side, one end of the 10'/3m of 4mil rope runs through a cam cleat with fairlead (#4) and an eye-strap (#10) before ending with a Harken mini-bullet block (#5) hitched to it.

* Spinnaker odds and ends

To **stow our spinnaker halyard**, I have the system shown below on each side of the boat:

1. aft-facing **hook**, and **2.** a CL204 **clam cleat**. This keeps halyard under tension along the shroud once the crew has cleated the halyard at #2, and the helm has cleated it aft.



Items where top quality is not so crucial

Our **jib Cunningham** is dead-ended through an eye-strap, runs up through the jib-tack grommet, back down through a microblock and aft to its cleat inside the splashboards (*inset*). Eat your hearts out, Mark 4s.



cunningham

Jib Cunningham: We use ours mostly to keep the luff from riding too far up its wire. We can ease it more to let jib tack set better off the wind.

Main Cunningham: For upwind work only. (*Should be let off at or near the windward mark, then re-set near the leeward mark.*) Ours is set up for the crew to adjust from either side - see two-page spread pages 4-5 and page 11.



A **compass** is truly vital for racing on open water. I love the *Suunto K-16* (*p.5 #25*) but that gem is - per Murphy's Law - no longer in production.

Most keen racers whom I know are using the rather costly *Tacktick* mast-mounted electronic compass that doubles as a stop watch. It can do even more, but Wayfarer Class Rules forbid use of electronics while racing except for timers, compass and digital cameras. (*Cell phones are permitted but not the in-race use of their GPS capability.*)

outhaul

I have a (too) nice outhaul set-up, adjustable from both sides but rarely have time, desire or need to adjust it. A very low priority item for me.

hiking straps

We have padded foot-friendly **hiking straps** that are through-bolted under the thwart (*below*) and thus won't drop you into the water the moment your crew stops hiking.

storage bags

On *SHADES*, we'd be lost without our fabulous Hans Gottschling net **spinnaker bags** (*p.5 #21*) and their side pockets under both sides of the bow deck. These hold everything from spare clothes to beer - even the spinnaker at times.



Little storage bags (*above*) under the thwart are a very useful idea copied from Danish Wayfarers. Julia made me two, honouring my 1972 *Elvstrøm Sails* bag from *Fogh Sails* in the process.

2 Tuning Basics

Standing & Running Rigging

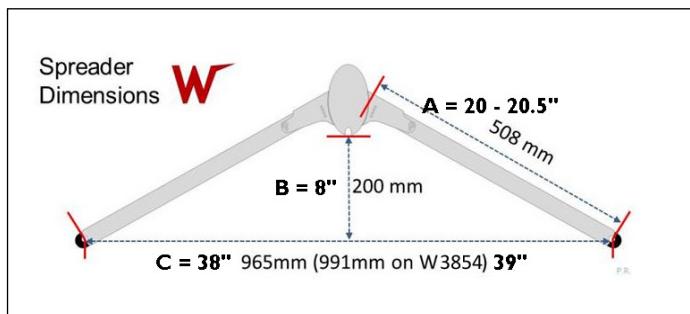
The spars (*mast/spreaders, boom, spinnaker pole, whisker pole/jib stick*) and halyards and sheets (*main, jib, spinnaker*) exist to put your sails into a position to succeed.

Wayfarer spreader recommendations

Spreader length from mast wall to tip (*A above*) **20-20½"/508-521mm** This length keeps the mast from bending to leeward or windward.

Spreader angle aft

Wayfarer Book recommends 8"/20cm between the aft face of the mast and a straight line between tips of spreaders of the recommended length. Spreaders should be angled aft symmetrically until that distance *B* in the diagram above measures 8"/20cm).



I save a step, by using tip-to-tip distance instead.

When *B* = 8"/20cm tip-to-tip is 38"/965mm. Less tip-to-tip distance (angling the spreaders further aft) promotes mast bend, more inhibits bend. Since my spreader revelation (*p.20*), I have generally used the **tip-to-tip distance 39"/991mm (*C above, measured with a marked length of batten material that lives in the aft tank.*)** This makes the mast harder to bend, enabling me to get more main leech tension.



Mast bend > Sail shape:

A Wayfarer mainsail is designed assuming mast will have 2-3"/50-75mm of bend at spreader height (*p.21*). A main thus works to best effect when the mast has that amount of bend, and the luff entry is neither too full nor too flat due to inappropriate bend.

Fixed spreaders set mast bend tendencies.

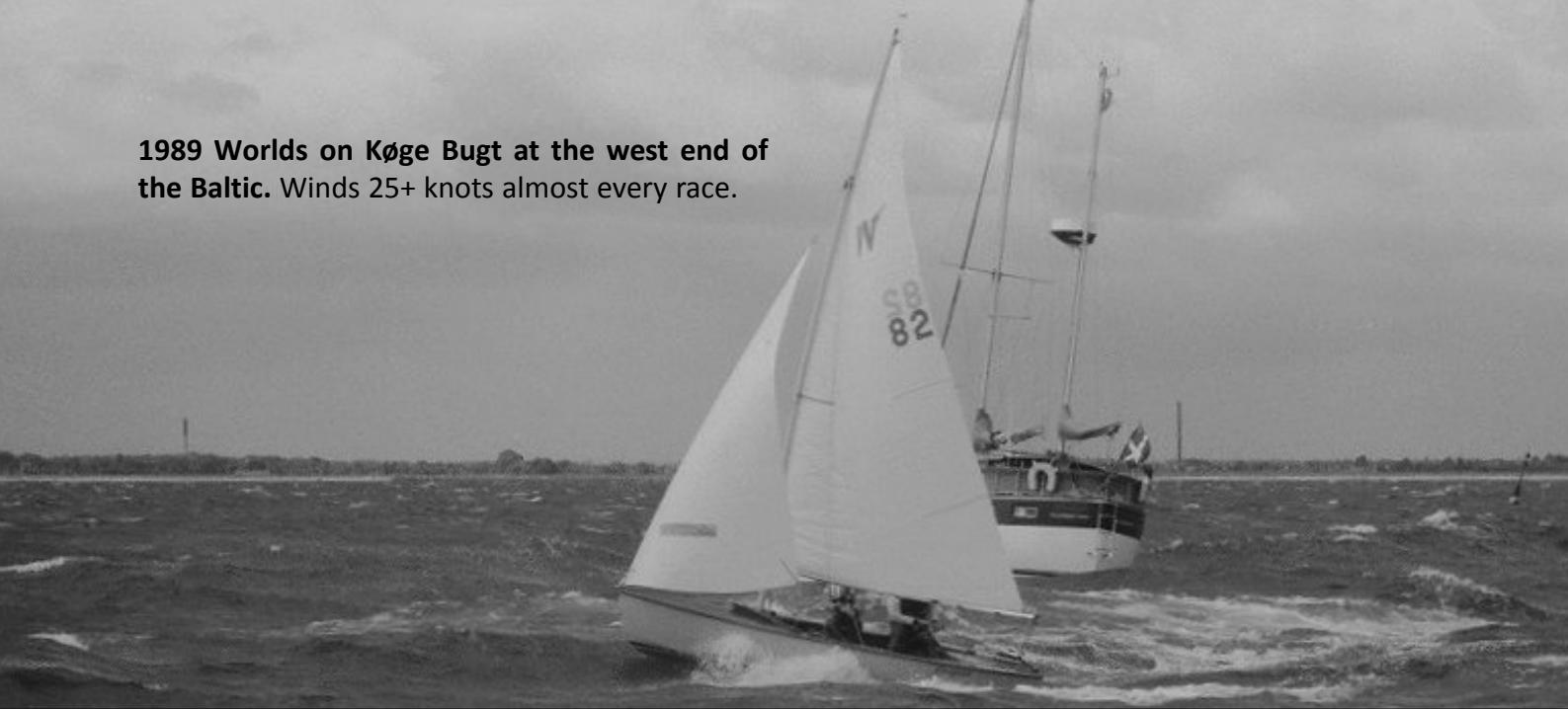
The old free-swinging spreaders promote mast bend. They easily let shrouds assume a straight line between hounds and chain plate, thus pushing spreaders forward into mid-mast as the rig comes under tension. Nowadays we actively influence bend by using fixed spreaders. Moving spreader tips forward of the straight line shown in red on *p.20* causes rig tension to resist mast bend as tension pulls aft on the spreader tip and the middle of the mast attached to it. Moving the spreader tips aft of the straight (*red p.20*) line encourages bend when rig tension is added since it makes the spreaders push the middle of the mast forward.

Light-air mast pre-bend would be nice. But the usual suspects that give mast bend: jib halyard, mainsheet and vang tension extract too high a price in light winds. I thought I might have a work-around in 1995: lots of jib halyard/rig tension to get compression (*see demo by my niece, Olivia*) that pre-bends mast. Then use mini-tackle (*below*) to take up slack in forestay and maintain the rig tension while the jib halyard can be eased to bring entry fullness back to my jib luff. A fail-safe idea, I thought.

It did sound very promising. But alas, rigging tight as a bow string in light air was something I could not get used to. Nor was it fast. Sadly I returned to letting jib halyard tension dictate our rig tension, and our results have been perfectly acceptable.



1989 Worlds on Køge Bugt at the west end of the Baltic. Winds 25+ knots almost every race.



Don't let the mast be too easy!

Between races one day at the 1989 Worlds (above) the wind died down to a nice 4m/sec (8 knots). So I climbed onto the boom, slot screwdriver in hand, and angled spreaders further forward to inhibit mast bend/power up the rig. In keeping with Murphy's Law, winds picked up again right away. But Tom Wharton and I left the spreaders in power-up mode as laziness won out.

Imagine our joy when these settings let us outperform the top UK "heavy air" team on that beat. I already knew that keeping the main leech tight leads to windward gains, but had assumed that when overpowered, we must make the mast easier to bend. But no. Angling the spreaders forward of the straight hounds-to-shroud plate line (*red at right*), is the way to go: rig tension trying to pull the shroud aft into a straight line (*red*) adding power and leech tension. This improved our performance to windward significantly.

Forward-angled spreaders force us to pull harder on mainsail leech before we can bend mast and flatten main. Result: more leech tension > better performance to windward. I checked with our world-class sailing and sails guru, Mike McNamara, who confirms it:

A boat points on its mainsail leech.



Tuning the Mast

All tuning sheet magic numbers and measurements are merely a guideline to help achieve one main aim: getting the sails set to best effect, the way our sailmaker designed them. The key thing, more important than the numbers, is the *taste test*, i.e. the main and jib should present a good profile to the wind all the way up and down their luff and have a shape that departs as little as possible from what our sailmakers had in mind when their work of art was created.

Angle and Rake

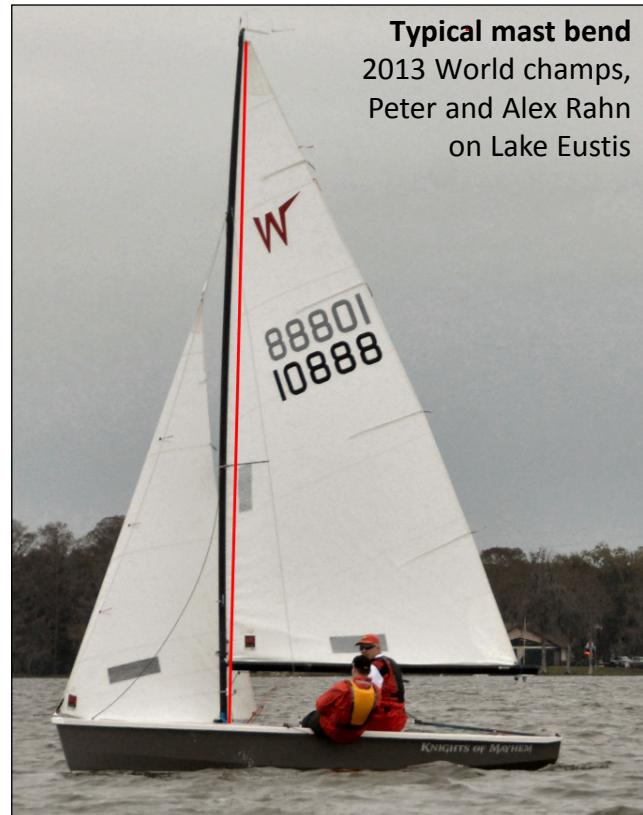
Two mast angles: 1. sideways 2. fore& aft/rake. To check that these angles are acceptable, we remove rig slack by raising the jib and give the rig medium air tension (*about 330lb/150kg on a gauge applied to a shroud, if you must*). Then we ping the mast (straddle the thwart, grab the mast with both hands at head height and push forward) to ensure no reverse bend.

1. Does mast lean to one side?

The mast must be vertical athwartships. A mast leaning to one side of the boat skews the rig set on both tacks. To confirm mast is vertical, attach a 25' tape measure to main halyard and hoist it to the "main-full-up" position. Take tape to the corners of the transom. If the readings are more or less equal, your mast is close enough to vertical. If not, one shroud will need adjusting *but not until after you have checked mast rake*.

2. Is mast rake (angle aft) acceptable?

Correct rake numbers are **23'5-7"/7135-7185mm** (The Mark 4: **23'9-11"/7240-7290mm** to transom centre). Tape measure to centre of lower edge of traveller (or batten across cut-out).



Having found any necessary length adjustments, we now change effective shroud length by moving shroud plate pin(s) (p.10) as needed.

At the 1973 Fireball Midwinters, world champion,  Sten Warfvinge, a young Swede with much experience in borrowed boats showed me a quick and excellent shortcut. To check rake, Sten just applied medium rig tension, then hoisted his main. If the boom - no mainsheet or vang tension - now hangs level (*below*), mast rake is acceptable. If boom's aft end angles up, there is too little rake because shrouds (which control rake) are too long. Aft end down means shrouds are too short > too much rake. Adjust shroud length accordingly.



Adverse effects of incorrect rake

Too little aft rake is a real pointing killer and must be corrected right away. More aft rake than the recommended setting/boom hanging level gives better pointing but worse performance downwind - **and overall**. *Extremes are rarely worthwhile since overall performance suffers. As in life, moderation is the best approach.*

Chocks

The sides of the mast must be a snug fit at deck level. This keeps jib sheets from getting trapped between mast and deck (*often during crucial tacks*). Most racers also chock the front of the mast at deck level to varying degrees when they want to power up by inhibiting bend in the lower mast. I never seem to remember to do this.

Nov. 2014. SHADES
off North Carolina's
Shackleford Banks
and Cape Lookout



Good boat and sail trim are crucial to acceptable sailing performance, in both racing and cruising. The good news is these keys to safe and capable sailing are fairly simple to achieve and maintain.

Boat Trim

A fine boat trim rule of thumb is to keep the boat reasonably level - both **fore/aft** and **side-ways**. This balance allows the dinghy to perform as intended, and is beautifully illustrated on p.49 by Kit and George in W994 *Peregrine*.

Fore/aft: Place weight so that neither bow nor transom digs into the water. While racing, crew and helm usually sit next to each other forward and aft of thwart. A **38"/105cm** tiller extension permits me to steer with weight correctly placed. *In cruising scenarios of course, weight placement is rightly considered to be somewhat less important than crew comfort.*

Exceptions: On a windy broad reach or a run when the boat wants to plane, we sit further and further aft (*in direct proportion to the size of my terror*). Keeping the bow up allows the boat to sail on its flatter aft parts, making it more stable and less capsize-prone.

Sideways trim: It is good form to sail dinghies fairly flat. Mike Mac says totally flat.

Is my heel/helm too much? Heeling to leeward makes a dinghy moving through the water want to luff up (*weather helm*). **Beat:** If tiller gives more than slight pull to leeward, you are heeling too much - even though this may feel faster! **Off the wind:** Zero helm is fastest.

Why is too much helm bad?

1. Rudder fighting to steer the boat acts as a brake.
2. Strain weakens and eventually breaks the rudder.
3. Helm wastes effort on trying to keep the boat on course.

How to reduce weather helm: Sail boat flatter: hike out and use vang/resulting mast bend to flatten mainsail. Still heeling too much? Ease main as needed to make excess heel/weather helm go away. More on pp.11, 49.

Very light winds: In drifters, wetted surface is our major source of drag. At that turtle-like speed, weight forward and ample heel to leeward reduce wetted surface (*below*) and also let gravity keep the sails looking full.

Keep rudder blade vertical! At any significant speed, a rudder blade angled even slightly aft greatly magnifies any helm the boat feels.

Lesser evil? Weeds make it worth raising blade as far as feasible, but then do sail dead flat for zero helm. **In shoal sailing**, an auto-release cleat (CL257) for your rudder tie-down is an asset.

2019 Old Brown Dog Regatta, Charlotte, NC
Lucky Uncle Al gets a perfect day for sailing solo and wins the event.



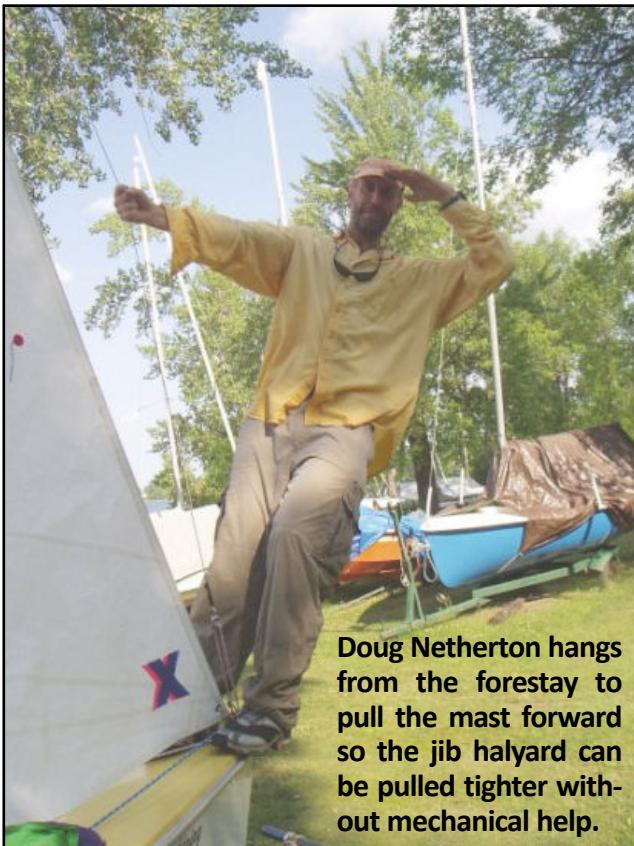


August 2011, Netherlands:
Two dozen Wayfarers enjoyed
sailing the interesting canals
and coming home each night
to the mother ship *In Dubio*.

Sail Set

Proper setting of the sails.

A proper job of setting sails, gets better performance and longer life from them. And best of all, you look like you know what you're doing!



Doug Netherton hangs from the forestay to pull the mast forward so the jib halyard can be pulled tighter without mechanical help.

The jib:

We hoist this first since it is easier to deal with while main is still down (*Jib can also be furled*). Tighten the jib halyard more or less enough for present wind conditions. Fine tuning will happen out on the water as per p.33: *If, when you are sailing close-hauled, the leeward shroud hangs loose, you usually need more halyard tension.*

Most racing Wayfarers these days use a cascade system (p.9) (or a Magic/Muscle Box) to tension a low-stretch halyard - *usually 1/8"/3mm 7 x 19 stainless steel wire* - and to achieve adequate jib halyard/rig tension.

Beware of over-tensioning jib halyard, however. This can flatten the jib luff entry in a way that narrows your "sailing groove" (p.27) to the point where it becomes impossible to steer effectively within it, and performance suffers badly - *more on page 33*.

How tight is right when beating? As you sail close-hauled, add jib halyard tension until the lee shroud shows almost no slack. (*Luffing a bit while adding tension avoids needless gear stress.*) If jib luff telltales get too jumpy, e.g. showing luff and stall at virtually the same time, ease jib halyard until that issue is resolved. In bouncy conditions, a slack lee shroud will be the lesser evil - Mike Mac won the '92 Worlds doing that! *More on p.34.*

Without mechanical advantage, it is not possible to get enough jib halyard/rig tension but you **can** get closer; our Junior Grubbies used to:

- * Have someone hang off the bow from the forestay to pull the upper mast forward (*left*) while the other crew member tensioned and cleated the halyard as tightly as possible. *But be cautious - I once bent a CL16 mast doing this.*
- * Get the mainsail to assist: Sail a dead run which will push the upper mast forward and let you take up some jib-halyard slack.

The mainsail:

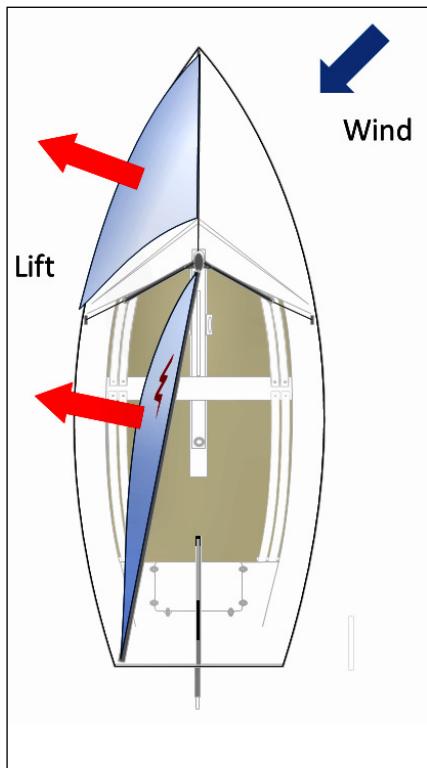
Ideally, the main will be hoisted as high as Class Rules allow - to the lower edge of upper black mast band. *Sounds simple but it takes very little to get the mainsail stuck as you hoist. Hoist becomes well nigh impossible if you have any resistance caused by cleated/tangled mainsheet, the vang or wind in the sail.*

My own main hoist procedure is:

1. hang the boat head to wind with centreboard fully up to allow the boat to stay to head to wind as easily as possible in the shifty winds prevailing at docks
2. keep boom off gooseneck
3. make sure that both vang lines and mainsheet are slack and free to run
4. hoist as high as the sail will/is allowed to go and hook the halyard onto its rack (p.8)
5. pull boom down > re-insert goose-neck. If this leaves luff with a stretch crease because your luff is under maximum length, raise goose-neck if you can. If not, ease halyard as needed. *A stretched luff causes a big bag in main just aft of the mast, something that is needlessly slow, especially when winds are too light to blow the draft aft.*

Sails & Sailing

General principles. The sailmaker builds a smooth curve into each sail. The depth of this curve will vary somewhat from class to class and from sailmaker to sailmaker. On our boat, we no longer worry much about influencing sail shape. We hoist, check that sails look OK, then mostly

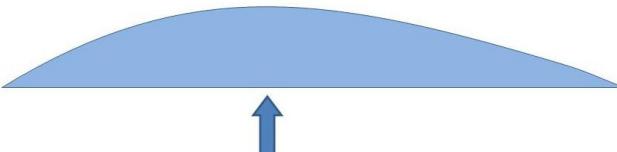


let well enough alone - except when we have become over-powered. Then we use vang to bend the mast and thus reduce the main's draft /fullness/power.

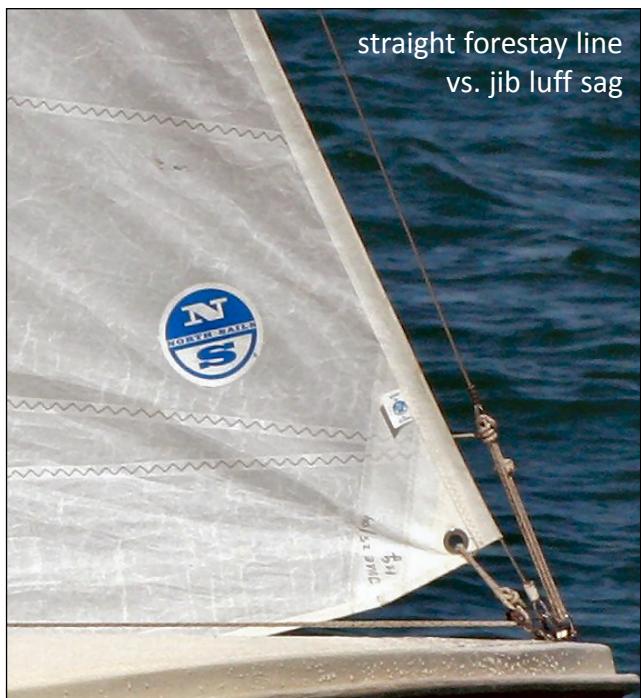
Lift. Like wings of a very slow plane, sails are curved so the air flowing over the sails gives lift towards the outer side of the curve in the sails (*left*).

Draft position. The sailmaker usually designs a mainsail so that maximum draft ends up about 45% aft from luff (*below*) by the time wind friction blows draft location aft. We ignore this except as specifically noted in *Simplified Tuning* (p.31).

The mainsail's maximum draft depth is about 45% aft from the sail's leading edge.



How do we get/maintain optimum shape in our sails? We just try to not mess up the shape our sailmaker created. We hoist, control - in simple ways - the sails' leading (luff) and trailing edges (leech) and then we sheet each sail to the best of our abilities.



Your sailmaker's assumptions:

1. jib luff will sag 2-3"/5-8 cm at mid-luff in any good breeze since luff is supported at only the tack and the hounds (*where the halyard enters the mast*). Your jib luff is cut to anticipate and match this sag. (*above: front view, and then the side view*)

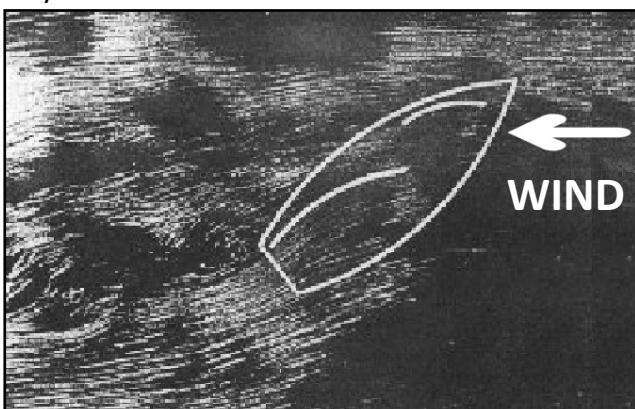
2. as wind rises, the mast will bend 2-4"/5-10cm - more if you let it. That is why the main luff has to be cut with extra cloth to fill the need created by the expected bend. We do want to keep the mast from bending too much or too easily (*p.20*). If the mast bend exceeds what your sail is able to handle, large stretch marks (*below*) will point from the clew to the area of excessive bend.

Lightweight speedsters, Mike and Marg Duncan, intentionally overbend their mast and seem to make that work when it blows.

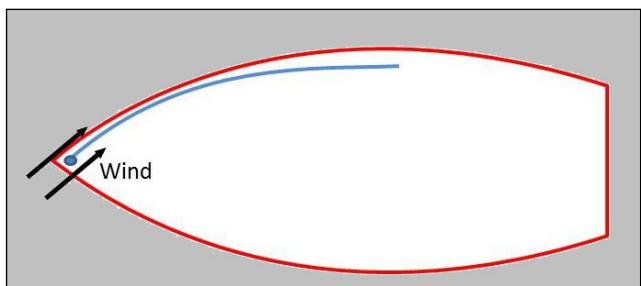


Other sail shape/function basics:

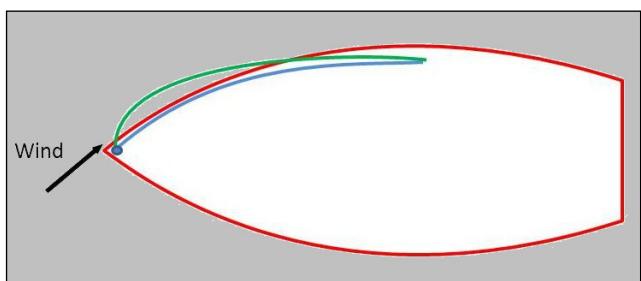
The image below has been borrowed from Eric Twiname's wonderful 1973 book *Start to Win*. Aluminum dust was sprinkled onto water flowing from right to left (*arrow below*) in a water tank to simulate wind flow over the sails. Remember that the **sail's leading edge must meet the wind head on**, so that the wind can flow properly along both the windward and the leeward sides of your sail.



If you point too high, the jib starts to luff as wind blows into the lee side of the sail. If we point too low, sail cloth does not flutter but lee telltales do get jumpy. Since the wind is now blowing at an angle to the windward side of sail, it cannot flow properly over both sides of the sail to generate maximum lift. This is the stalling out that causes planes to lose lift and crash.



The groove can be seen as the space between the gutters of a bowling lane. The wider the space/groove, the easier it is to avoid gutters. In sailing, you can widen the groove by adding curvature to the jib's entry (*green line below*) with reduced jib halyard tension. This makes the jib increasingly forgiving of less than perfect angling to the wind (*be it due to poor helming, bouncing around in waves or whatever*).



So why not sail with a wide groove all the time? Since wind needs to meet the jib luff entry head on, a more rounded entry (*green above*) will force you to point lower. It therefore pays to sail with the *flattest entry you can get away with* at any given time.

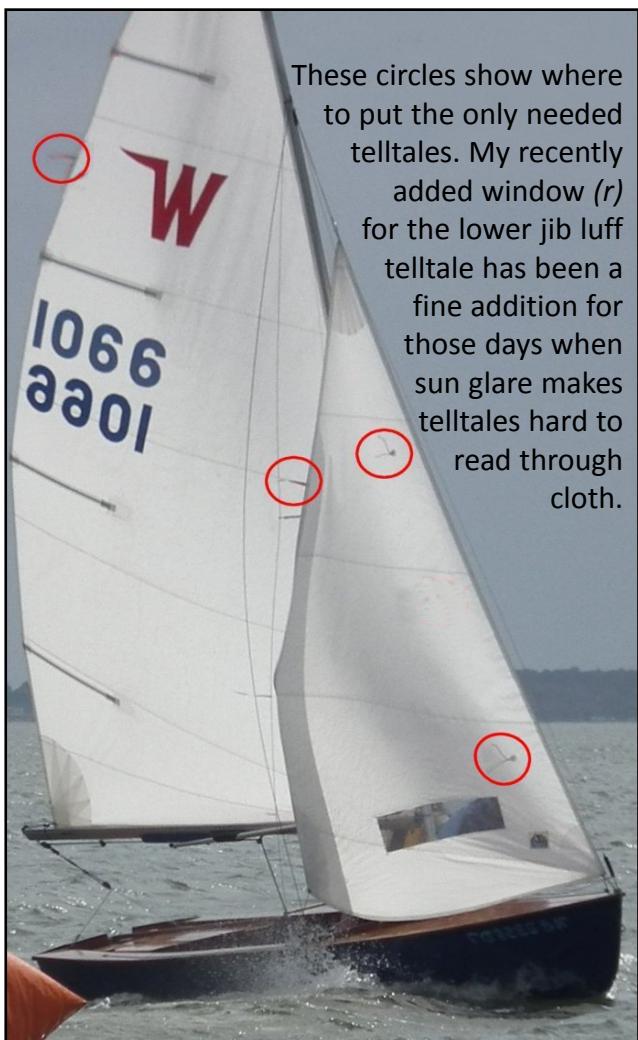
Good helming skills, steady wind and flat water permit a flatter jib luff entry and its attendant narrower groove, than the one that might be needed by a rookie struggling in bouncy waves or shifty winds.

But as always in sailing: **When in doubt, let it out.** If I do not feel fast going upwind, the first cure I try is to widen my groove by easing the jib halyard which in turn makes our entry more forgiving of less than perfect sail trim.

Telltale

What you should know about telltales. If you don't make a little effort to get the right kind of telltales and to install them the best way, telltales may annoy you frequently.

Materials: Sticking telltales onto the sail with tape (*facing page bottom*) may be easiest, but it is not the best way to install them because their loose ends can and do get stuck on the tape at bad moments. Telltales made from spinnaker cloth, your favourite Elvis tape or best of all an 8-track cassette entitled *The Mud Yelper and Other Turkey Calls* are the lightest and most wind-sensitive, but they too, have their Achilles' heel. When they get wet from rain or spray, they stick to the sail cloth tenaciously and at length. No. The ideal solution, says Mike McNamara, is virgin wool which is water resistant due to its oil content and will fly again surprisingly soon after a soaking. The two telltales top right are wool "sewn" into the sail and their dark colour usually makes even a leeward telltale legible through the sail cloth.



These circles show where to put the only needed telltales. My recently added window (*r*) for the lower jib luff telltale has been a fine addition for those days when sun glare makes telltales hard to read through cloth.



FLASH! The telltale window (*below*) lets me track a leeward telltale even in extreme sun.



Telltale installation: A sailmaker's needle will accept the wool's diameter when I put a loop of sewing thread through the eye. I insert the wool through that loop, and then use the thread to pull the wool through the needle's eye. Thinking ahead, I cut off one long piece of wool, well more than enough to provide two 20-cm luff telltales for the jib and two 15-cm leech telltales, one each for main and jib.

Jib luff telltales: Thread the two 20-cm lengths of wool through jib luff at quarter and three-quarters height (*left*), leaving half of the length to show on each side of the cloth. Keeping telltales away as much as possible from seams that could snag them is more important having them at the exactly perfect height. But do ensure that both luff telltales are equi-distant from the jib's leading edge to avoid conflicting readings. Telltales should be just far enough aft of the luff sleeve stitching to keep telltale ends from being able to snag.

To keep the luff telltale in position, tie an overhand knot (*left*) into the wool close to the cloth on each side. Repeat the process for the other luff telltale. I use the blunt end of the needle as a fulcrum inside the overhand knot, so that I can end up with each knot as close as possible to the cloth.



Leech telltales:

Leech telltales go at about 3/4 height of each leech (*facing page*). To attach these telltales:

1. mark your spot on leech > put a stopper knot (figure eight) in long end of the wool.
2. Slide needle inside the fold of cloth at trailing

edge of the leech between two stitch holes, letting the needle come out through the fold in the cloth at the very aft end of the leech.

3. Pull through gently until the stopper knot is buried inside the fold where it will not catch the rest of the telltale.
4. Cut the telltale to your preferred length.

Sail Trim

Sails perform best trimmed to the edge of a luff. Close-hauled, this means steering to the edge of a luff. On reaches, trim sails to edge of a luff. The run is the slowest point of sail since the wind just pushes the boat, i.e. a stall is inevitable.

Proper trim is easy to achieve and maintain, but does require constant attention on the part of the sailors (*which is harder to achieve!*)

When in doubt, let it out!!

A sail loses power if part of it is luffing. That is easy enough to see, but stalling - sail in too far - is not obvious. Boat won't crash like a plane but the power loss kills speed! Upwind, your leeward telltales warn you, but on reaches you must keep checking by easing the sails to the edge of a luff.

How to read the luff telltales?

When a windward telltale starts to angle up, the sail is close to luffing and perfectly trimmed (*see W10963 next page*). Heeling the boat and sailing a bit closer to the wind than this for **brief** stretches works when the occasion warrants.

Ask the leech telltales how tight is too tight.

Jib: Telltale starting to go behind sail shows sheet is now in too tight. **Never oversheet here!**

Warning: In a blow, jib leech telltale may keep streaming even oversheeted. *See 2(a) on p.31*

Main: Only one leech telltale is needed (near top batten); more are mere distractions. Upwind, see "Gears" (*p.38*). no vang until overpowered Off wind, tighten vang until boom is at right angles to mast. (*more on page 30*)

Upriver from Clayton, New York, 2006

Navigator, Julia, confirms that we are still on the St. Lawrence River.



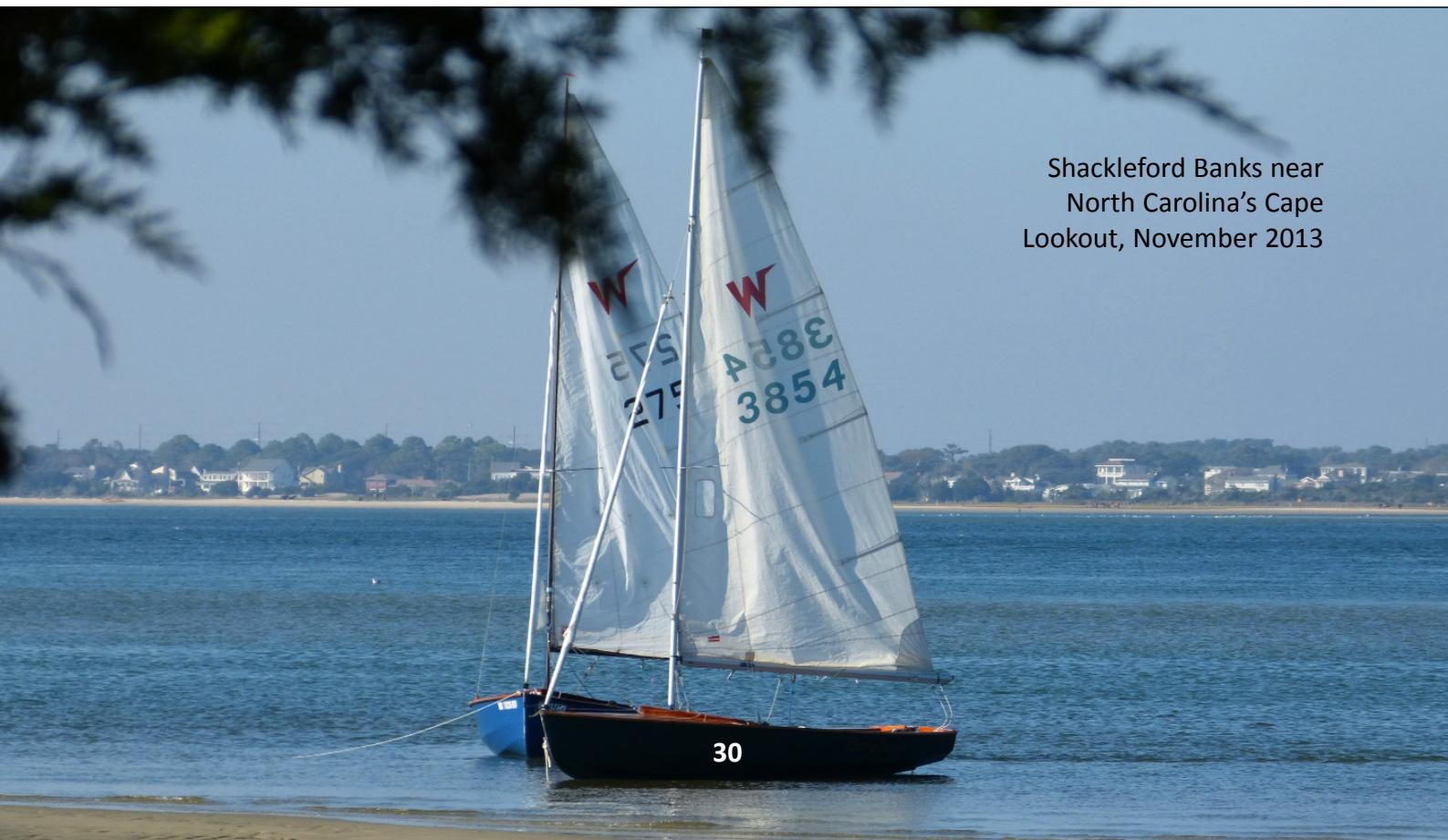


David and Anne Pugh
in fine form on
Michigan's Clark Lake,
September 2014

Upwind sail trim without telltales?

Jib: Sheet in until top and bottom of jib sail start luffing at the same time. Mark jib sheet to avoid having to keep checking this!!

Main: Sheet in until top batten is parallel to the boom end. If vang/kicker is in play (boat over-powered and/or off the wind) add tension until boom is at right angles (90°) to mast (*above*).



Shackleford Banks near
North Carolina's Cape
Lookout, November 2013

3 Sail Tuning and Trim Simplified

Sail shape: *Keeping it simple*, I reduce our daily upwind sail tuning to the two steps in the white inset below. As pointed out earlier, we try not to mess with the shape built into our sails. Mostly we adjust the luff and the leech of both jib and main using halyard and sheet tension.

Upwind Sail Tuning and Trim at a Glance

After acceptable mast rake (set it > forget it, p.22)
only two adjustments needed:
1. jib halyard > rig tension
2. leech tension (main & jib)

Mast rake: Reminder that mast rake is OK, when, given moderate rig tension, the boom hangs level under the luffing main that has no vang or mainsheet tension. Set it and forget it as per p.22.

1. Jib halyard > rig tension: While beating, add halyard tension until jib luff telltales become hard to read > ease halyard to settle luff telltales as much as needed in best groove for current conditions. (*shortcut: Tension jib halyard to remove obvious slack from lee shroud while beating.*)

2. Sheet tension

(a) **Jib:** Sheet in until top and bottom jib luff telltales start to show luff at same time. (Non-hiking winds shortcut: Sheet in until just before leech telltale starts to get sucked behind leech.)

(b) **Main:**

First gear: Sheet in as far as possible while keeping leech telltale streaming. (*Use this gear any time you need to regain speed e.g. after tack, waves, in dirty air, etc.*)

Second gear: Sheet in a little more such that the telltale only occasionally peeks out from behind leech. This gains distance to windward but must only be used as long as the boat is maintaining good speed. *When in doubt, let it out!*

2004 Wayfarer Worlds off Port Credit, Ontario: Søren and Jesper in fine form in Ed Tait's wooden W825.





July 2009, North Bay, Ontario:
Resting at the McNutts' after
the Trout Lake Poker Race

Setting the groove

As noted earlier, we tension the jib halyard until visible slack has gone from lee shroud as we sail close-hauled. If we want to test our limits seriously, tighten halyard 'til the luff telltales get jumpy as we sail upwind. That would mean our entry curve is now too flat, and the steering groove (p.25) too narrow for these conditions.

Is entry too flat?

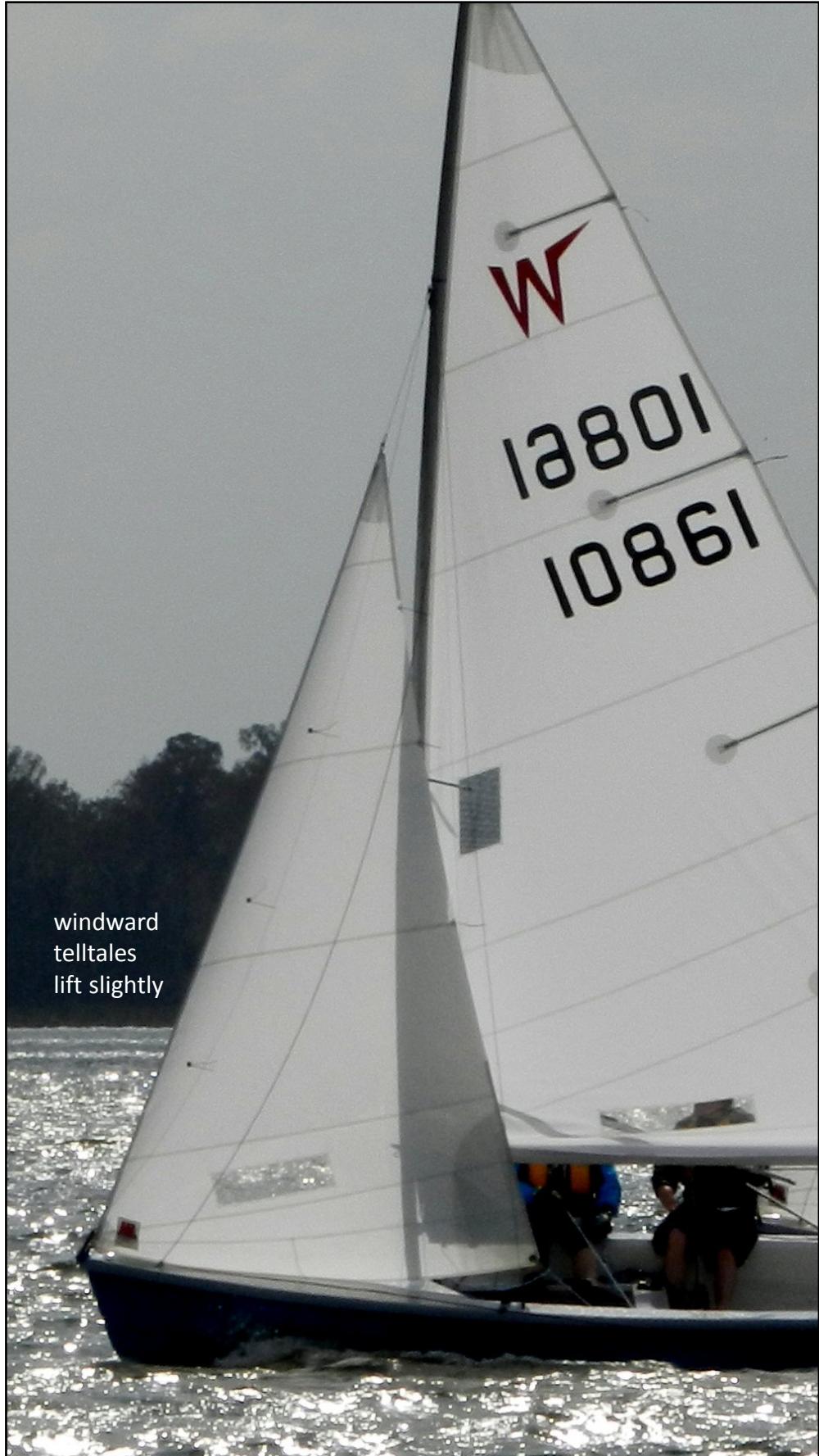
Our groove is too narrow (*entry too flat due to that tightened jib halyard*) and must be widened at once when the luff telltales are jumpy (*from one second to the next they switch from indicating luff to showing stall, at times both at once*).

To do this, we ease our halyard in tiny steps to make jib entry rounder. When our telltales settle down, we have set our halyard/rig tension, its attendant entry curve and our steering groove to the optimal setting for the present conditions.

And Bingo! Since the jib halyard-luff wire combination derives its tension by pulling against the shrouds' resistance, we have set our correct rig tension for these

conditions at the same time. (*A dinghy forestay is normally only on duty until the jib halyard takes over mast and rig support duties as soon as the jib has been hoisted.*)

If wind strength changes, we need to change jib halyard tension accordingly. Always though, we remain alert for performance kill in the form of twitchy hard-to-read telltales silently screaming: "**Entry too flat. Ease jib halyard immediately!"**



Is the entry too round? I know of no easy way to tell if the entry is fuller than it needs to be. Eventually, we develop a feel for an amount of rig tension that is “in the ballpark” for current conditions. This feel is especially useful in mid-race where overtensioning and then easing off are not a viable option.

Sometimes our telltales are working well, yet our boat still does not feel quite right. That means we’re *in doubt*, and we thus *let it* (the jib halyard) *out*. Almost invariably that helps – perhaps only psychologically, or maybe it is the easier steering derived from a wider groove.

A most striking example of the importance of a comfortable groove happened on Lake Ontario in 1991. Frank “Wayfarer Man” Goulay and I were sailing a 1992 Worlds qualifier out of Ashbridges Bay YC in a nasty cross chop of large swells from an overnight south-east gale and the new waves from a southerly lake breeze of about 10 knots. We kept having to ease the jib halyard and by the time we had gotten well behaved telltales, the jib was sagging more than 8"/20cm to leeward at mid-luff! We pointed lower than those who were sailing with tighter halyards but we axed them in boat speed. Not only that, but our better speed was making our centreboard more efficient so that we lost not that much distance to leeward.

What about the mainsail entry? Luckily we have no easy way to adjust this on the go. Fiddling with adjustable mast bend would just add one more item to my already overloaded brain .

So, having set the jib entry to our satisfaction and leaving the main entry alone until we talk main Cunningham on p.39, we can now look at the sheets and how to trim our sails to make best use of our power source.

Twist: We try to avoid the situation (*below*) where only a small part of the sail meets and uses the wind to best effect. Ideally, we want the entire leading edge of each sail to meet the wind optimally (*entry parallel to the wind so that the air particles can freely flow along both sides - remember p.26.*) Luckily such an orientation of the main is easily maintained with sheeting and supplementary vang as needed. We dealt with upwind jib work on p.31. Sailing free legs (off the wind), good spinnaker trim is usually our main priority, and the jib only gets serious attention when no spinnaker is involved.

But **in very choppy conditions** both main and jib may benefit from some twist to make sure that at all times at least part of each sail is working at the correct orientation to the wind as we bounce around.

Hilton Beach, Ontario 2006: Too much twist in the two mainsails on the left. More vang/kicker would be ideal.



Sheeting Jib and Main

the jib:

Option 1: Works in all winds strengths

Sheet in until upper and lower luff telltales (right) "break" at same time (*says Mike Mac*).

Option 2: Light to medium winds only

Sheeting to a leech telltale removes the need to compare two readings: just sheet in until the leech telltale starts to get sucked forward, then ease out a touch until it again streams aft. Note also the window near the mast in the main (p.33) for leech telltale observation. When we get a hiking breeze that overwhelms the leech telltale and it can no longer get sucked behind the leech, we must revert to option 1.

Lead position: We have not moved our lead from the aft end of the front bench's inner slat (*left*) since 1992. Why on p.41

the main - a boat points on its mainsail leech

Mike Mac confirms this, and that's good enough for me. The more main leech tension we can get away with, the more we gain to windward. If we sheet the main in a bit more after getting up to speed, we make better distance to windward relative to boats who do not do this. Note however "leech tension we *can* get away with". Too tight



a leech will stall air flow over the sail and definitely slow you down. If in doubt, ease.

Traveller. If you still use one, **never move its car off to leeward while racing** - even a few inches. That kind of stuff kills pointing and should be reserved for survival conditions of huge waves and howling winds, where pointing ranks well behind self-preservation in sailors' hierarchy of needs.

Bridle Review. As amply discussed on p.12, most dinghy racers use a bridle nowadays (*red left*). But do remember that adequate mainsail leech tension is crucial to pointing, so we must err on the side of having the bridle too short.



We have our bridle length set so that we reach the mainsheet block-to-block position just as we start to get overpowered and must start adding vang. Above, note that we are getting close to block to block by the time we are both sitting on the deck. In the middle picture, we are sitting out a bit and have sheeted in as much as this bridle will permit - block to block. Below (*Marc steering and Al crewing*) we are again sheeted block to block and are about to add a bit of vang due to more wind.





Bridle Bonuses

In addition to ensuring that we always get best pointing by letting us sheet to the centreline, the bridle does other useful things:

1. In lighter winds, the bridle gets rid of the excessive downpull that hooks the leech too far to windward if we try to centre the boom working from the traveller (*photo above left*).

So, is the main sheeted in just right? Our instrumentation here is one leech telltale near the top batten (*installation directions on p.30*). Perhaps the best way to illustrate how we use this telltale is to go through our routine as we sheet back in after completing a tack:

It is less damaging to undersheet than to oversheet, even more so when we've just slowed down due to tacking. Thus we take care to undersheet as we come out of any tack, *which is also a fine buffer against capsizing on a windy day.*

Ideally, helm and crew then both bring sails in simultaneously as we settle in on our new tack. This mini-pump gives us a timely nudge forward.

2. The bridle gives us a very easy upwind read on how far in or out we have sheeted the mainsail, i.e. do we have one inch, two inches, three inches between blocks (*above right*).

That is naturally far easier to judge than the difference between 30, 31 or 32 inches between the traveller and boom block (*above left*).

To fine-tune sail set, we start with easy references as short-cuts, like size of the gap between jib foot and splash boards and distance between bridle and boom blocks (*pics facing page*).

Of course, I will have observed how big a gap should be left today between the boom-end blocks to put us into this trim (*first gear*), and I can immediately sheet that far in without having to look up at the leech. This is quite helpful in high-stress racing situations.

To fine-tune jib, crew trims as earlier outlined on p.29. Helm, meanwhile, sheets in until the main leech telltale shows signs of wanting to hide to leeward of the leech. Gears next!



Gears Review

A review of the gears:

A reminder: When the boat has slowed for any reason (*tacking, waves, disturbed air, too much pinching, and so forth*), our top priority must be to get the boat moving again. So we gear down by easing the sheets and sailing with the main-sail leech telltale nicely streaming aft (*but close to getting sucked behind the leech*). This is the sailing equivalent of starting a car in **first gear**.

Shift to second gear? When we have regained good speed for present conditions, we pull the mainsheet in as much as waves and wind permit at that time.

With luck, we'll be near a boat against whom we can speed test, to see if the extra mainsheet tension is helping. If it is not, we go back to first gear, get our speed back up, and try cranking the main in a bit less or more. And so on.

String Pulling: Outhaul, Cunninghams, Vang

Outhaul: On our boat, outhaul furling gets done after spin, wind, waves, competitors, or strategy have been attended to. We may ease the outhaul a bit to power up the foot of the main (*more curve > more power*). In very light or heavy winds, we pull main clew to boom's black band. (*Flat foot in a blow to depower, flat in drifters when the wind is too weak to deal with sail curves.*)



Note how the cunningham is pulling more cloth forward

Pursuing this thought further begs the question: "What if the wind is blowing more than those eight knots that moved the draft from 25 to 50% aft? Won't the draft move too far aft?" Yes, and here the main cunningham rides to the rescue.

Principle: Stretching one edge of the sail pulls cloth towards the stretched edge (*left*). Thus, tensioning the luff pulls sail cloth forward. So when breeze pushes main draft too far aft, we add main cunningham which pulls draft forward to its desired position.

When we use our 1994 main which has logged many years of hard use, we need to crank on more cunningham since the cloth is tired and blows aft more easily than that of a newer sail.



If we use any **jib cunningham** at all, we use it very sparingly (*see speed wrinkles above*) - even in a good blow.

String Pulling: Vang/Kicker

As shown on p.7, a cascade is now the Wayfarer vang system of choice. The 16:1 cascade has ample power and never catches on stuff. Upwind, we use no vang until we need it to depower because we can no longer hike the boat flat. At that point, an easily adjusted vang is worth its weight in gold, especially in gusty conditions where it frequently needs to be eased and then cranked back on just as the next gust hits. Controls that go to both sides of the boat where either crew or helm can easily adjust them are also well worth the investment. See p.30 for use of vang/kicker off the wind.

Cunningham brings draft back home.

I once took "draft" pictures of a brand new main on land and was appalled to find maximum draft was only about 25% aft. Distressed, I phoned the sailmaker, Heider, who chuckled and said: "I'll show you. The wind going across the sail will drag the draft aft right to where it needs to be." Sure enough, in about 8 knots of breeze next day, there was the maximum draft, blown aft from quarter- to half-way as Heider and I sailed close-hauled. What a total and blessed relief!

Close-hauled & overpowered: The vang does two important things. It flattens/depowers the mainsail by helping bend the mast (*below*). Even more importantly, it adds vital tension to main leech (*right*) which keeps us going well to windward even after we have eased the main to keep the boat flat (*right*).

A boat points on the leech tension of its main, World champion, Mike McNamara states. Which brings us back to the major benefit of the fixed but adjustable spreaders already pointed out on *page 19*. Spreaders can be set to make the



mast more bend-resistant, which in turn lets us put more tension on the leech because the vang must pull down on it harder before the mast is willing to bend. And presto: you have better pointing even when the sail is eased quite a bit (*above*).

I once tried spilling wind from a main not vanged, my idea being that only the top of main would luff and this would reduce heeling forces better. The reality of one beat, nosediving from a great start to 9th place at the windward mark soon shelved **that** promising theory.

No Need to Move the Jib Fairlead

 I used to worry about the ideal fore/aft and in/out position of the jib sheet fairlead usually putting the lead where an imaginary line drawn from the mid-point of your jib luff through the clew meets the jib track. Thanks to Mike McNamara (several times Wayfarer World champion who at least partly agrees with me), I have realized and confirmed to my satisfaction, that lead location is not as critical as I had thought. Fiddling with it and worrying about it just wastes brain effort better spent on almost anything else.

Here's what happened: Coaching us in Toronto in 1990, Mike Mac had us tip a rigged Wayfarer on its side and then asked Mike Codd to sheet the jib in to close-hauled. "Now sheet in one more inch (25mm)," said Mike, "and watch what happens to the jib leech at spreader height." Amazingly, the upper leech moved inwards 5-6"/125-150mm. The point being made was that small jib sheet tension adjustments have a major effect on the close-hauled jib.

But I saw a second message in this revelation: If the upper part of the close-hauled sail comes in far faster than the lower - *six inches of upper leech for every inch at deck level* - there must always come a point where upper and lower sail are in balance at the same orientation to the wind regardless of the lead position.



If, for example, the upper jib is twisted off to leeward too much, and we sheet in, the upper part of the jib comes in faster than the lower half. Eventually any unwanted twist will be removed, and the whole jib entry will meet the wind at the same "angle". And this will happen no matter where (within reason) the lead is positioned. Sheetin from further forward just means I'll need less sheet tension to reach the balance point because I'm pulling more directly on the upper part of the jib leech. By the same token, moving the lead further aft just means the jib foot will be in pretty tight by the time the upper jib catches up. In so many words, moving the lead forward means you'll be sailing with the foot of your jib progressively fuller/more curved, and vice versa if you move the lead aft.

Upwind we simply obey the sheeting dictates of our jib telltales which give us an easy, accurate read in all conditions. Frank Goulay and I played with rounder and flatter jib foot settings a bit in the early '90s but noticed no difference in performance. Since then, I have never moved our jib lead from its position just forward of the thwart on the inside board of our front bench (*above*) regardless of conditions. And I ultimately got rid of unneeded track a few years ago.

(Note that our windy beating jib sheet tension is up for review. Option 1 (p.35) to be used next time we race in a hiking breeze.



Off the wind with no spinnaker things are less complex. As far as your sails are concerned, trim is mostly a matter of letting your sails out to the edge of a luff (*remembering the inevitable stall on runs*) and using enough vang to keep the boom level (*90° to the vertical mast*). These three photos pretty much tell the story:



Artsy as the curves look, none of these sails is using the wind to best advantage. Since neither main is luffing, parts are thus oversheeted and stalling out. Using enough vang to get booms level would leave the mains at a more uniform and potentially effective angle to the wind.



Beware: an under-vanged main raises capsize risk on heavy air runs, especially during a gybe where the boat must be turned further before the wind can finally get behind the upper main and violently slam it over.

Jib: We ignore excess jib leech twist when we have spinnaker preoccupations. But on two-sail reaches and runs, good crews will by-pass the jib lead to play the jib sheet from where they can add more downpull and remove unwanted sail twist.



(above) Note how Marc - to keep boom end from lifting - has added vang just before we got to the windward mark after not needing vang while going upwind. In another pre-rounding preparation, Marc has just let off both cunninghams completely (*see the wrinkles in both luffs*). Cunningham tension is undesirable on reaches and runs.

This can be seen in the image on the left where main is perfectly vanged to keep the boom level but the jib luff has a stretch bulge that illustrates one reason why you don't want the cunningham tensioned while you are sailing off the wind.

4 Safe, Efficient Sailing

I have a rudder ... and I know how to use it!

Skills: Steering competence is likely the most vital skill any mariner can cultivate. Both helm and crew should understand the principles of steering and develop at least a basic ability to steer. Yes, the crew. If the crew at least knows the basics, that understanding helps them to do their crewing job better. And every crew should get enough time at the helm to at least be able to rescue the helm if the latter should happen to fall overboard.

Equipment: Rudder, tiller and centerboard are our life-line to steering. As mentioned earlier, the foils (*rudder blade and centreboard*) are the heart of our boat and must be well shaped, smooth, strong and ***fibreglassed if wooden***. Foil reliability is even more vital to the cruiser than to the racer. Racing, we are close to potential help if a board or rudder snaps, but out alone (e.g. *below*), far from help, weak foils could well be a disaster.



My kingdom for a strong rudder!! June 2011: Gale-force winds on Lake Michigan off Charlevoix during our *Tip of the Mitt Adventure*. In retrospect, on a broad reach in 25 to 35 knots with no land in sight and the waves bouncing us around a fair bit, Gary Hirsch and I should have been wearing life-lines, even sailing under genoa only. Still, as pilots have been known to say: "Any landing you walk away from is a good landing." Lifelines for sure next time! Note Uncle Al's death grip on the port gunwale. Worth his weight in gold, Gary got the camera out and kept the red wine coming, cool as a cucumber.

Leaving a busy dock and steering backwards

The illustration at right shows how to leave a crowded dock where boats are hanging head to wind like sardines: Sails luffing, board down just before cast off, helm must be prepared to steer backwards, reminding self that when boat goes backwards, stern goes where the rudder blade points!

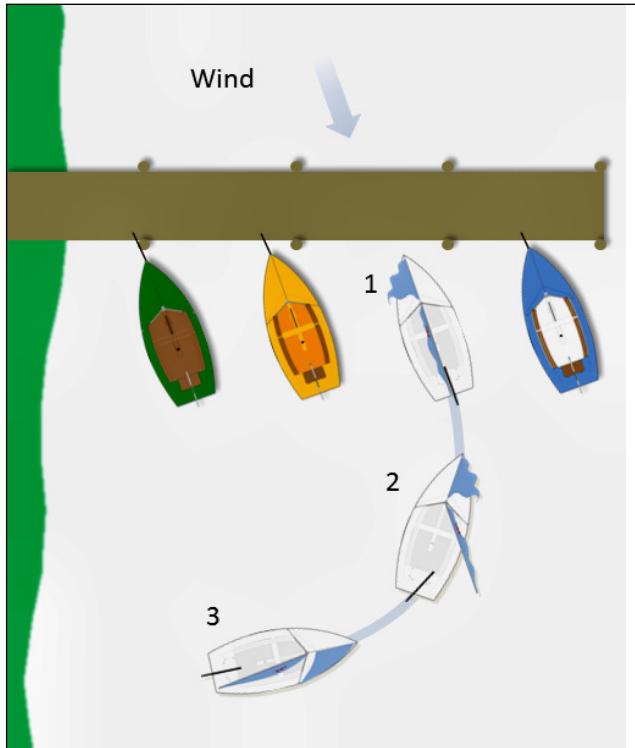
At right, you'd of course want to steer your stern towards shore. *I once saw a crash arising from a situation like this one. In 20 knots of breeze, the helm put the tiller to port as the crew shoved off and soon found himself planing at a low dock (green in diagram) trying desperately to gybe out of his coffin corner. He sailed onto the dock.*

Backing out: On helm's signal, crew gives boat a healthy push straight aft (1) while stepping aboard the high side. Keep rudder/tiller dead centred until boat has cleared its neighbours.

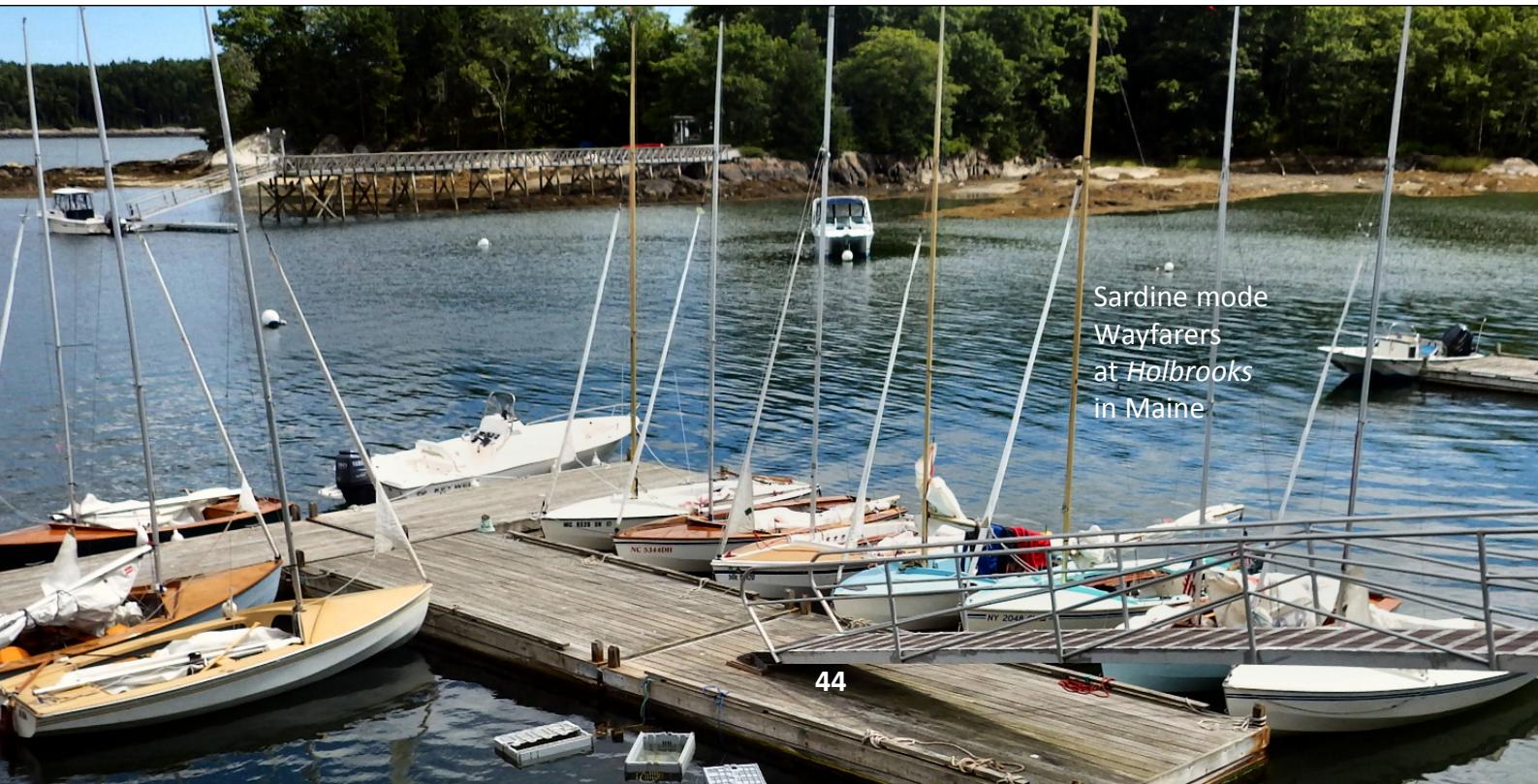
Once sure that bow won't hit neighbours when you turn (2), **gently** aim rudder blade (and stern) towards shore. Crew can now back the jib towards the dock you just left in order to assist.

Once boat is parallel to dock (3), bring sails in, but helm **waits til backwards motion stops** before starting to steer in "forward" mode. No wishfully steering as though you were already going forward while backwards is still in charge. That will just turn bow back in towards the dock you just left.

As you steer going backwards, the stern will go where the rudder blade points. If other boats are hemming you in, steer straight back (position 1 below) until you are clear. Then angle rudder blade as shown in positions 2 and 3.



Practise this at an empty dock to become an expert - much to the joy of your dockmates, and the admiration of the critics. I've been among the latter often enough, and I can assure you it's really fun to watch screw-ups - as long as my boat isn't part of the mayhem!



Pick-up and delivery between moving boats

Contact with another boat (*to deliver beer, other staples, etc.*) is of course only done at reduced speed and while close-hauled. On that point of sail, speed is easily adjusted and brakes can be put on very effectively by pushing the boom out to backwind the mainsail.

Approach each other on a bow-to-bow collision course. Luff up to end up head to wind within arm's reach at about the same time, slowing both boats as they "connect" with sails luffing amidships. Crews grab the other boat's shroud while helm weight keeps both masts vertical.

Heaving to

Heaving to is a very useful procedure that allows us to relax even in fairly wild conditions with hands free to have lunch, open the wine, light up, whatever.

One step up from the R&R mode (*full story p.75*), heaving to is easier on your ears, sails and wallet. This is especially true of the genoa which does not flog away dollars while you are hove to. The same is true of the main if you put suitable vang on (*something I plan to also try with the main in the R&R mode as soon as the right moment presents itself - not too soon, I hope*).

How do I heave to?

1. Start in the R&R mode (*wind abeam, sails luffing, board full up, no momentum*)

2. Hold tiller to leeward. Sheet main in half-way, as crew cleats jib to windward (*helping its leech past mast's spin pole eye as needed*). Vang enough to keep main leech from flogging. Trim mainsail to counterbalance the pull of the jib.

3. Release tiller which will stay to leeward due to sideways drift of a boat using no board.

4. Leeward drift can be reduced by using some centreboard but then the tiller normally needs to be held (*tied? tiller-tamed?*) to leeward.

In severe and very shifty wind (*e.g. small lakes*), I feel safer with the board full up and also make sure I sit near mainsheet and tiller, and the crew does likewise with the jib sheet - just in case!

August 2010, Killbear Park on Ontario's Georgian Bay:

Sean and Quinn Ring (W1887) and Jeff and Fran Kirk are hove to, waiting for the Rally gang on Parry Sound.

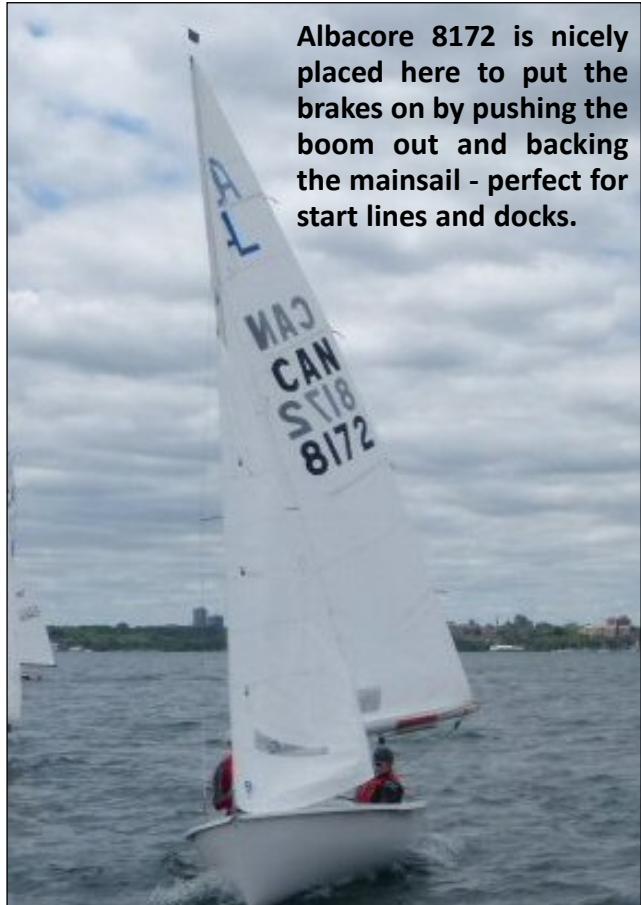


What else a sailor needs to know about steering

Confident steering is vital to safe boat handling, especially at close quarters, where nerves can make us sail too cautiously and slowly. But to enable the rudder to do its job, we must - **above all** - keep water flowing over it. Such flow across the blade is the one essential without which the rudder cannot turn the boat.

Imagine that we have to beat through a windy harbour entrance with nasty looking concrete walls lining both sides. This is no place to let fear rule. Instead we must intrepidly use speed to maximize boat control, maintain good speed and hold off on every tack until the last possible second. A tack at speed is always safer than a hesitant one, especially in a breeze. And last-second tacks give us more time and distance between tacks in such a narrow passage. *Practise in more benign conditions?*

If a tack is not an unqualified success and we come out of it slow, the worst thing we can do is let fear of hitting the wall make us pinch. Doing that will just make us drift faster toward the dreaded wall. No, we must briefly bear away and speed up right at the wall to regain speed and steering. Then we can do our next tack crisply and avoid being a spectacle on those nasty walls.



Albacore 8172 is nicely placed here to put the brakes on by pushing the boom out and backing the mainsail - perfect for start lines and docks.

Luckily a Wayfarer can turn on a dime. **But only while speed through water enables the rudder.**

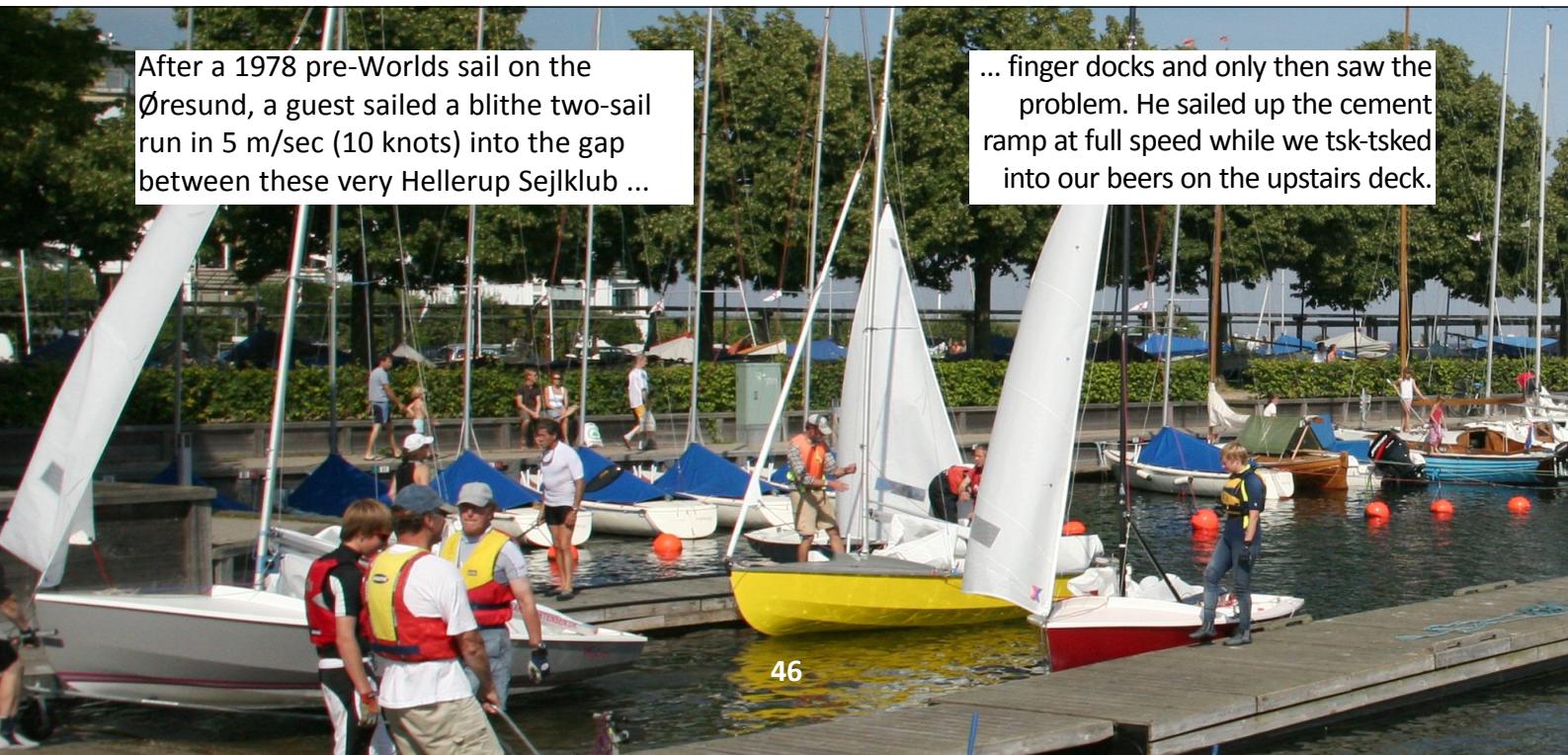
Putting the brakes on

A sailboat has no real brakes. If we are nearing the dock on a run, we must plan ahead: Get at least the main down early, while we still have time and room to do so. Otherwise, situations like the one described below may well befall us.

Sails **can** be used as brakes, but only when **sailing towards the wind** (*above & p.71*). Then we can push the main out to the dead-run position and slow down moderately or stop dead impressively just before we hit the dock (or start line).

After a 1978 pre-Worlds sail on the Øresund, a guest sailed a blithe two-sail run in 5 m/sec (10 knots) into the gap between these very Hellerup Sejlklub ...

... finger docks and only then saw the problem. He sailed up the cement ramp at full speed while we tsk-tsked into our beers on the upstairs deck.



Returning to the dock close-hauled

Plan ahead. Make sure that the bailers are closed. Do your best to create a close-hauled approach for your landing. This lets you slow down with easy control. If feasible, have your crew furl the jib or lower and stow it well before you reach the dock. Provide a “high side” on which your crew will go to the bow with the painter while you create a low side to leeward and hold your brake (*boom*) in hand (p.71).

I love to come in at speed, then stop the boat at the last second by backwinding the main. Crew is ready to fend off but does not do so unless helm has misjudged. It looks so much more impressive when helm brings boat to a stop close to the dock without the help of crew. The latter now steps very casually onto the dock. (more p.71)
If no close-hauled approach is possible, a jib-alone approach is best. Main down and stowed early, keeping centreboard and tiller accessible.



2002 Danish Nationals, Farum, Denmark Site of my favourite docking dazzle ever: Supercrew, Anders Pjetursson (*below right with 2016 World champion, Anders Friis*) sailed Jesper Friis' W9355 *Whistle* with me. Spin flying, we planed into the tiny harbour above. Al had unveiled a plan to take some gloom off the day's poor results, a plan that

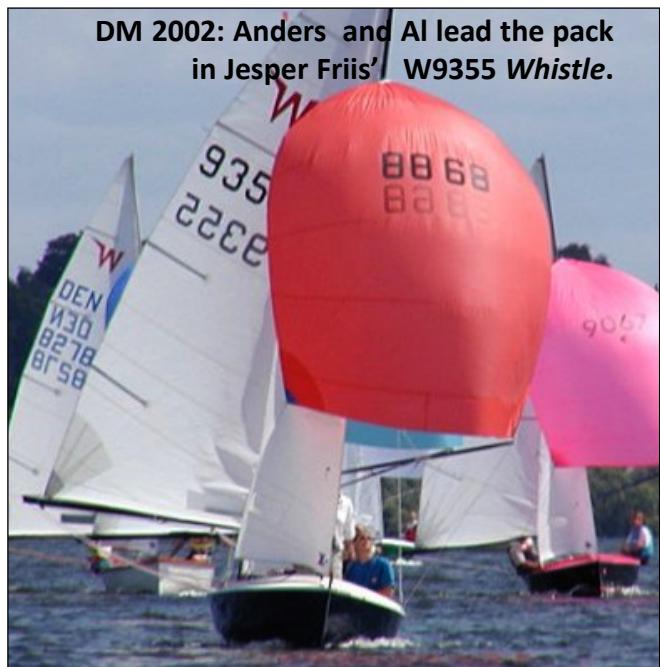
made even unflappable Anders look a bit dubious. But he humoured me as always. Through the entrance (*above*), spin gybe to port just before hitting the red inflatable, and look: “*They left us a spot!*”. A flawless douse by Anders, two quick taps on mainsail brake, Anders onto bow and we stop inches from dock. Fans duly dazzled.



Anders Friis and

Anders Pjetursson

DM 2002: Anders and Al lead the pack in Jesper Friis' W9355 *Whistle*.



back at the dock: Once crew is on dock, helm does dock-leaving steps (*p.44*) in reverse order: 1. bailers closed 2. board fully up 3. (sails down, boom off mast) 4. rudder/tiller off 5. exit boat.

To now bring a boat hanging off the dock parallel to it, facing the ramp, wait until you have a boat length or two of free space between you and boat before you in the ramp queue. Then, holding the painter short, give the bow a sharp jerk along the dock (towards shore!) and then

immediately give painter lots of slack. Because board is all the way up, this will swing the boat parallel and nearer to the dock so that you can grab a shroud to bring the boat right alongside. You can then moor the boat in this position by passing the painter around the side-stay before tying up to any convenient cleat or equivalent.

Haul-out Caution: Boats are not built to resist water-pressure from inside. Never haul out a boat full of water. Do some serious bailing first.

Former ISAF President, Paul Henderson, gave me great advice at a 1964 protest: "If a collision is inevitable, always luff up to reduce damage." Here the collision was made worse by bearing away.



take a break

I have found great therapeutic value in taking a break from wild action at sea by heaving to (*p.45*) or using the R&R mode (*p.73*). Provided you have ample sea room, the R&R mode (sails luffing, vang on, board full up) is a virtually fail-safe way to take a short breather, open a beverage, do small repairs, take pictures, etc.

Heaving to (*p.45*) (board up or down) is better for a longer break since it removes the noise and expense of flogging sails. Heaving to is not quite as capsize-proof as R&R, but still lets us totally relax. Only in truly nasty conditions, do we heave to with boat level and board fully up, staying ever prepared to un-relax and ease the sheets.

help your hard-working rudder

The faster we sail, the more we need to use trim of boat and sails to help the rudder, especially when bearing away from close-hauled. Many a starboard-tacker has been holed when the port boat tried to bear off in a blow without first easing the main. At the windward mark, too, the rudder desperately needs an eased main for a more controlled turn by a flatter, faster boat.

cushion your gybe or avoid it altogether

The complete low-down on gybe-cushioning is presented on page 72, where you will also find the alternative to gybing: what my junior sailors fondly if undiplomatically derided as the infamous "chicken gybe".

There's more than one way to steer a boat!

A boat is normally steered with the rudder. But we *can* also steer the boat without the rudder by using boat (*p.23*) and sail trim (*p.29*). If effort and resistance are misaligned (*more next page*),

they cause helm which can be put to good use as the sole means of steering in an emergency. If we induce **weather helm** the boat will luff up while **lee helm** makes the boat bear away.

2013 Worlds, Mississauga, Canada.
Kit Wallace and George Waller have
W994 *Peregrine* flawlessly trimmed.
Surely Ian Proctor is smiling up above.



Steering without a Rudder

Here is a skill that is fun to practise and that may really save you and your boat one day, especially if you are sailing where no immediate help is to be expected.

Remember that even rudderless, you can stop to think at any time: board all the way up, moderate heel to leeward and kill forward momentum by luffing both sails (*R&R mode, p.73*).

Rudderless Practice: Pick a day with moderate winds and uncrowded waters in which to do your practising as follows: Come to the R & R mode. When forward motion has stopped, remove rudder or tip the blade up completely out of the water, and put board down about half way. Slowly sheet in both main and jib while keeping the boat level. I stand straddling the centreboard box aft of the thwart while holding one sheet in each hand (*neither hand is now needed for the tiller!*) Standing up as I am, I can easily move my weight as needed - like Bud Loukes, the helm of *Chicken Sloop* W661, is doing very nicely below. Crew, Jen Burrell twiddles her thumbs and/or ponders meaning of life.

Once the boat is moving through the water, it must be steered. **Turn sensitivity is directly proportional to speed.** Absent rudder, turning effect comes mainly from boat heel:

- * To go straight, sail flat.
- * To luff up, heel slightly to leeward.
- * To bear away, heel to windward (very slightly unless you're eager to do a surprise gybe).

If things get hairy go to R & R mode to turn off your motor: luff sails, leeward heel, board up.

Sails, **to a lesser degree**, help steer. Using one sail more efficiently than the other, causes boat to pivot about its Resistance. If all else is balanced, jib in, main luffing makes the boat bear away (relatively slowly) and by luffing only the jib, you can make the boat luff up gradually.

Not to forget: *The faster the boat goes through the water, the greater/more violent the effect of heeling.*

You **can** steer with just a paddle but even then, it pays to use heel and sail trim to assist you.



All about helm

What causes helm?

Effort and resistance are the two main forces that oppose each other as a boat sails:

Effort: Sails create force vectors which can be summed up at the Centre of Effort (CE) as one force arrow of propulsion/effort.

Resistance: Water (*air, too*) resists your hull being pushed through it. To simplify, I call the sum of all these vectors the boat's Centre of Resistance (CR). Your boat is designed to align effort and resistance both fore/aft and sideways when sailed as intended. If these forces are out of alignment as the hull moves through the water, you get a boat that wants to turn (helm).

Location, location, location

In simplest terms, sail position determines the location of the Centre of Effort. For example, under jib alone, all your sail force/CE is up front, and your boat wants to pivot downwind (lee helm) since the Centre of Resistance remains aft of the mast right below where your designer (*who assumed you would also use a mainsail*) expected the CE to be. Under main alone the opposite applies: the CE moves aft of the CR and tries to push the aft part of your boat to leeward, creating weather helm. As can be seen below, the Centre of Effort also moves sideways when the boat heels to windward or leeward.



(above) The *Centre of Effort* is linked to the boat, somewhere in its sail plan. But as you can see, with this much heel, the sails are providing their forward power out above the water to leeward

of the hull where the *Centre of Resistance* remains. Because the two forces are out of alignment, the boat wants to turn - to windward in this case - and we get weather helm.

Centre of Resistance more subtle

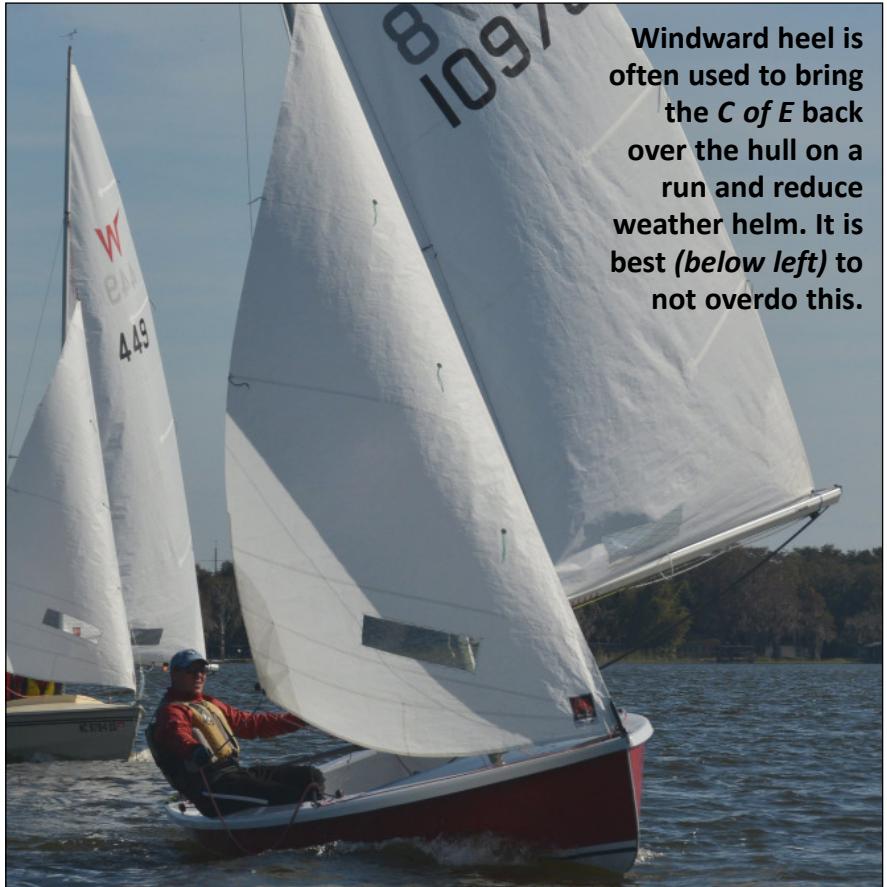
The *CR* moves aft if you sail stern down. This promotes lee helm. By the same token, weight forward moves the *CR* forward and creates weather helm/tendency to luff up).

Weather helm (*mostly caused by too much heel to leeward from wind pressure on sails*) is far more common and benign than **lee helm** which can be brief but deadly at speed. Caused by sudden windward heel on a breezy run, lee helm is often the start of a dreaded “death roll”, a capsize to windward and its attendant mast-down inversion also known as a “turtle” or my favourite, a “Greenlander” as Danes call it.

How do we reduce/avoid helm?

- 1. Sail the boat flat:** Hike (*Sit out, hænge*) and flatten (*depower*) your mainsail with lots of vang. If adding vang is not enough, spill wind from the main (*or reef*) as needed to reduce heel and thus remove excess helm.
- 2. Keep rudder blade vertical.** Even 5° of aft blade angle increases the helm you feel dramatically and makes steering downwind dangerously difficult at windy speeds in a rather heavier boat such as ours.
- 3. Weight aft on a breezy run.** The death roll (*Laser example below*) is a real danger in a Wayfarer going full speed on a run since heavier boats’ helm easily overpowers their rudders. If the boat heels

Windward heel is often used to bring the *C of E* back over the hull on a run and reduce weather helm. It is best (*below left*) to not overdo this.



the least bit too much at speed, one side of the hull quickly lifts out of the water while the other half is now free to deflect off water at top speed. A violent turn away from the dipped side and likely a swim will result.

My #1 pure BS luck ever: Halfway through a certain death roll, Julia and I once bounced our mast top off a beating boat’s forestay. This righted us while the port-tacker apologized.

To be safe and much less nervous in such conditions, get bow out of water by sitting well aft. This may be a bit slower but is ever so much more relaxing.

5 Spinnaker & Other Techniques

How we actually work the spinnaker with “balls system”

The now rare buoys-to-port triangle-sausage-windward course is what I like to use to cover all points of spinnaker eventuality:

(a) before the start

1. carefully pack spin in port-side bag, ready to hoist without twists; stow halyard (*p.15#7a*)
2. stow pole (*p.16*) on starboard side of boom

(b) near the windward mark - last port tack:

1. free halyard from port storage hook (*p.15#7a*)
2. uncleat port barberhauler (BH)
3. if pre-hoist pole set is desired, tighten and cleat starboard BH which will pull one metre of spin out onto the leeward foredeck

(c) last starboard tack of the beat:

1. take pole downhaul out of storage hook at forward end of boom (*p.16 #8*)
2. crew presets pole > brings windward spin sheet to pole end fitting (*p.16 #1* > inserts sheet into fitting, opening facing up (*p.16 lower pic*) to keep sheet from falling out during pole set, and facilitate later removal of up-angled pole. Crew slides pole forward through pole loop (*p.16#4*). Ramp (*p.16#6*) catches loop > crew snaps forward-aimed pole onto mast.
3. vang, cunningham to off-wind settings

(d) after rounding:

1. ensure you are well placed to execute your pre-planned strategy for the reach, and won't be luffed or passed to windward while hoisting
2. helm stands up > hoists spi, leaving about an inch of halyard slack to facilitate possible spin untwisting while crew balances boat as needed.



3. if the wind is gusty, the crew takes control of mainsheet during spin hoist.

4. spin sheet caught under the jib foot (*above*) may need to be freed. Crew then trims jib to a reasonable reaching position. Helm may fine-tune later.

5. When done with spin hoist, helm takes back mainsheet control while crew resumes standard spinnaker flying position just aft of windward shroud.

(e) at the gybe mark - the approach:

Basic: Prior to gybing, helm stands to steer with knees (*below*), takes spin sheets from crew who

1. cleats port BH, frees starboard BH;
2. unclips pole from mast and sheet, lets it hang free forward of mast, pole loop still in its ramp
3. at word from the helm, the crew gybes the jib and cleats it to starboard reach while the helm pulls most of the spin to starboard to keep it from filling to windward after gybe. Helm and crew are now ready to gybe.



For any relatively terror-free gybe, Al stands up and steers with knees during each hoist, gybe or douse. He flies spin as duty calls.

(f) the gybe:

In winds not too threatening, helm concentrates on gybing with tiller between knees (*p.53*) while ensuring the spin ends up to leeward.

In capsized weather, it is safer to have helm use hand to steer through the essential S-gybe (*return to a straight-downwind course as soon as the boom commits to the gybe*) before proceeding to step (g). Crew does the rest: barbershows and briefly cleats both spin sheets before orchestrating cushioned gybe (*more p.72 Even a small break in boom's momentum from a timely pull against vang makes a gybe far less violent.*)

(g) start of reach after the gybe:

1. Leaving spin to flog to leeward with only port BH cleated, helm gives full attention to steering; crew resumes spin fly position aft of windward shroud > ignoring spin, helm and crew balance the boat and steer as tactics dictate (*e.g. go high to defend wind*) while trimming main and jib to best effect.
2. Once jib is trimmed and cleated, and strategy permits, crew re-sets pole (*pointed forward*) as the helm drives/balances boat.

(h) near the leeward mark:

Before spin douse, helm starts to position boat to enable post-rounding course: hold port or tack to starboard. That strategy sorted, helm

1. takes spin sheet while crew puts board down for upcoming beat.
2. stands up and checks spin halyard for tangles > uncleats and holds halyard over head for added tangles warning.
3. announces "spin down" to crew who steps **in front of windward jib sheet on floor** > unclips pole from mast, twists pole so ramp faces up and can easily slide aft past loop's tear-drop shape (*p.16 #10, pole uphaul storage adjustment waits til later if circumstances so require*)
4. (helm) keeps a gentle hold on the halyard to keep the spinnaker from coming down too fast, while the crew - **ever alert for halyard-tangle SOS from helm** - brings the spinnaker down **to windward**, pulling briskly on leech and foot. This, plus the mini-"bowsprit" (*p.55.2*), avoids sheet-under-boat horrors.

(i) at the mark:

Mark priorities: boat positioning for beat strategy, board full down, jib oversheet avoidance, keep boat flat. Tidying up can be done when



things are a bit more settled. Spin packing is nice but **never done at the expense of more urgent tasks (board, sail trim, boat flat)**.

(j) start of the run after the second beat:

Before rounding, helm/crew will have decided whether to start the run on port or starboard. If starboard with leeward hoist, remember:

1. pole wants bringing to starboard side of boom before you round; will be added after the hoist
2. spinnaker may get hung up between spreader and mainsail during a dead-run leeward hoist
3. windward spin sheet may catch on jib tack

Gybe set? If all else is equal, I do a gybe set > windward hoist to blow spin away from snags. "Defending the left", puts us on starboard once we gybe back and start to meet boats. It also puts us inside for mark-room.

1. Crew cleats windward BH > helm hoists spin
2. Helm flies spin; crew cleats jib tight to leeward unless we tack downwind and keep jib flying
3. Crew adds pole carefully so that spin, flawlessly flown by helm (*facing page*), stays filled.
4. Once pole is set, crew cleats windward sheet (*guy*) > resumes spin duties.
5. Spin-flying crew **always gets priority seating on windward deck just aft of shroud**; helm sits/stands suitably placed to keep boat level (*p.57*).
6. To let gravity help spin to fill on light air runs, helm heels boat to windward, holds boom out (*p.57*); crew sheets "short" to take sheet weight off malnourished spin (*#1 next page; also p.57*).

As Julia wields the CWA camera, Al sheets "short" with the leeward BH cleated in a bit to keep sheet away from boom (1).



(k) run-to-run gybe:

In survival conditions, I keep board half down, and may not entrust us to "knee steering". If I hand-steer, crew looks after sheets, reverses BH's, and cushions violence of gybe with vang.

Priority #1: capsiz e avoidance.

In all other cases,

1. helm steers with knees, taking over both sheets (p.53e). Ideally, crew frees pole from both sheet and mast, abandoning it to hang free in front of the mast **before we gybe**.
2. helm steers through gybe with knees and tries to keep spin flying while head avoids boom
3. having cushioned/encouraged our gybe as needed, crew cleats jib to keep it to leeward,

then re-sets pole quickly because helm is still knee-steering which means we are stern-heavy (*slow*) and under less than ideal control.

4. when pole is set, helm grabs tiller and moves forward to get the transom back out of the water as crew resumes windward-shroud position and resumes spinnaker flying.

(l) the end of the run:

Basically per p.54(h) except that helm, once spin hal is certified tangle-free, can keep spin flying, while crew stows pole and gets board down. If a late gybe is needed near mark, crew stows pole just before gybe, then douses spin PDQ right after gybe. **Helm always leaves time for crew to sheet main in from run to beat (p.59).**

Haste Makes Waste

How true this is when we take down the spin! There are two things we must always make time for just before the douse - no matter how hectic the situation may have become:

1. Before the spin comes down, crew ensures that **spin halyard is free to run**. Helm then stands and grabs halyard at cleat, letting it run through fingers while raising arm over head. **Crew remains set to untangle** halyard if needed. I keep my arm up after uncleaning, letting crew pull spin halyard through my hand until spinnaker is all the way down.
2. **Always douse spin to windward** on a dinghy. Crew job #1: **keep the spinnaker and sheets from going under the boat**. A good crew soon learns the rapid diagonal downpull that brings the foot around the bow as the spin luff comes down. **No fancy fiddling or stowing, just speed!**



Pole angles

How far aft?

As far aft as possible while still keeping spin looking healthy like the ones above, not stretched to leeward of the pole like 864 (*left*) which has the pole too far aft and/or the spin sheeted in too far).

Another visible result of pole too far aft/spin oversheeted is the spinnaker foot touching forestay which is bad form and slow. On a broad reach or run, we simply aim for a nice, healthy luff-to-foot angle of more than 90° like Julia has on *SHADES* (*above*).

Pole up-down angle: The photos here show examples of good pole-to-mast angle. Angled up perhaps 20° for medium airs, a bit higher in more wind or a closer reach; lower as needed in the lighter stuff (*facing page*).



The crew sheets *short* around the shroud.

Remember that on a run, a spinnaker can also collapse because it is being blanketed by the main. In that case, pole aft and sheet eased!

Light air spinnaker nuggets:

On a run or broad reach:

1. To reduce sheet friction and weight, hold spin sheet "short" (*above*) after it passes leeward shroud - lee BH cleated in a bit keeps pushed out boom from trapping the sheet (*p.55.1*)

2. Heel boat to windward to let gravity bring spin out from behind main - helm holds the boom out (*above and below*)
3. Lower the pole end (*below left and right*) if wind is too weak to lift spin cloth. If sheet easing no longer works due weak wind, we trim the spin with pole and guy/windward sheet.
4. To keep an empty, flopping jib from disturbing what little air the spin is getting, furl the jib or sheet it in hard to leeward.





Chesapeake Bay 2007: Dick Harrington, North America's legendary Wayfarer cruise has no trouble sailing solo in *Blue Mist*.



Depowering on a planing spinnaker reach

To deal with bad gusts on a spin reach you can collapse the spin (not pretty or very safe), or run down with the puff. A **better third option** is to quickly ease the main a lot.

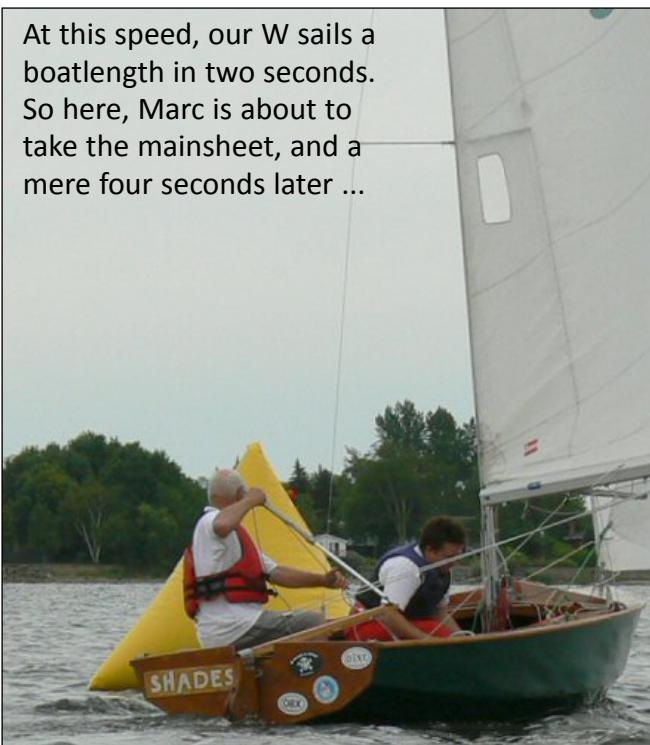
This chokes slot between spin and main (*right*), depowering your boat nicely. You can see Frank Goulay and me do this supremely well - if I do say it myself - in a clip at <https://www.youtube.com/watch?v=tsUgXngYmw0>

A Rounding Revolution

What a fine moment it was when my crew, Marc, got tired of my one-armed paper-hanger routine at each and every leeward mark (below left) and ripped the main sheet from my hand. Using

two hands, he got the main from run to beat in two seconds (below right). What can I say? It's the only way to live! Allows me to concentrate on the all-important task of steering in the often congested, always crucial area near the mark. A fine addition to one's bag of tricks!

At this speed, our W sails a boatlength in two seconds. So here, Marc is about to take the mainsheet, and a mere four seconds later ...



... has the main in
- not too tight! -
and the sheet is
back in Al's hand.



Our roll tack procedure

I urge one and all to try roll tacking. It takes a bit of getting used to, but once you get the hang of it, tacking becomes easier than ever before. And the roll tack does make tacks so graceful, elegant and effective.

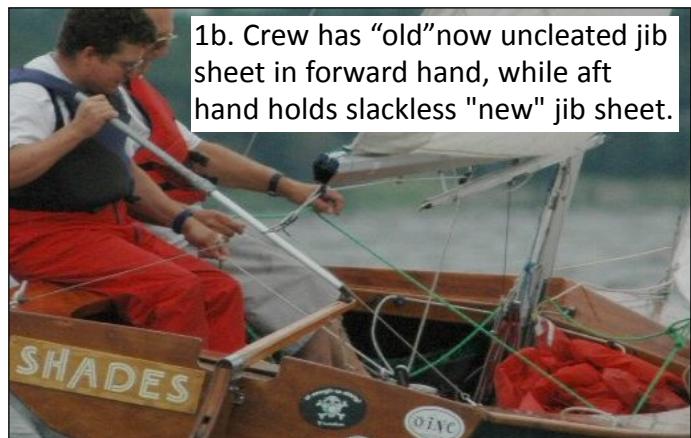
1. Helm warns crew of impending tack.

Crew ensures feet are inside triangle formed by the continuous sheet as it runs from jib clew, through both jib fairleads, and back to jib clew.

Crew takes up slack in the current windward jib sheet with aft hand and uncleats leeward jib sheet with forward hand before informing helm that all is set. If a "crash" tack is needed, crew (whose feet "live" inside the triangle) skips 1-2 and does steps 3 through 6 as calmly as possible.



1a. Helm warns crew of upcoming tack > crew uses aft hand to remove slack from "new" sheet.



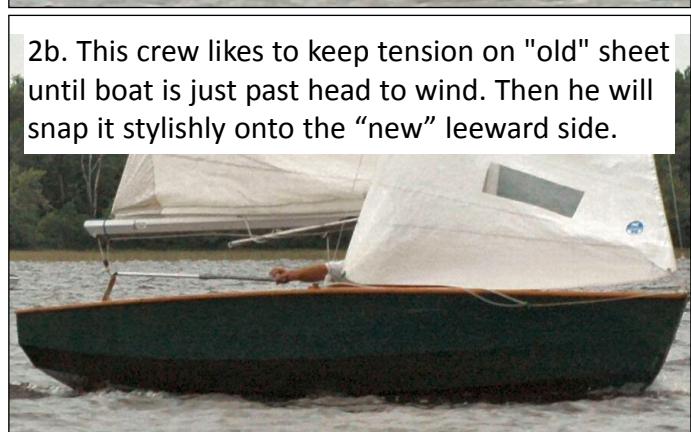
1b. Crew has "old" now uncleated jib sheet in forward hand, while aft hand holds slackless "new" jib sheet.

2. Helm uncleats main (moves to windward deck if not already there) and puts the tiller alee to start the tack.

Crew moves to windward deck if not already there > can release "old" jib sheet now or, for a super crisp tack, hold "old" jib sheet until the jib starts to "back".



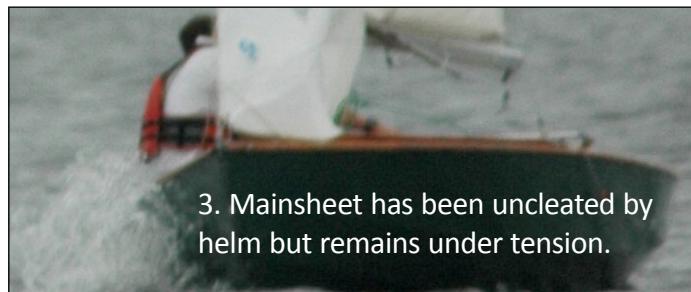
2a. As skipper puts helm down, crew will move up onto the deck.



2b. This crew likes to keep tension on "old" sheet until boat is just past head to wind. Then he will snap it stylishly onto the "new" leeward side.

3. Helm steers through a 90° turn > lets main fill enough to promote heel to the new leeward side > eases mainsheet as required to avoid excess heel, and lets boom out enough to be able to easily stand straight up without hitting the boom.

Crew tips forward across centreboard box as main fills on new leeward side, putting the now empty forward hand on the (inside board of) windward bench (or other hand-hold) while straightening aft arm (the one holding the "new" jib sheet) out over the windward deck until reasonable tension for conditions is felt - if in doubt, undersheet!



3. Mainsheet has been uncleated by helm but remains under tension.



4b. (above) Boat is now on new tack and helm, having eased main to limit heel, stands up and prepares to step across the boat.

Crew is tipping self forward, grabbing windward bench with forward hand. That grip secured and his three-point stance solidifying his balance, he will shove aft hand out to windward until he feels some sheet tension, then let sheet slide through his hand to avoid overtensioning.



5. (above) Helm turns to face forward. As he completes his 180° turn, his tiller arm briefly ends up behind his back (below). Crew meanwhile, faces aft to initiate his turn. Note how both sails are slightly eased. At this point, neither helm nor crew is watching the sails which are being trimmed by "feel", such as angle of heel, wind strength, etc.



4. Helm straightens tiller to stop the boat's turn
 > stands up, facing the new windward side >
 takes one step across the boat (still facing the
 windward side) > uses mainsheet to adjust heel
 as needed.

Crew will usually follow helm's lead in moving to
 windward but needs to ensure that boat never
 ends up heeled to windward in light airs when
 crew will end up on the CB box or even on the
 leeward floor or deck after the tack.

In a good breeze especially, crew needs to be
 ready to move to the new high side (much) faster
 if the unexpected should happen.

5. Helm, having crossed the boat, stands facing
 out at the water still steering a straight course,
 then calmly turns to face forward, putting tiller
 hand behind back, while maintaining control of
 sheet with the other. (*Easier done than said!*) As
 helm's full 180° turn progresses, the tiller arm
 becomes bent behind helm's back (*bottom left*).
 The hand holding the sheet is now the aft hand
 and will reach back to also take hold of the tiller
 extension. Once that grip is secured, the other
 hand lets go of the tiller, reaches around in front
 to take over the sheet.

Crew straightens up, keeping reasonable tension
 on the jib sheet, steps across the centreboard
 box, turns to face aft and then completes his
 turn. Speed is not crucial here.

6. Helm now sits down on deck (or further in if
 boat balance requires it), bringing sheet back in
 to first-gear close-hauled setting (p.44).

Crew sits where wind strength demands. After
 undersheeting to this point, crew fine-tunes the
 jib sheet by bringing it in to its correct upwind
 trim. In light winds, the crew will move to wind-
 ward slowly or not at all if good boat balance
 requires this.

5-6. (left) Helm has just used "sheet hand" to
 take tiller from right hand that had been holding
 it behind his back. The right hand will now
 reach in front, take the mainsheet from the left
 hand, and the tack will be complete.

Oct. 2012, Lake Townsend, North Carolina:

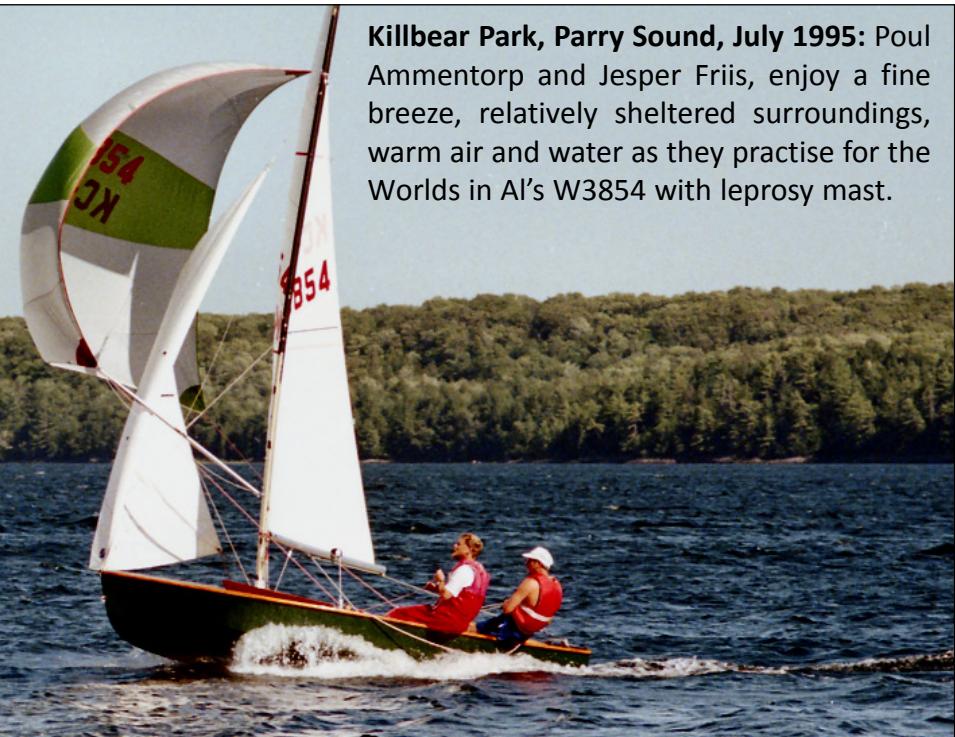
The late and much enjoyed HOT Regatta often brought gusty winds to the Lake Townsend YC on the late-October weekend before Hallowe'en.



6 Making Lighter Work of Heavier Air

I grew up sailing mostly in light-to-medium airs, and have never been fearless when racing in heavy airs. So I much admire our English friend, Graeme Hinton, who would smoke his cigar during the same windy runs that had me grabbing the gunwales with white knuckles. In the 1983 Worlds, I got to see a true high-winds maestro right up close when Nick Hodshon had to conscript me as an emergency crew aboard W198 *Nipegegi* in F7-8 winds and six-foot chop off Hayling Island. On overwhelming spinnaker

reaches where I could only see part of the spin above the wall of spray, Nick was totally at ease. I loved it when during one especially hairy spinnaker plane, Nick whacked the deck a couple of times and cheerfully yelled, "Atta girl, Nippy!" An attitude to emulate! Thanks, Nick, for being such a good example to us.



Killbear Park, Parry Sound, July 1995: Poul Ammentorp and Jesper Friis, enjoy a fine breeze, relatively sheltered surroundings, warm air and water as they practise for the Worlds in Al's W3854 with leprosy mast.

In this chapter you will see how I finally learned to sail comfortably, safely and efficiently in heavy air. Nothing on reefing which is amply covered in *The Wayfarer Book*. But I do cover other ways of shortening sail, including Ken Jensen's beautiful contribution to Wayfarer sailing, the trysail. The way I like to sail - simply - the trysail

(or fewer sails or even mast alone) is the only sail shortening I really need.

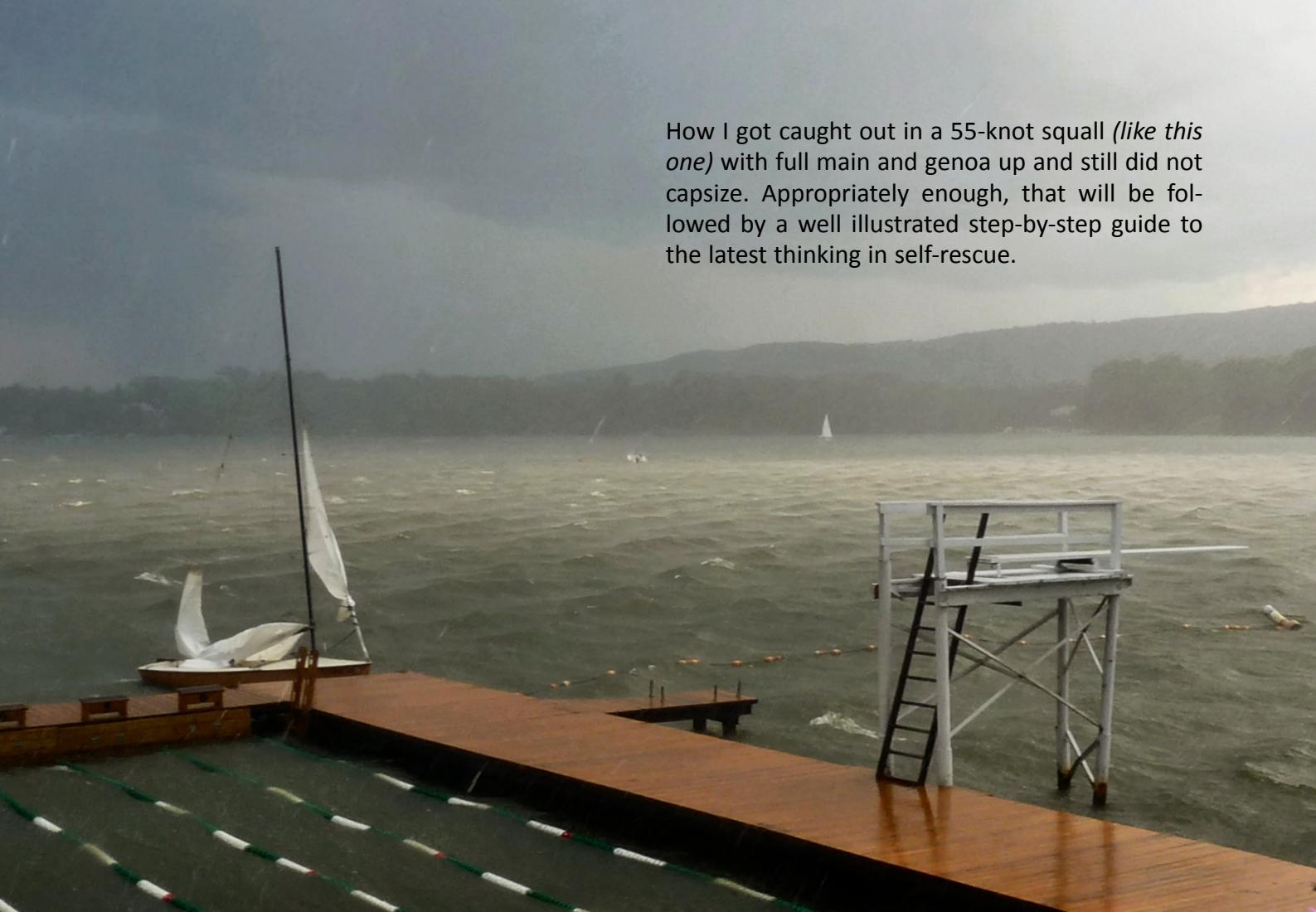
And then, I will touch on other ways to make heavy air less hectic and more enjoyable:

- * how to take a safe and relaxing time-out even in the midst of a windy sail, however wild it may be
- * how to cushion a windy gybe (or avoid it entirely by means of the "chicken gybe")
- * steering concerns and other priorities as conditions get breezier and the boat moves faster, and finally one more tale:



June 2011, Tip of the Mitt Adventure

Gary Hirsch puts the cream in our morning coffee just after we depart beautiful Leland on Lake Michigan.



How I got caught out in a 55-knot squall (*like this one*) with full main and genoa up and still did not capsize. Appropriately enough, that will be followed by a well illustrated step-by-step guide to the latest thinking in self-rescue.



June 2011, Lake Michigan: 30 knots and rain five miles off Charlevoix, Michigan under jib alone in *Solje W1321*. This cool, stiff wind most definitely demanded respect and our alert attention to every detail.

Dick Harrington, chomps along single-reefed in *Blue Mist* (W887) off Tilghman Island on the Chesapeake Bay.

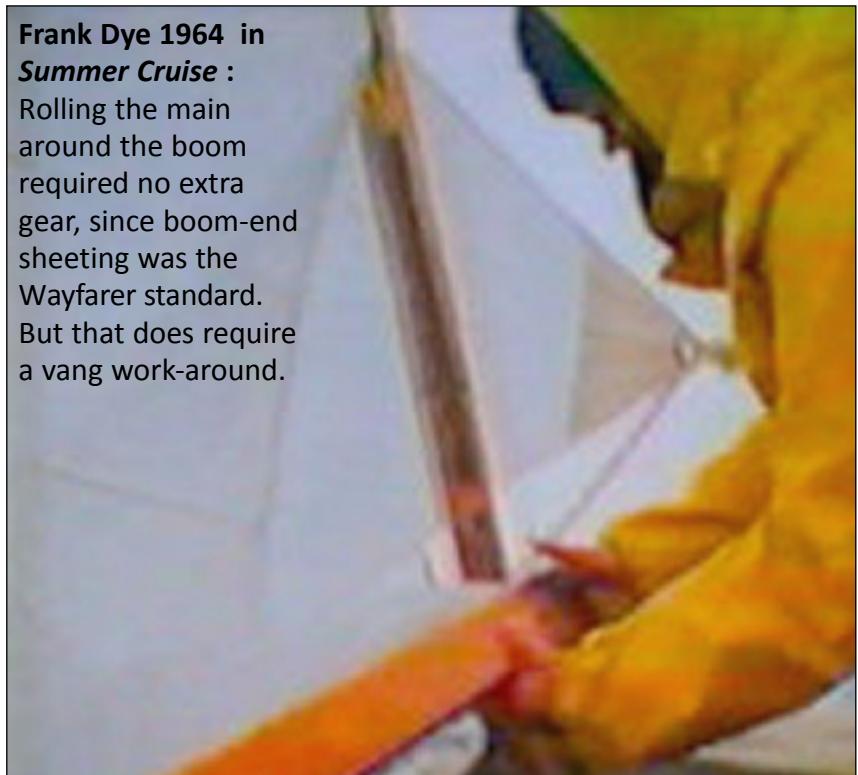


Shortening Sail

When the wind pipes up, visions of reefing (*reducing effective sail size*) dance in cruisers' heads. There are various fine systems available, from the Wayfarer's original roller reefing used by Frank Dye (right) in his *Summer Cruise* to other more recent systems, shown in *The Wayfarer Book*, numerous other print sources, and of course on youtube.

Reefing was a nice option to have when Gary Hirsch and I sailed *Solje* W1321 in the June 2011 *Tip of the Mitt Adventure*. But on W3854 I have never reefed, and so am not qualified to talk about it. Instead, I do any depowering/shortening of sail I need in the following ways:

Frank Dye 1964 in *Summer Cruise* :
Rolling the main around the boom required no extra gear, since boom-end sheeting was the Wayfarer standard. But that does require a vang work-around.



Depower the main: In wind speeds up to 20 knots, it is not too difficult for any sailor who knows the basics to beat or reach for several hours with a well-vanged and thus somewhat depowered main that gets eased until heel and weather helm become acceptable. We do this while racing and it's no big deal.

More dramatic options than vanged and/or eased main are available to us when we no longer feel at ease under full sail. Cruising - especially one boat alone - I find that bad weather, threatening shore and perhaps above all, no other boats in sight, make me admirably and speedily far less devil-may-care.

Alternatives to reefing

1. Shrink or eliminate the jib

Using a storm jib instead of a genoa is a modest way of reducing Wayfarer sail area (*right*). And the *Aero Luffspar* (p.13) lets us create custom foresail area by rolling cloth around its spar to any extent desired.

2. Main alone

We can also sail without the jib. The misadventure related on p.13 was my first time “in irons” since Juniors in the 1950s. It happened because I did not keep up my speed through the tack. Back then, we were taught to get out of irons by pushing both boom and tiller to the same side. That was easy in light summer morning winds on Toronto Bay but rather scarier as Hans and I backed up in 20 knots of breeze, rain and waves while daylight was rapidly fading on the Chesapeake Bay.



Button Bay, Vermont

2003. Bill Harkins and Margie McKelvey enjoy their “storm” jib.



3. Jib alone

A run in 15+ knots under full sail puts most Wayfarers on edge. Faced with that on a cruise, I am the first to opt for sailing under “jib” alone (*p.29 photo is a lovely example*). If you want safe relaxation for a windy run (*l*), sailing under “jib alone” is the perfect answer. Jib alone permits reaching or even beating (preferably for short distances, provided the board is kept down while the speed is kept up).

(above) When Elof and Karen Anderson in *Kantarellen* needed help with a stuck main on the windy Skagerrak Sea, Ken Jensen (*above*) and Ken Jr. beat back easily under trysail to assist. Now they sail in company under jib alone. (*Trust Elof to match the name Kantarellen with the W insignia in Mushroom font on his bow!*)



(r) Oklahoma Wayfarers, Jason and Stephanee, beat briefly under jib alone out of Crisfield’s Somers Cove towards Chesapeake Bay and Tangier Island. Wall-to-wall whitecaps out on the Bay made locals fear for our safety but we ran the 12 n.mi. easily under jib alone.

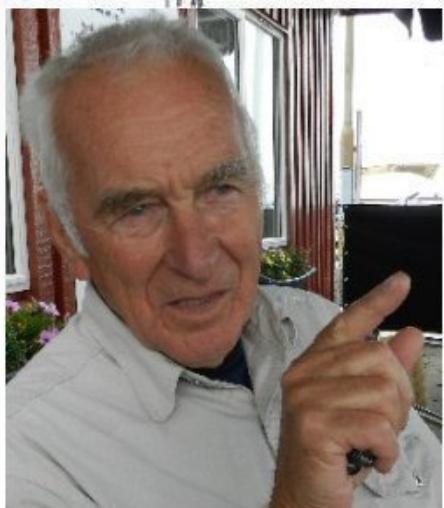
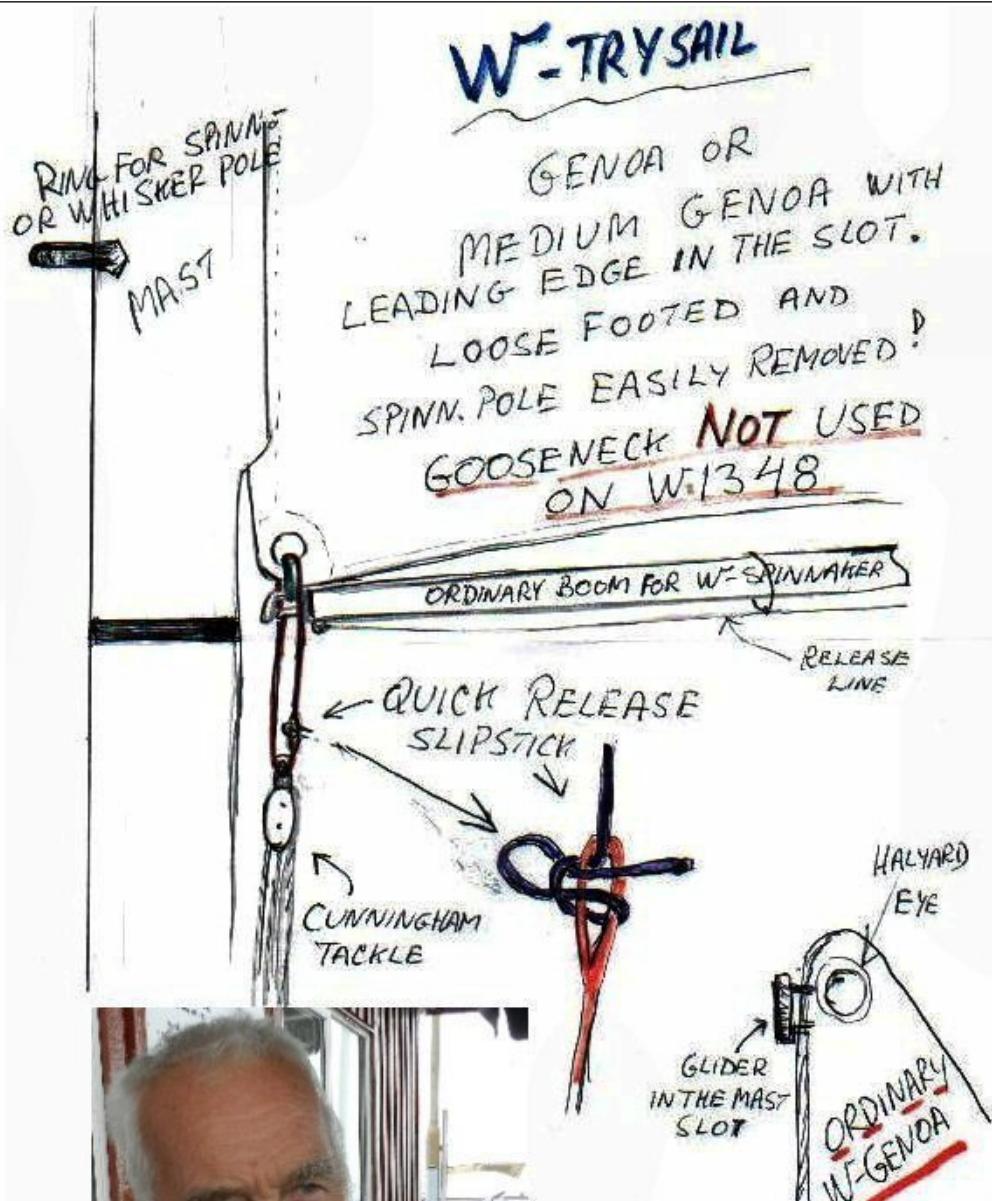
Sometimes all you need is a Trysail

When the wind passes Force 5/20 knots and there is a need to go upwind, full sail becomes a bit stressful for most of us. Even main alone can be a bit much in those conditions, especially with that sail plan's increased weather helm.

Using only a foresail in its usual location reduces sail area nicely and is great for runs or even reaches but should probably only be used for short stretches upwind, because the sail power

source is so far forward that there is a constant struggle against significant lee helm.

Why didn't we think of this? Move the jib's CE (effort) closer to the CR (resistance). Our great Danish Wayfarer friend, Ken Jensen (W1348) did just that with his **Wayfarer trysail**. He moved the foresail to where the mainsail usually lives, a fine solution that is both functional and inexpensive. So here is Ken to introduce his "baby".



**Uncle Ken wants YOU!!!
To try the trysail.**

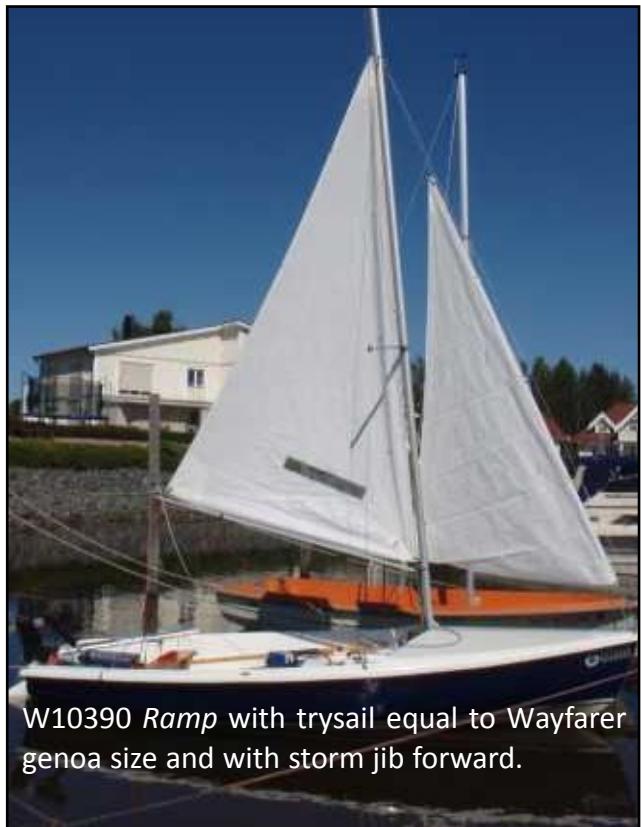


Ken talks Trysail

My earlier Wayfarer trysails were actually used without a boom for years. This was okay when sailing close-hauled but not so much off the wind until Gudtorm Heldal (W7172) thought of adding a boom to the loose-footed trysail by using the spinnaker pole between a small loop in the tack eye and a small loop in the sheet eye. That way, any ordinary Wayfarer genoa with the short foot length or a medium genoa can very quickly be fitted to the pole (*above*). This arrangement is especially efficient on broad reaches and runs where the pole keeps the sail stretched out.

Upgrades. The foot of my oldest genoa is about 125mm/5" longer than the spinnaker boom. My newest one, made like a medium genoa by Mike McNamara, is about 100mm/4" shorter and has a luff bolt rope that fits inside the mast's sail groove like a mainsail. When not in use, it is rolled around my spare spinnaker pole and lives under a side-deck for easy access. I do not use the W1348 gooseneck with the trysail boom but could easily do so.

My trysail has double sheets, like an ordinary foresail. No kicker, but I do sometimes use a preventer line to hold the boom down while running in a 'bumpy' sea. But be careful: One day, we were on a dead run in 25 knots with good-sized breakers coming straight in from the Skagerrack Sea. The trysail was bouncing up and down so I pressed the preventer into service. But when we gybed, I forgot to free it and caused a well deserved capsiz. Until that failed gybe, I was getting fine stable surfing and planing with



W10390 *Ramp* with trysail equal to Wayfarer genoa size and with storm jib forward.

trysail stabilized by the preventer, a thin line which goes from pole via spin sheet hook near the chain plate to a cleat.

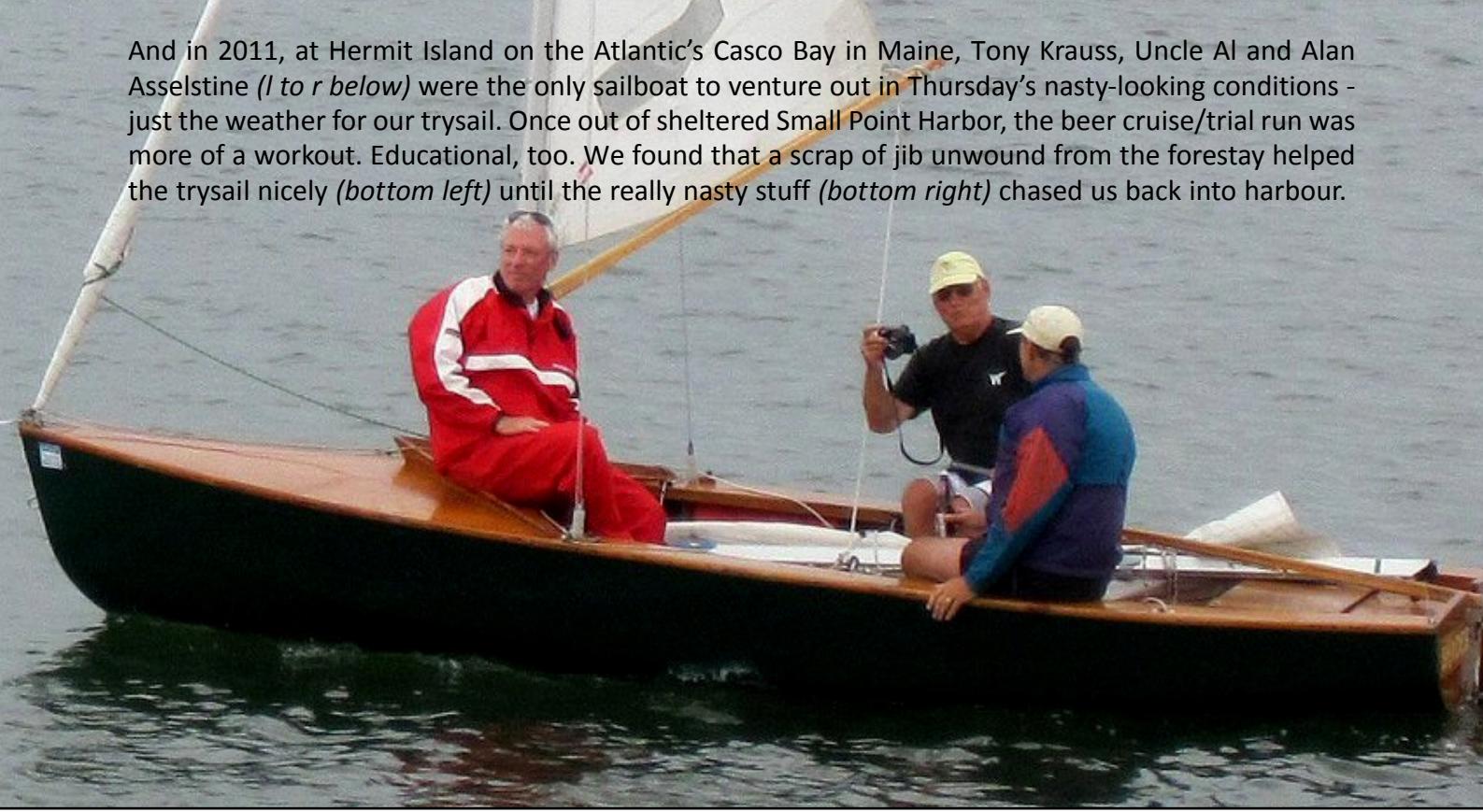
Below is *Ramp* with the spinnaker boom on the gooseneck, and the main Cunningham used as the downhaul on the trysail. The lowest slide of this trysail can be seen in the mast groove (*below*). A luff rope or set of slides that will go into the mast groove is definitely an advantage.





(above left) In 2008, Hans Gottschling (*l*) and Uncle Al (*r*) brought atrysail to try out on the Chesapeake Bay cruise: a genoa fitted with slides along its luff and a custom boom made by Hans. Both worked beautifully. (above right) On the Chesapeake's Smith Island, Al takes our beloved friend, Marina manager and resident artist, Pauli Zmolek, for a spin under trysail as her "Captain" looks on.

And in 2011, at Hermit Island on the Atlantic's Casco Bay in Maine, Tony Krauss, Uncle Al and Alan Asselstine (*l to r below*) were the only sailboat to venture out in Thursday's nasty-looking conditions - just the weather for our trysail. Once out of sheltered Small Point Harbor, the beer cruise/trial run was more of a workout. Educational, too. We found that a scrap of jib unwound from the forestay helped the trysail nicely (*bottom left*) until the really nasty stuff (*bottom right*) chased us back into harbour.





2013 BOD Regatta:

*All God's creatures got a place in the choir
Some sail low, some sail higher ...*

While Chip Cunningham untangles the spinnaker, Nick Seraphinoff keeps *Impulse* from inverting on the Detroit River off the Bayview YC.

Windy Seamanship

launch preps/routine

On a windy day, the pre-sail check list is more important than ever:

- * **Confirm that buoyancy tanks are water-tight and securely sealed.** Functional, tightly closed hatches are vital for self-rescue, especially so on a windy day.

- * **Tie bailing bucket to the boat.**

- * **Close self-bailers prior to launch.**

- * **Launch boat to leeward of the dock.** This avoids being blown onto it while raising sails and when trying to leave

dock as boom and sails drag all over the dock. And if you do make it off, mainsheet will snag on a dock cleat - something you never need. Well almost never (*photo right*)

Once launched:

Tie painter securely to dock with minimal slack. A long painter lets the boat start sailing in the shifty winds found around most docks, especially if someone has lowered the board already.

Helm gets aboard and ...

1. leaves board up until just before casting off;
2. attaches rudder before main is hoisted and

Rebel Nationals 2011, Awosting, New Jersey

It's an ill wind that blows no one good: Waiting for his crew, Al was head to wind, holding on to this dock when a nasty gust hit from dead astern pushing the boat full speed at nasty pilings (*inset*) and sure doom just off the bow. But wait! Not every mainsheet-catching cleat is evil.



- boom starts swinging at helm's head. Tiller must wait lest it catch mainsheet during hoist;
3. hoists sails as per p.27, starting with the jib;
4. a little boom vang to limit leech flog;
5. attaches tiller; makes sure the rudder blade is vertical;
6. ensures main- and jib sheets clear to run;
7. sits at tiller on the side that will be windward when backing out is done > crew will step onto the high side left by helm's positioning;
8. centreboard down;
9. asks the crew to step aboard, pushing boat straight aft (*especially if wedged in, p.44*);
10. helm backs out as per p.44.

Midwinters 2006, 25+ knots of breeze

As Al sails a close reach full speed at the dock (note the wake), Marc has his hand on the "brake" (boom). As per p.46, we will back the main/brake as needed, then luff up gently alongside the dock.



1989 W Worlds
Vallensbæk, DK

Cushion your windy gybe

Control of your gybe: Board down some for better steering and stability during a windy gybe. Crew and helm move to the boat's middle. Mainsheet will be left cleated nearly full out during gybe. (*Mainsheet stopper knot and crew on "cushion" duty stop the boom before any damaging hit on shroud*). Helm bears away until crew holding vang can easily swing boom over.

In a blow, heavy dinghies must be sailed smoothly, especially in gybes. A violent course change at speed makes the boat want to roll over. Heel is aggravated if boom jerks to a stop, terminally if it hits water and the boat capsizes.

But any windy gybe can be mellowed: A good start to this is doing an S-gybe. Even the reach-to-reach gybe needs an S-gybe at its core, and

we don't resume course to the next mark until boat is under control after the gybe.

the S-gybe: Once boom comes across, helm has one brief but crucial task: resuming the earlier straight downwind course, albeit on the other gybe. The boat ends its gybe still facing straight downwind, and its wake should resemble a flattened letter "S", hence the name S-gybe. Once boat is under control on its new gybe, helm can resume proper course and attendant duties.

To cushion the windy gybe, vang-holding crew pulls against/disrupts boom's momentum as it crosses the boat's centre line, , and eases the gybe to a gentler completion. Doing the gybe without the slam at the end muffles it an amazing amount.

Other heavy weather tricks that may come in handy

In addition to sitting well aft on a windy run, putting the **board half down** reduces the death roll risk.

Then there's the "**chicken gybe**": If you'd rather tack than do a wild gybe, put some board down and luff up in a controlled manner, keeping main

pulling to keep boat moving through tack. This is another good time to have your crew devote both hands to mainsheet trim assistance.

Once you're past head to wind, crew needs to be very sure to ease the main to help the boat bear away and resume its downwind course.



Saved by No Board

June 1988. Strong winds gusting to 20 knots at our Nationals on Fanshawe Lake, London (above). Just after the start we were hit from astern and our rudder was knocked off its gudgeon and pintle. No photo, but imagine W1066 (right) moving at full speed and suddenly rudderless. What to do?

Instinctively, we went straight to post-capsize mode, ***uncleating sails and cranking the board fully up***. The boat came to a pleasantly quick stop with wind abeam and remained totally stable despite the lost rudder. And we didn't even hit any boats.

So was born the **rest and relaxation (R&R)** mode. Putting the rudder back onto our boat was far easier without motion through the water, too. The race was lost but we had learned that the R&R is useful for more than just post-capsize duty. I now often use it to relax briefly when heaving to seems too much trouble. I do however keep vang tension to reduce noise and wear on the main.

And on the subject of no board, having board fully up while hove to works especially well on open water.

Here George Blanchard and Mike Codd's *Red Top* drifts so fast that rudder is kept at desired angle no hands. In gusty winds, heaving to with no



Saved by No Board Once More



2016 Humber Bay, Lake Ontario Sue Pilling and Steph Romaniuk in W397 *Chich* wave happily, having survived a 50-knot squall that has just passed through. (*Tip from Uncle Al: Whenever I lower my main for a squall, etc. I find it better to take the boom off the goose-neck and lay the boom and tied-up main inside side-deck out of wind's and tiller's way.*)

July 2003, Canadian Nationals on Humber Bay. my son, David, and I noticed no sign of anything untoward as we headed out from Toronto Sailing and Canoe Club to Sunday's 10AM race. The winds were lighter than the day before and I was dreaming about how we might do better on that final day of the championship. Suddenly the RC fired three guns. I turned around and finally noticed black clouds with white, lacy storm trim (*below*) coming off shore from north-west. In all my years' sailing, I had never met a morning squall.

Foolishly, I tried for shore before all hell broke loose. Never again! I should have downed sails, pointed boat downwind and enjoyed the fun under mast alone. But no! Our sails were still up when the squall hit - 55 knots according to CBC news. Even with sails completely luffing, we began the slow but inevitable and by now sadly familiar capsiz. But this time I finally did what I had sworn to do after past such misadventures: I

dove into the boat and whipped the board all the way up.

Halleluja!! The boat stabilized, drifting sideways fast with the leeward gunwale just in the water.

As Dave hiked his little heart out, I quickly unhooked the main halyard and got that sail down. The jib soon followed. A wind like that does indeed feel like the hand of God. We were able to develop quite reasonable steerage under mast alone. But it had been the "board full up" that saved the day for us. Among the Humber Bay sailboats shown on national TV that night, David and I were the only dinghy on the waters of Humber Bay that managed to avoid capsizing.

Which brings back another wild day on Humber Bay: In the *Around-Toronto-Island Race* Tom Wharton and I were racing W600 . In a do-or-die effort to keep our lead, we opted for the spin ...



... It was a wild ride, broad reaching across the Bay in 25 knots, six-foot chop and a cloud of spray. Survival without capsizing demanded weight well aft, and the pointy bow out of the water to avoid terminal helm. Things were going impressively well in a rather white-knuckled way when Tom's rudder snapped off. "Spinnaker down!" I shrieked at Tom as I dove to raise the board. "We're OK. It's flying fine," Tom replied, blissfully unaware. "Get it down!" I explained with more than just a touch of hysteria. Full marks to Tom for having the chute down PDQ. It proved too windy and choppy to sail two sails rudderless, and we limped to a 9th under jib alone, steering with the bit of paddle we had. Ah yes, there I was, lying face down on the aft deck, nose just above the water and a death grip on Tom's paddle fragment, waiting for his "Head up!" or "Down!!" as the situation demanded. Fun!



Smith Island Marina 2009:
Wayfarer sailors were safe
from the squall seen coming in
the photo above, snug in the
clubhouse in front of which the
lounger can still be seen just
before wind blew it away.



Hermit Island, Aug. 2014:
The Rally fleet returns from
lobster heaven, Holbrook's

Self-Rescue

Anatomy & critique of a capsize recovery

FLASH!! Beware!!! A very lucky escape for the careless helm of W3854: Shannon and I capsized on Conestoga Lake in June 2019 and found that our aft buoyancy tank quickly flooded because I had failed to fasten my aft hatch cover properly. The flooding made even the cure-all *Rest & Relaxation mode* useless. Several capsizes later, we got a short tow to shore from a rescue boat which saved our bacon. Please make **adequate buoyancy** your pre-launch priority #1 every time you sail.



My apologies to two of the finest, ablest Wayfarers we have ever had, Mark and Paul Taylor, whose one little faux pas is about to be immortalized for the greater good. *Uncle Al W3854*

Sunday 2 June 2013, Detroit River off the Bayview YC: (photos: Photoelement, Martin Chumiecki) Mark Taylor and his brother, Paul (W7673) have just capsized. Spinnaker was involved. Under the Racing Rules of Sailing and the Law of the Sea, Robert and Nikos in W3445 have an overriding duty to try to help - if it appears that help may be needed.

RRS #1: SAFETY

1.1 Helping Those in Danger

A boat or competitor shall give all possible help to any person or vessel in danger.

Robert reacted perfectly: "I thought of the rule but felt we would only add to the problem at that point. The rescue boat was out and the photo boat was there. I did change course to come close and check out how they were doing. *Robert*"



Left: Crew Paul has done job one flawlessly: He is on the fully lowered centreboard. As usual on a spinnaker run, the helm was sitting to leeward. Here Paul and Mark are placed perfectly to use the **scoop method** of recovery: Mark staying where he is while Paul uses his weight on centreboard to lever the boat back upright. This offers several big advantages:

Advantages of using the “scoop method”

1. The inside person can ensure that sheets are free to run so sails don't have to lift water.
2. As the boat begins to come upright, Inside can further help by moving weight as needed.
3. Above all, somebody is already inside the boat when it rights, ready to whip the centreboard fully up, keep the sails free to luff and to help the other crew member get back aboard!



(above) Learning sailors used to be told to send the crew to hold the bow head to wind as the other person rights the boat and gets back aboard. **Do not do this!** It is worse than useless because it makes the crew waste valuable energy swimming which can be a killer in frigid water. Instead, the boat should be kept sideways to the wind with the mast very preferably aimed downwind as the boat is being righted.

Another flaw in righting with boat head to wind, is that ultimately *Holder* will have to get back into the boat. Unless he waits until boat is bailed, there is the very real risk that boat will start making sternway while still full of water. That is a re-capsize waiting to happen. In my regrettably extensive capsizing experience at home and abroad, we have never had a problem with the “abeam to the wind” method - especially when we made absolutely sure that the mast and sails were pointing downwind.

Alas, Mark (above) goes for the old approach and swims to grab the bow. Note that if Mark had stayed inside the hull, there is the distinct possibility that Paul would by now have righted the boat - with Mark inside it. In fact, as you can see above, Paul is righting the boat nicely with just his own weight. So Mark could have stayed inside the boat where he started and now be making sure that the sails - the jib especially - are not making Paul lift unnecessary water during the righting process.

And now Paul is about to make *his* life tougher than it needs to be: Having foregone the scoop method, Paul should at least make sure he gets himself aboard while the boat comes upright. I do this by flopping into the boat as soon as the righting motion passes the point of no return. Failure to get in while the getting is good can easily lead to expending much needless energy on trying to climb back in later.



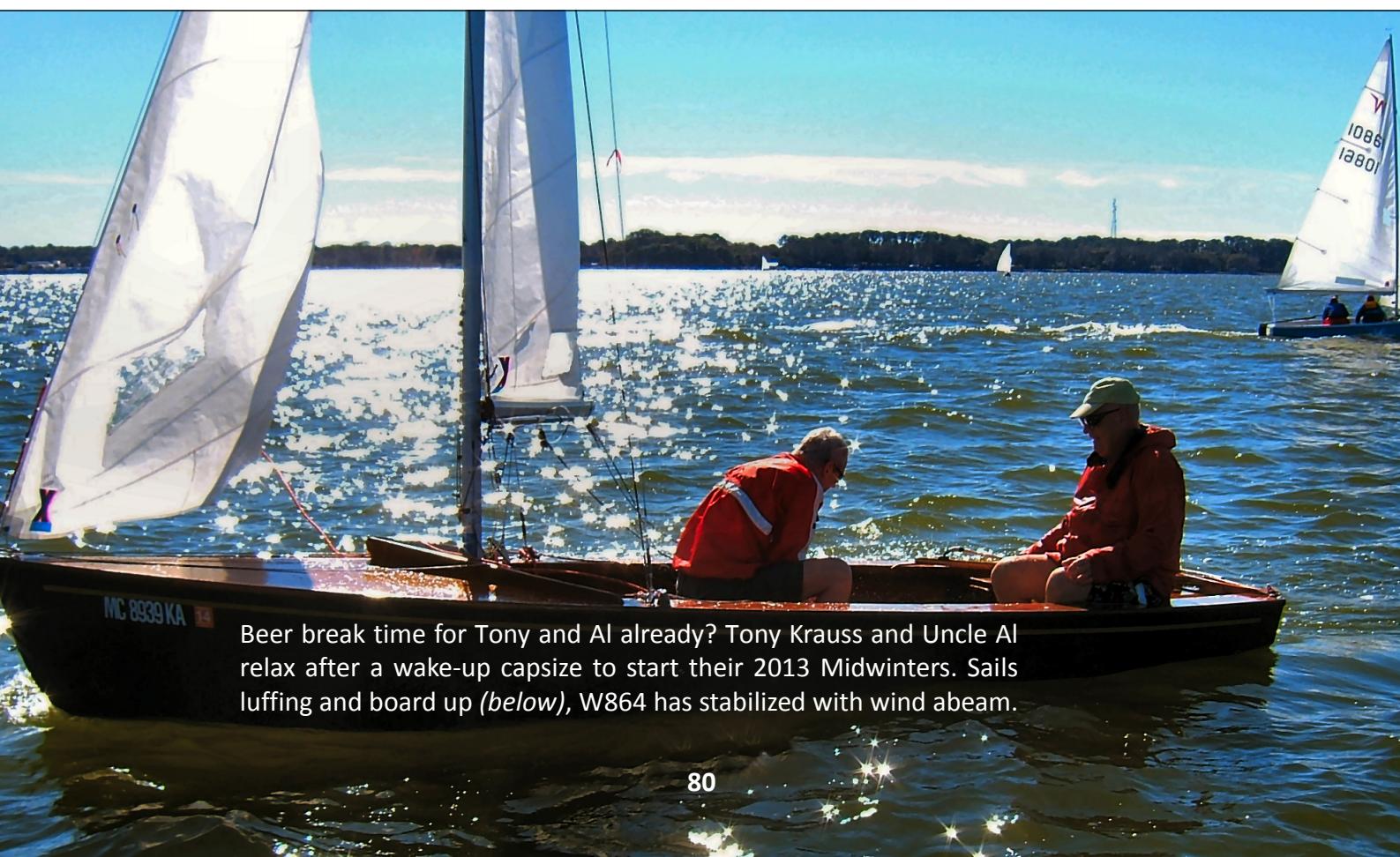
Here we see what happens if someone is not in the boat as soon as it rights. At my age (80) I now find it hard to climb aboard without some kind of help, especially while wearing a PFD. That's why I like to get back in off the centreboard. Failing that, I need someone to heel the boat towards me until the rubrail is immersed and I can just slide aboard. **Note that as long as the sails are luffing and the boat is not moving through the water, it is safe to heel a Wayfarer until rubrail is immersed.** (*Even worse than post-capsize reboarding is trying to climb back aboard a "high and dry" boat after falling overboard as I discovered recently, and I now keep a tie-on ladder handy - see p.81.*)

Many sailors prefer to get back aboard over the transom - especially when no one else is back aboard yet. Here you can see Mark (right) trying to keep the boat level as young Paul prepares to get back on board. But it would be quite safe to heel the boat to either gunwale while the boat is dead in the water. At this point it is best to heel the boat towards Paul (left) until he can more or less slide aboard while Mark hangs onto the port side if only to make Paul feel safer. Unfortunately, having both crew members in the water at the stern as shown, only encourages the boat to bear off and try to sail away. And once a water-filled boat begins to move through the water, it is nearly impossible to keep it from re-capsizing in short order. So Mark and Paul must therefore put all their youthful strength, speed and energy to quick and effective use. Luckily, the lads are more than up to the task. Mark (r) will act as ballast, while Paul climbs back in. **But the scoop method would have been ever so much easier on all concerned.**





"But," as Gord Lightfoot says in one of his great songs *Ten Degrees and Getting Colder* "his troubles are not over ..." Paul is back aboard but sea anchor Marc keeps bow pointed downwind and the boat trying to sail. Be that as it may, **raising the board completely is the absolute first thing** that must happen after Paul is back aboard. Note how W7673 is already starting to sail away with Mark making a wake and Paul looking nervous with good reason. Paul must get the board fully up **now**, and Mark must move quickly to about half-way along the windward side. Taking Mark's drag off the transom will immediately let the boat stabilize beam on to the wind. **Dead in the water, luffing sails and raised board reduce the re-capsize risk to zero (p.73)**. With the boat in that state, the person inside can, as noted earlier, safely heel the boat to windward - even 'til the rubrail is immersed - and help to slide the flotsam back aboard.



Beer break time for Tony and Al already? Tony Krauss and Uncle Al relax after a wake-up capsize to start their 2013 Midwinters. Sails luffing and board up (below), W864 has stabilized with wind abeam.



(above) Now the boat is looking after itself. And you can also (sort of) see that our centreboard is completely raised. Board full up, has yet another immense plus: it plugs most of the centreboard box against incoming water. This dramatically reduces the amount of bailing needed, especially if the boat lacks slot closure strips. *Frank Goulay and I capsized in six-foot chop off the Isle of Wight at the 1992 Worlds. Frank had that boat dry quick as a wink even without slot closure strips once the centreboard was up.* Tony

starts to bail as Uncle Al looks on. Luckily I have a heart condition and can, in reasonably good conscience, ask my crew to do most of the bailing. Above, I have already done my bit by offering to open Tony Krauss's beer for him. No napkins, cheese and crackers though. Boat stabilized but my lovely Mike McNamara sails are flogging. Next time, I will very cautiously heave to. That will let me enjoy my beer in even greater peace. Sooner or later of course, the fun will have to be curtailed and racing will have to start.

A self-rescue of a different colour ...

(below) On the last day of our 2014 Chesapeake Cruise, a surprise gybe knocked me overboard as we were leaving Deal Island. It was a benign summer's day and the water was warm. But there was a sobering component to the experience: I discovered that I am now too old/weak/heavy to pull myself back into a boat that has not been lowered by means of a capsize. Hans, even older than I by seven years, was unable to help me climb back aboard, either. Luckily, a nice sandy shore was only 50 yards away. So we (sort of) sailed in until I could stand on sand and climb back aboard.

A few days later, my thoughtful wife got me a sea-dog folding boarding ladder (*left*) and a stirrup as well. The latter can also be improvised by tying a bowline into handy bits of rope which could in fact live permanently tied around the deck end of each shroud while one is out sailing. I plan to try this out in warm water near shore at my earliest opportunity.



7 It's All in Your Mind

Well ... much of it is, anyway. Sail smart, sail fast. Unlike most physical sports, sailing is something one can do at a very high, competitive level to a ripe old age. In sailing, the Glory Days celebrated so well by Bruce Springsteen, can be made to last a long time - because so much of sailing is mental.

Words to Live by: 10 racing maxims to remember whenever you race

#10: Czech proverb: Misfortunes always come in by a door that has been left open for them.

Almost all bad luck is preventable with careful boat maintenance, well oiled helm-crew team work and sensible choices on the water. And when bad luck does strike, our reaction to it can make all the difference. Imagine for example that on a run the wind has come up from astern, erasing your big lead. You can go to pieces or you can see the bright side: We're still with the leaders; let's get 'em!

#9. The harder I work, the luckier I get.

Keep the sails perfectly trimmed. Play the main upwind, especially in puffy conditions: Ease in lulls, crank back in when wind picks up again. Don't forget to sheet in a bit harder once your boat is up to speed after a tack.

#8. Stuart Walker put it nicely: Don't be greedy!

Who cares how much you win by? No need to take chances by trying to improve on a first.

Dr. Walker's corollaries to Don't be greedy (particularly apt in oscillating winds)

Cross 'em when you can.

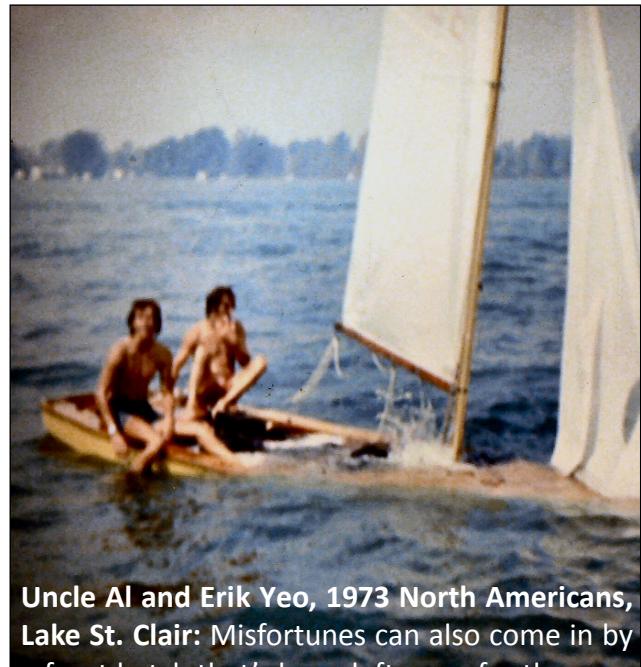
On a beat, you are headed and can now cross the boat to windward who was ahead of you. Don't wait for an even juicier shift to bring fatter gains. Instead, consolidate your gain while you can.

Don't let 'em cross you.

If you are the freshly knocked windward boat and are tempted to starboard the guy who just tacked to try to cross you, **don't** try to prove anything. **Do** tack to the new favoured tack right away and remain placed to get your lead back on the return shift.

#7. Lotteries are for losers.

Unless it's your last hope, avoid a long shot - especially if your boat speed is enviable. The better your boat speed, the less you should like risk-taking (*e.g. banging a corner, forcing mark room*). Early in a series, be content with a good result rather than risk losing boats that you can and thus should stay ahead of.



Uncle Al and Erik Yeo, 1973 North Americans, Lake St. Clair: Misfortunes can also come in by a front hatch that's been left open for them.

#6. Love the rhumb line. (straight line mark to mark)

Upwind: Staying relatively near the rhumb line keeps your options open (to play shifts, etc.)

Reaching: The rhumb line is the shortest distance to sail. (Great mental toughness is often needed to make yourself stay low.)

Downwind: In my experience, the straight mark-to-mark course is usually the best heavy-dinghy course on a run, especially if you are sailing hull speed or close to it, and possible speed gains are minimal. Tacking downwind sometimes does pay off, notably in the lighter airs or if sailing higher will let you plane.

How high to sail when tacking downwind?
Wayfarer builder, Richard Hartley, recommends:
Sail just high enough to get the genoa pulling.

Corollary: Avoid corners and lay lines until you have sailed most of the leg. (more on p.85)

Upwind: Once you have reached a lay line, all your useful strategic options are gone. Thus, the closer you get to the layline, the more you should hesitate to get even closer by tacking.

Tacking downwind: Once more, your strategic options are gone once you reach the lay line.

#5. Think ahead!

inside the boat: preparations for things that must go smoothly (e.g. before spin douse: crew feet move from inside jib sheet triangle to forward of windward jib sheet while helm makes sure spin halyard will run freely; board down; take pole off mast and sheet before spin gybe)

outside the boat: Discuss with crew your plan if you meet another boat. (e.g. defend your side of the course? make the other guy tack/gybe?)
emergency plan: Be clear in your mind at all times how you will react if a boat suddenly appears that you had not (fore)seen. For instance, do you want, at all costs, to avoid tacking here? But remember:

If a collision is unavoidable, luff up!

Luffing slows the boat (*God willing, both boats*), and minimizes impact. But even here, if you absolutely must stay on the tack you were on before the incident, it may pay to luff up, sit for a couple of seconds, then go back to your desired tack as soon as possible .

next leg, finish: Decide your strategy for the next leg before you round a mark. e.g. *Is one side of the coming leg favoured due to wind/current strength, a shift? If you think so, plan your rounding (or finish) accordingly. Don't for instance get trapped on the outside when your plan is to tack right after rounding - far better to round astern but with options.*

4. Keep your eye on the big picture

in the here and now: Watch what is going on around you, both near and far. Don't spend too much time/thought on fiddling inside the boat.

on this leg: Do we have to pass the boat ahead on this leg or is it enough to establish a good attacking position for the coming leg? How crucial is it, really, to get room at this mark?

run, buoys to port, no gate: If in doubt, defend the left > starboard *near* mark, inside *at* mark

this race: Is it imperative that we win this race? Is there any particular competitor whom we must beat to stay in the hunt?

#3. Avoid messes of any kind.

Collisions and congestion are **slow**, and possibly incapacitating. Avoid pile-ups at starts and marks.

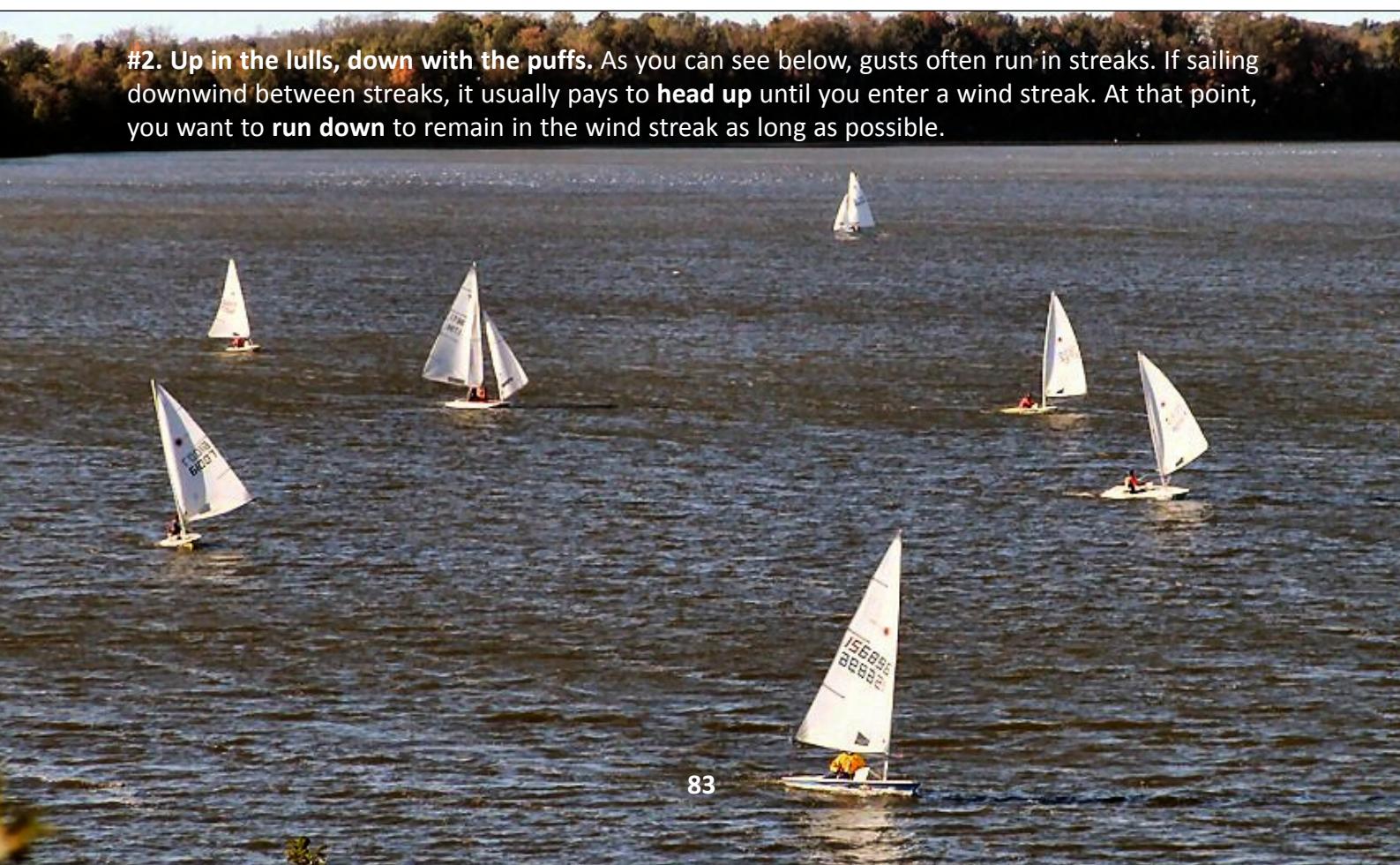
#2. Up in lulls, down with puffs (see pic below)

#1. When in doubt, let it out.

Upwind: Especially in light air – sail as high as you can but the moment you start to feel slow at all (**doubt!!**), ease sails and get speed back up; maybe ease jib halyard as well to make jib luff entry rounder and widen your sailing groove. A faster boat makes better distance to windward and lets the centreboard work better.

Off the wind: Ease your sheets (main, jib, spi) frequently to the edge of a luff on reaches - that is the only way to avoid oversheeting which stalls your sails and is hazardous to your speed.

#2. Up in the lulls, down with the puffs. As you can see below, gusts often run in streaks. If sailing downwind between streaks, it usually pays to **head up** until you enter a wind streak. At that point, you want to **run down** to remain in the wind streak as long as possible.





Lake Eustis, a recent Midwinters Uwe Heine and Nancy Collins almost hidden in the mists. If they were defending against a boat down here and wanted to play it safe they'd exchange some of their windward lead into "ahead" by footing for speed.

The Trout Lake shift, 1966

One moment of my first long-distance race on Trout Lake, at the 1966 North Bay Wayfarer Weekend stands out as something that changed my racing life entirely. I had of course read about tacking on headers, sailing the lifted tack, etc. but this day brought its true potential home to me in an unforgettable way.

Roy Coleman and I had paid for winning the long first-leg beat with our extremely raked mast (as seen on p.91) by losing seven boats on the ensuing five-mile run. As we rounded the leeward mark and began another beat (*diagram p.85*), we saw that the boats ahead were all parading south across the lake. Just to be different, Roy and I tacked to port right after rounding. Leader, John Green (W745) who was the width of the lake ahead of us, tacked then, too. Now we were bow to bow, but John of course, was a mile to windward. (*Eustis photo at left shows smaller lead, bigger boat > gives idea with more artistic merit*). Little did I know that a minute or two later, my entire outlook on racing strategy would be re-arranged.

Innocently enough, a major header/knock came along, virtually forcing John and me to auto-tack. We were still sailing more or less west along the long axis of the lake but now on starboard tack. Looking up after tacking, I was stunned to realize that we were now a mile to windward of John. **We had gained nearly two miles in two seconds!! (see diagram on facing page)**

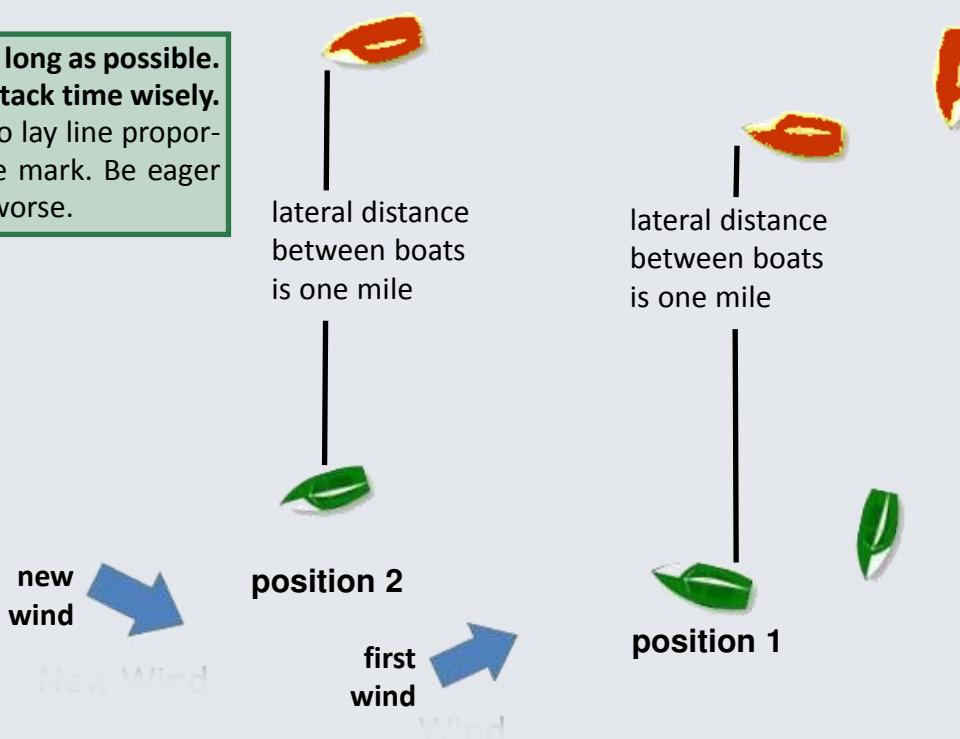
Lesson learned: Incredibly huge gains can be made (or losses incurred) in no time at all on the beat. Far more than on boat speed, these depend on **angles** and **separation** between the boats (which in this instance was a monstrous mile). What should/could the leader have done to prevent what happened?

Defend your lead: *Careless* rounds the leeward mark way ahead but then holds port tack until "the cows come home". That leaves a door open for us, giving us hope of passing *Careless* with a big port lift. Hope makes us sail better, too. To **defend a lead**, we must diversify. Invest enough lead in each tack to maintain that crucial position **between your pursuer and the next mark**. That is not only good strategy but also disheartens knowledgeable pursuers who will see that any come-back hope is now pretty much zero.

Lesson: Avoid lay line as long as possible.
Spend precious shorter-tack time wisely.
 Work to keep distance to lay line proportional to distance to the mark. Be eager to avoid making things worse.



next
mark



Upwind Strategy: Playing the Angles

Green (above) has gone against racing wisdom by sailing the shorter tack first until he reached the lay line. *Green* should have tacked right after rounding. This very skewed beat virtually demands **sailing the tack directionally closest to the mark first**.

Longer tack first is the default mindset for any skewed beat/run. The more unbalanced the leg, the more vital it is to sail the longer tack first. The only valid excuse for not doing this is guaranteed better wind or current. Hoarding shorter-tack time keeps options open, crucial in any game of strategy. Above, wind direction at leeward mark suggests a prompt tack to port in order to **“sail the longer tack first”** and **“avoid lay line as long as possible”**.

Green's strategy above is particularly risky in the shifty winds found on small lakes. *Red* plays the odds much better by tacking onto the longer tack right after rounding. True, the other side might get more wind or a better shift, but we can't build sound strategy on wishes. What we **can** do is play the odds which are in our favour if we sail a much longer tack first.

What if? Directionally, the wind can veer, back or not change. None of these can benefit *Green* when he is already on the lay line (*pos. 1 above*):

1. **No change:** Neither boat gains. But any shift benefits the lay-line avoider, *Red*.
2. **Lift:** A port-tack lift/back lets *Red* sail shorter-course to mark but is useless to *Green* who was already laying the mark on his shortest course.

3. Knock: With *Green* on the lay line, a knock will let *Red* tack and eat into *Green's* lead or, if the knock is big enough, *Red* can even take the lead (*above*). (*Green at least did one thing right: by tacking on the header at position 2, he is now at last sailing the lifted tack. He is no longer leading but is sailing the longer tack and is placed to regain his lead if/when a return shift comes.*) *Red's* lead over *Green* is not “set in stone” unless *Green* lets *Red* get between him and the next mark. Such positioning confirms the lead for *Red* who gains a controlling position over *Green*, safe from the immediate effects of any possible shift.

A specific example: Trout Lake is a long east-west lake. On sunny days, a SW breeze often blows diagonally across the lake. At times that wind veers up to 15° as we sail the five-mile beat to the west end. On narrow lakes, we can often sail one tack (port here) nearly parallel to shore for long periods of time on our beat. Whenever we run out of sea room, we tack out but only for 100 yards before going right back onto the longer tack. Many others tack and then get lazy, continuing across the lake and wasting short-tack time that should be used to real advantage.

We, on the other hand, are miserly about spending our short-tack treasure. A few bits of short-tack time do have to be used on avoidance of the rocky shore, but what we live for - really - is longer-tack knocks. With a quick tack, the knock then becomes a fine lift that we use as long as it lasts. In this way, we can nibble the competition to death. *Death by a thousand tacks, dare I call it?*

Wind blows better along shore

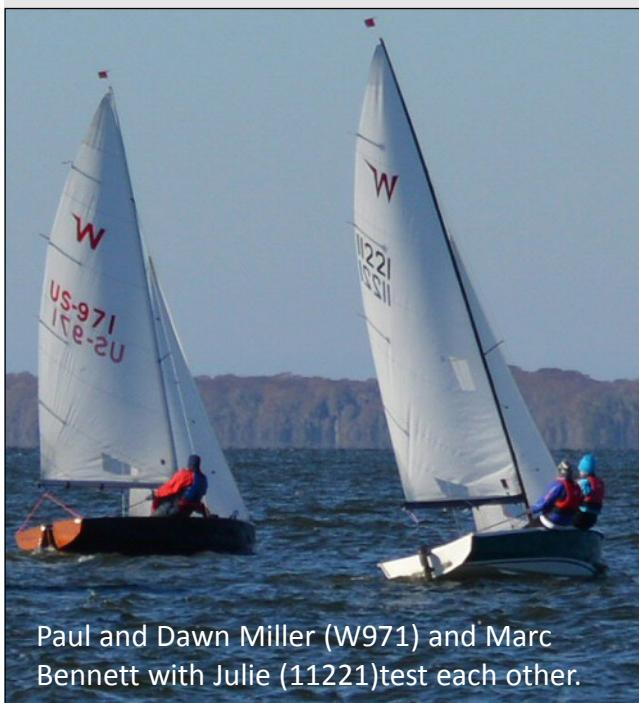
Trout Lake's relatively straight stretches of northern shore also illustrate a gem of "local knowledge" that I have used to fine effect in locations large and small, from Lake Ontario to Michigan's Clark Lake (*r*).

If the wind is blowing approximately parallel to a straight stretch of shore line, it seems to funnel and be stronger near that shore. Downwind, we can raise centreboard and rudder, and really use shore effect to advantage by sailing very close to the shore as Marc (11221) and Al (3854) are doing here on Clark Lake. Upwind, I recall using only one fine instance of this - off Lake Ontario's Bronte Harbour in the mid-'70s where I had to pick up a replacement crew at the pier between races and noted there was far more wind inshore than further out on the lake. With youthful abandon, I banged the inshore corner in the next race, got far more wind, and won.



Go head-to-head with the best

In Dr. Stuart Walker's *Advanced Racing Tactics*,  he describes a classic avoidance behaviour: If *Speedy* sails the left side or the middle of the beat, *Avoider* chooses the right side or bangs a corner to avoid getting visibly destroyed by *Speedy*. If *Avoider*'s gamble pays off, all is well for *Avoider* who rounds ahead. Far more likely though, *Speedy* will round ahead but this way *Avoider* has not been visibly trounced and can blame Lady Luck who did not smile on his side. Now I recognized *Avoider*. He was **me!** It is far more productive, advises Dr. Walker, to



Paul and Dawn Miller (W971) and Marc Bennett with Julie (11221) test each other.

actively seek out and sail near fast guys, using this chance to speed test against the best. So now I was dying for winter to end, being eager to try out this strategy against Detroit's Jeff Jones who had won the past five North Americans - and most of the U.S. and Canadian Nationals as well. Jeff and his dad were so fast that even the World champion English Wayfarers feared him.

Julia and I decided our first attempt to keep up with the Joneses would be the U.S. Nationals that June on Michigan's Tawas Bay, one of the world's finest sailing venues and speed testing spots.

Putting Stuart Walker's advice into practice was a dream come true for Julia and me. We were amazed to find that with only minor tweaking, we could keep up with the Joneses. Indeed, we managed to pass Jeff and his dad, Dave to win not only the first race, but also the series.

This changed my racing which had relied mostly on superior crews and strategy for any of our successes rather than challenging the known speedsters.

Lesson: You can't go too far wrong by doing **in-race tuning against a fast boat**. Just sail parallel to a hot boat in clear air, check your performance against theirs and tweak as needed.

Richard Johnson, then sailing W10139 Free Range Chick'n, once asked me: "What is your thought process when you are thinking about tacking on a header? How do you make the decision to go or not to go?" I have given the matter some serious thought - with the following results.

To tack or not to tack, that is the question

On a beat, you get a big header. Tacking would seem the right move. But there are times when you should pass on that header, tempting as it may be. A dinghy tack takes only seconds, yet that little move can have a profound effect on your finish position - and not always for the better. A thoughtless tack is fraught with risk to your finish position (*not to mention your boat!*).

"Do we want to tack here?"

Headers and converging boats often require our rapid response but we can pre-programme the mind with any answer that may be needed. In arriving at "yes" or "no" as we prepare, we should take into account at least the following **strategic considerations:**

1. Are we getting rather close to a lay line?

If we are far from the mark but already near a lay line, our tack-o-meter is definitely in the red zone since the number of useful strategic options available to us is proportional to our distance from the lay line. So a tack here would move our lay line distance and its accompanying strategic options even closer zero. No strategy game likes **that**.

Exception: *In a large fleet, it has never paid me to go up the middle of the first beat with its chewed-up air and water. Caveat nauta!*

The closer we get to a lay line, the more eager we should be to tack back in towards the rhumb line. So when we meet a header in that situation, we should already be in "eager-to-tack" mode and ready to dig back in towards the middle. After tacking, our minds will then switch to "anti-tack" mode as long as lay-line proximity is still an issue. (That same consideration, by the way, should govern our reaction - tack or bear away - if we meet another boat! If we like our starboard tack, for instance, and meet a port boat, encourage it to cross. Don't force Port to tack and end up lee-bowing you.)

(right: The barmaid told us that the owner of this bar is a racing sailor.)

Mind-set when sailing away from the lay line:
Size of willingness to tack towards a lay line should be proportional to our distance from it. And we should be loath to surrender a tack that is taking us safely away from any unnervingly close lay line.

Near the windward mark, we of course do have to get to a lay line, but this is best put off for as long as possible. If there are no other boats near us, we can of course tack when and where we like. But if a crowded mark rounding is coming up, it is - for once - safer to hit the line "parade" early or even overlay enough to reduce the risk of getting caught in a mess and losing lots of boats/distance by going slow or having to take a turns penalty.

2. Far from any lay line, the merits of the shift itself become more important. But there are still major questions to answer before we commit:

How will a tack fit with our game plan? Will it trash our pre-race plan to play/defend a specific side? If we know the left is usually favoured in these conditions, is this shift worth the risk of tacking towards the right? It's often a hard call but our mind should have the answer to "Would we want to tack?" readily available at all times.





To tack or not to tack in action

Of course, plans are rarely flawless. So we do not just bang the corner of what we expect to be the favoured side. Instead, we consider this further aspect of the overall situation:

3. What is our position in relation to the main body of the fleet (or to the boats we really need to beat)? I recall a Midwinters where we were fighting for the series lead with Peter Rahn and Richard Johnson. So our plan became delightfully simple: stay near or in front of these two. In that kind of situation, we tack on a shift that keeps us with main competition, or to remain between them and what we consider to be the favoured side (*or the mark*). But a tack away from our main rivals will need a very good reason.

Should we cover? I try not to be needlessly nasty on the water. Sailing upwind beside a boat rather than sitting on their wind lets them sail at full speed while giving us a valuable speed-test partner. Wayfarers have a lovely *live and let live* approach to racing that adds much to our fun. Of course, near a mark or the finish, someone has to win any duel and it might as well be us - no holds barred *then*. We all expect no less.

Covering boats in oscillating shifts can be a tricky business at the best of times. We prefer to "sail our own race" in such oscillations while loosely obeying our strategic imperatives: avoiding lay lines, and defending the favoured course side or the next mark against our scariest pursuers.

By discussing such matters with my crew as we proceed upwind, we (should) know - before any shift arrives - whether we are in **eager-, willing- or reluctant-to-tack mode**. This increases the odds of our making a good emergency decision.

Purely wind-related considerations before we decide whether to tack or not include:

* **Will this shift last long enough to make a tack worthwhile?** What are boats ahead doing? Wind patterns on the water ahead?

* Is this a "**velocity header**" - a lull in the wind brings the apparent wind vector further forward (*i.e. header*) only until boat slows down. No need to tack for a non-shift.

* **Dead spot?** A lull is rarely a good time to tack and damage fragile boat speed even more. Job one is to keep moving through the lull - major gains or losses are very possible here!

* **Subsidiary question:** Will a tack take us into an area of stronger wind? Ripples on water, and other boats, can give valuable input.

* Even the best shift cannot overcome lack of wind. It pays to go against usual strategic odds, if that makes us likely to get better wind - not much better - just more than other guys are getting! (*Remember the bear. "You don't have to run faster than it, just faster than your friend."*)

4. How big is the header? In “reluctant” mode, the header will need to be substantial to overcome our fear of tacking, but if, on the other hand, we are already eager to change tacks and go back towards the rhumb line, then even the slightest and most fleeting header may well be reason enough to tack.

5. Is this a persistent shift? (*a new sea breeze caused by thermal lift, permanent wind bend around a point of land, etc.*) In my experience, these are rare but spectacular. In such a case, it pays to sail well into the header (or even tack into the lift) if we expect the wind to keep swinging around. Then a later tack will get us a wildly better lift and a far shorter distance to sail on the other tack than the guys who tacked too soon. (*Imagine a wheel where you sail around its axle and other guy sails around its rim*).

Futher considerations

Since we often race in shifty winds, we must be prepared to tack often and well, practising our tacking skills until they are second nature and a joy to behold (p.60-61). Having no fear of tacking lets us easily admit a tack was a mistake now that we can easily undo that error at minimal cost.

If we are forced to leave our preferred tack, or see that a tack was a mistake (*because shift lasted only a moment, for instance*), we need to return to the favoured tack without hesitation.

Of course, sometimes every tack seems to be a mistake, and then we tend to tack too often. In that case I eventually try to break that cycle by holding one tack for bit. Then I start a fresh round of shift-playing in hopes that my tacking curse has passed.

Trout Lake, 1978 Cruise Race

The typical nearly one-tack beat on port (*top of p.85*), so Julia and Al are very reluctant to waste precious starboard-tack time by tacking. Instead they will work hard to escape Bill and Ann Rogers’ backwind.





Which end of the start line is favoured?

After I had misjudged yet another start line at the 2013 North Americans on Tawas Bay, I wracked my brain for a better way to determine the favoured end - something better than sitting head to wind, comparing port and starboard reaches down the line and back, etc. These were just not working for me. And then a vision in math: Could I really do it all based on only the bearing from start flag to pin?

 Buoys to port: If pin bears x° from RC boat and the line is square to the wind, then the wind direction will be $x+90^\circ$.

Since a Wayfarer can sail 45° to the wind, it should then be able to sail $(x+90-45)^\circ = x+45^\circ$ on starboard off a line that is in fact square to the wind.

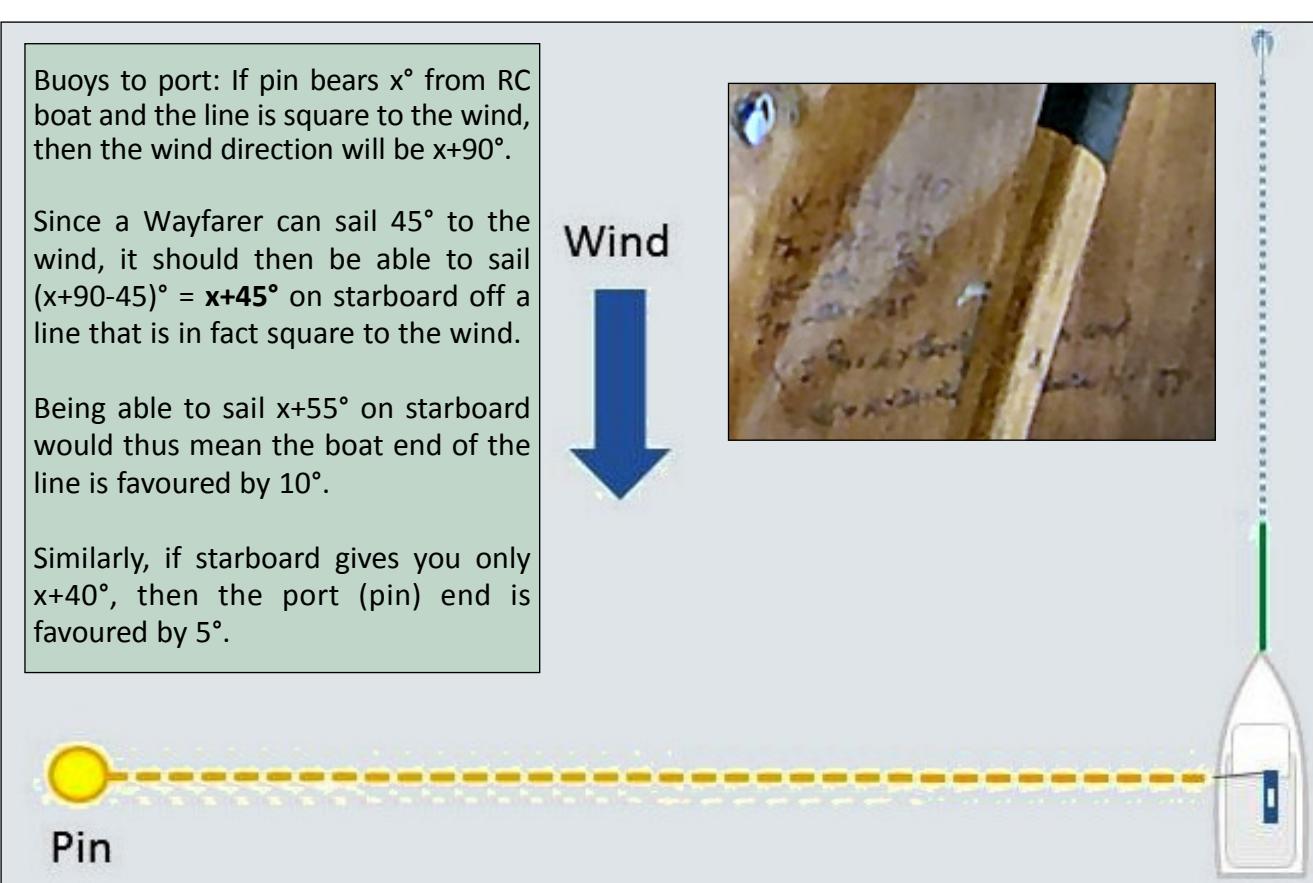
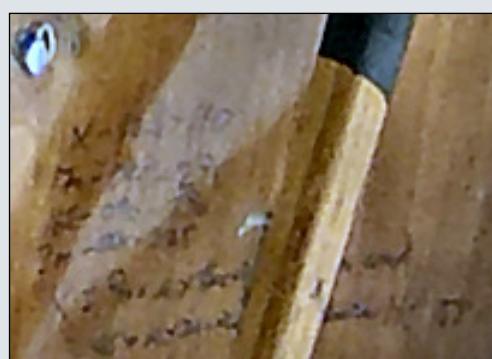
Being able to sail $x+55^\circ$ on starboard would thus mean the boat end of the line is favoured by 10° .

Similarly, if starboard gives you only $x+40^\circ$, then the port (pin) end is favoured by 5° .



Soon I was jotting in china marker on my aft tank cover (below) how I might determine **not only which end is favoured, but also by how much**. No need to be on the line to get updates either: My close-hauled compass heading anywhere in the start area is all the info that I need - details below left.

(I have since discovered that "my" system was laid out in an early issue of Dave Dellenbaugh's Speed & Smarts but I had evidently not metabolized it.)



8 What the beginner should know about the racing rules

Rules applicable when boats meet

updated for the 2021-2024 RRS

2A: basic right of way between boats racing

10. port keep clear of starboard
11. same tack > windward keep clear of leeward
12. same tack > overtaking boat keep clear
13. tacking boat keep clear

limitations placed on right-of-way boat

14. all boats to avoid contact
15. acquiring right of way > initially give room to keep clear to **Newly Burdened**
16. any r-o-w course change must give room to keep clear to **Burdened**
17. same tack > leeward overtaker limited to proper course while still overlapped

2C (18-20 basically do not apply at start)

18. mark-room (more below)
19. room at obstruction for overlapped give-way boat
20. room to tack for boat needing to avoid obstruction

2D: 21, 22 override 2A, 2B

21. boat returning from OCS, doing turns, or sailing backwards must keep clear of those not doing so
22. others keep clear of capsized, rescue
23. not racing must keep clear of racing

fouls, exoneration & atonement

31. touching a mark > one-turn penalty
43. exoneration if foul forced by other boat
- 44.2 other foul > two-turns penalty

18 Mark-Room (largely protections for give-way boat)

18.1 Does this rule apply?

* at a start mark? **virtually never**

* when first boat part of *overlapped* group enters *zone* around any other *mark* of the course? **yes**

* between port and starboard boats beating? **no**

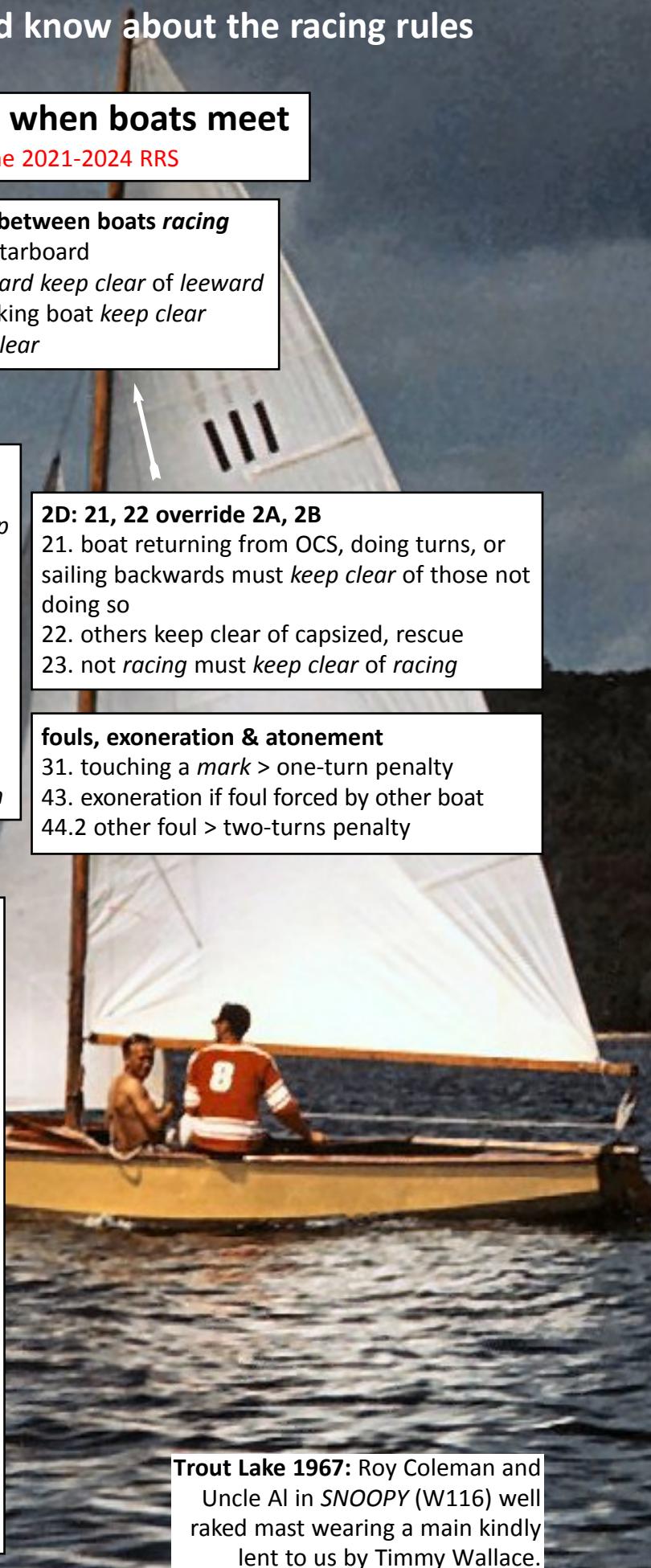
18.2 giving *mark-room*: freeze-frame as first hull enters *zone*: outside to give *mark-room* to inside *overlapped* boat(s) > *mark-room* rights/obligations remain regardless of later changed *overlap* status until *room-entitled* boat passes *mark*

18.3 completing tack to starboard in the *zone* near a boat already laying *mark* to be left to port, tacking boat must

* **not** make the other boat sail above close-hauled to *keep clear*, and

* must give *mark-room* if the other boat becomes *overlapped* inside (the real killer here is that the tacker loses the protection of rule 15 *Acquiring Right of Way* and rule 16 *Changing Course*)

18.4 at a gybe *mark*: inside *overlapped* boat must sail *proper course* until she gybes

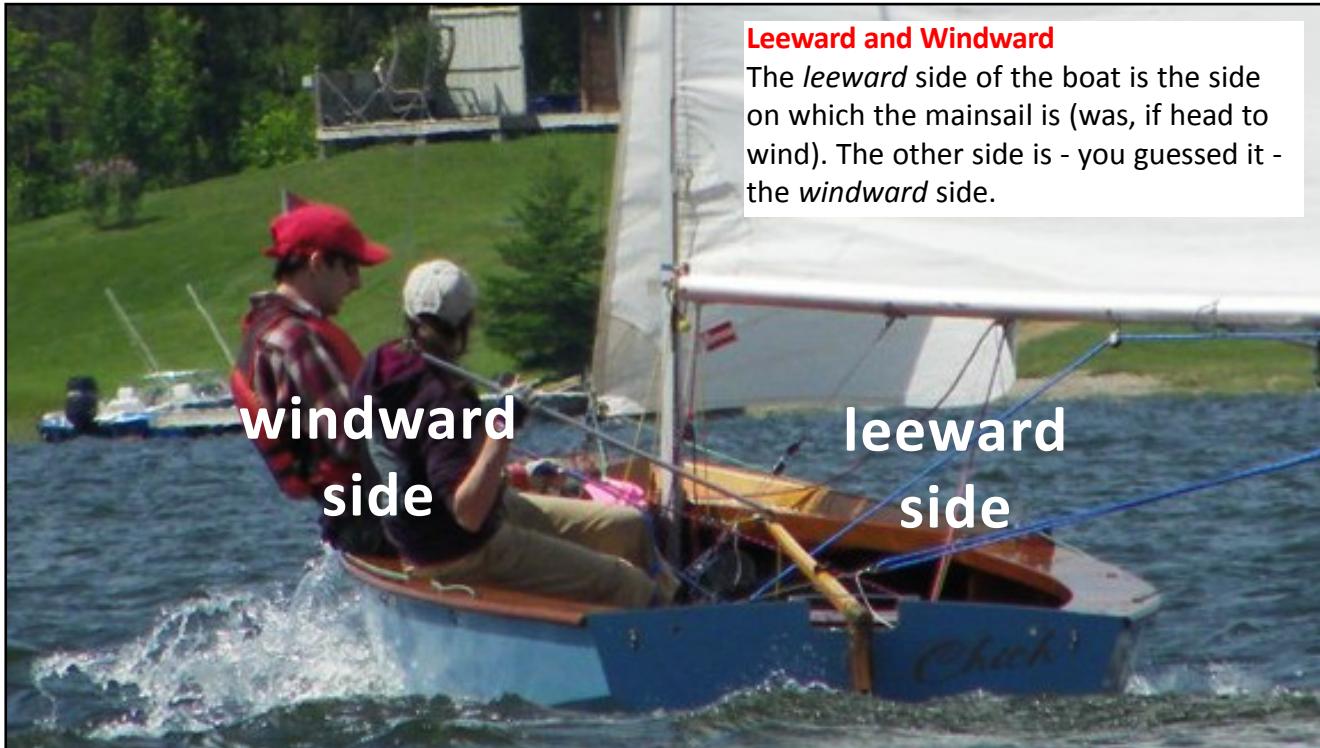


Trout Lake 1967: Roy Coleman and Uncle Al in SNOOPY (W116) well raked mast wearing a main kindly lent to us by Timmy Wallace.

Racing Definitions Illustrated and Explained

I have illustrated and explained the definitions listed below (and created one for “tacking”).
Leeward/Windward, Tack, Starboard/Port, Overlap, Clear A stern/Clear Ahead, Racing, Room, Mark-Room, Tacking, Keep Clear, Fetching, Proper Course, Obstruction, Finish

The complete official text of all 2021-2024 Racing Rules of Sailing and definitions is available at
[http://www.sailing.org/tools/documents/RRS20212024-\[26369\].pdf](http://www.sailing.org/tools/documents/RRS20212024-[26369].pdf)



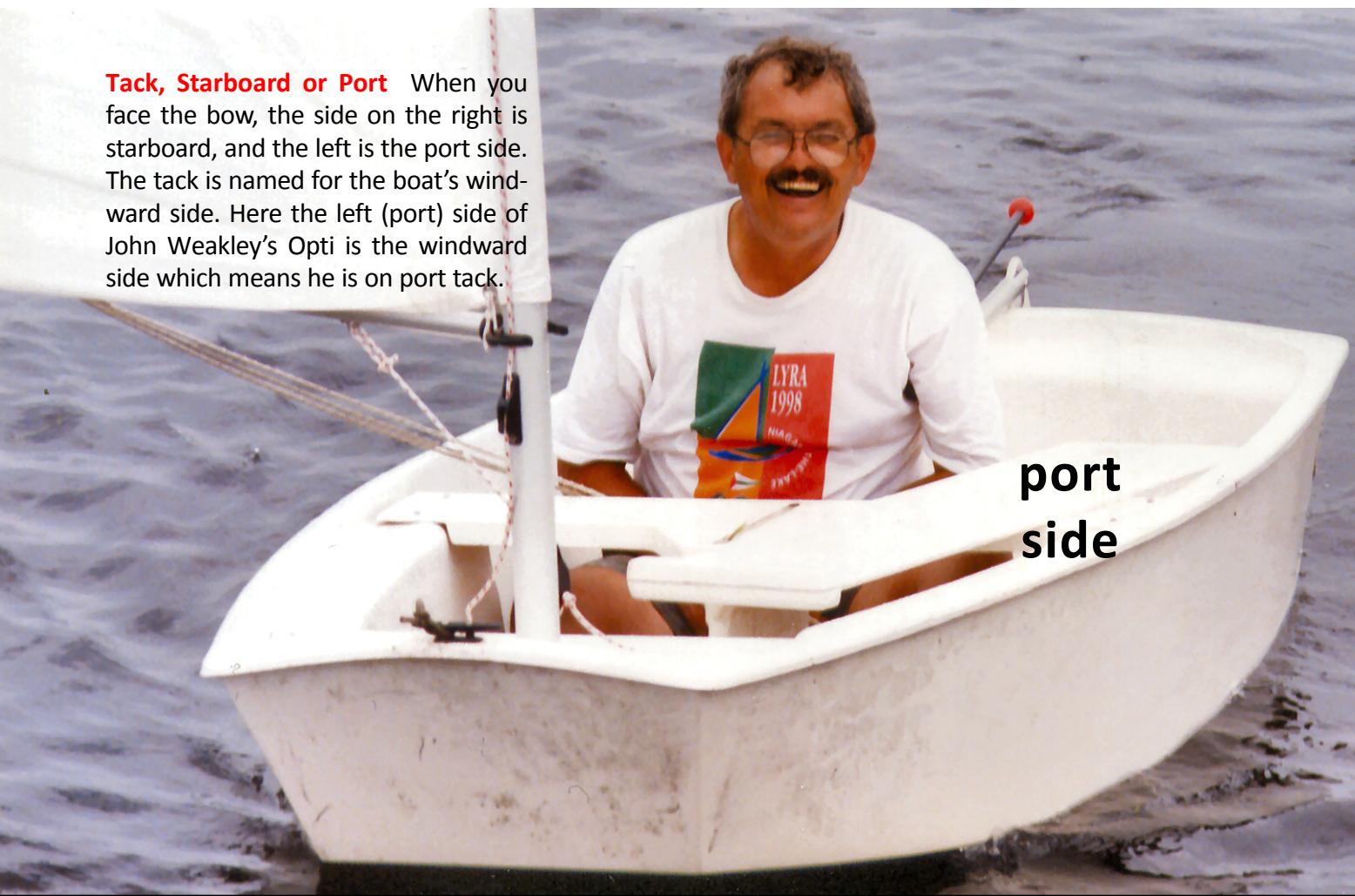
Leeward and Windward

The *leeward* side of the boat is the side on which the mainsail is (was, if head to wind). The other side is - you guessed it - the *windward* side.



Since Elise Beket (8745) is overlapped with W10873 (Richard Johnson) and off Richard's leeward side, 8745 is the leeward boat - which makes Richard and Michele the windward boat. By the same token, the Johnsons are leeward boat to 3664 Doug and Chris Ryan.

Tack, Starboard or Port When you face the bow, the side on the right is starboard, and the left is the port side. The tack is named for the boat's windward side. Here the left (port) side of John Weakley's Opti is the windward side which means he is on port tack.



Clear Astern/Clear Ahead; Overlap W7663 (*below*) is clear ahead of Laser 61007 and W286 since the latter are behind an imaginary line drawn at 90° (abeam) to the centreline of W7663 through the aftermost tip of W7663's rudder blade (aftermost point of hull and equipment in normal position). A spinnaker sheet, for example, dragging several metres behind W7663, would not create an overlap since that equipment would not be in its normal position.



(right) Y-Flyer 1760 (*r*) is overlapped with Peter Rahn (black hull) since not all of 1760's hull and equipment are aft of the (imaginary) line drawn abeam from the aftermost point of Peter's hull and equipment (in normal position).



(above left) The red vertical line through Hans Gottschling's spinnaker illustrates that the bow is not necessarily the foremost part of a boat's hull and equipment in normal position. For example, on a spinnaker run, a boat whose bow is a few centimetres short of gaining an overlap on a hull or rudder, may well have that crucial *overlap* due to a spinnaker in normal position.

(above right) For what it's worth, Al's sharp turn on the starting line is about to give Doug Netherton (*left*) a leeward overlap as the red line swings around dramatically with the aft part of Al's boat.

Here, Uncle Al (9355) has an *overlap* on Søren Jensen (10212) because Sten Madsen (9067) is between them and *overlaps* both 10212 and 9355. Just in time to get *mark-room* it was, too!!

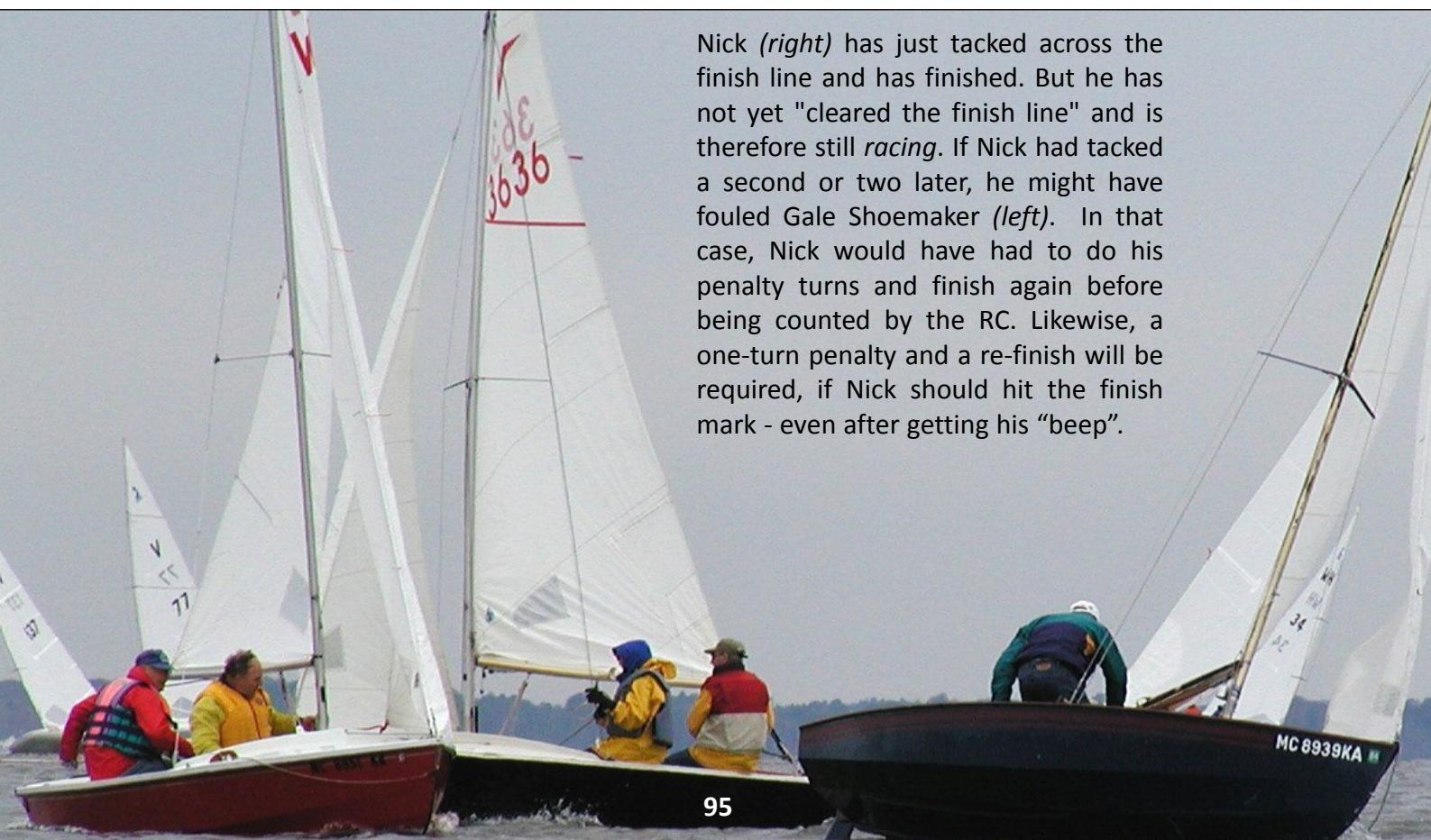


Usually *overlap*, *clear ahead* and *clear astern* are applied only to boats on the same tack. But the photo above illustrates the two situations in which these terms *can* apply to boats on opposite tacks: The definition says “**If boats are on the same tack, these terms always apply, but they apply to boats on opposite tacks only when rule 18 applies between them or when both boats are sailing more than 90° from the true wind.**”

Here, W7351 and W3854 are *overlapped* on opposite tacks because they “**are sailing more than 90° from the true wind**”. The *overlap* matters once they enter the *zone* and rule 18 begins to apply. Until that time, *overlapped* or not, 7351 (port) must *keep clear* of 3854 (starboard) (rule 10)



Racing According to the RRS, a boat is defined as *racing* from the time of her prep signal - step two in the normal start sequence - until she *finishes* and clears the line. *AI's note:* This definition is especially important since the pre-amble to Part 2 of the RRS (right-of-way rules and such like) specifies that a boat not *racing* shall not be penalized for breaking one of these rules, except rule 14 when the incident resulted in injury or serious damage, or rule 23.1 *Interfering with another boat*.



Tacking Al's note: There is no longer a definition of *tacking* in the Racing Rules of Sailing. The old RRS stated that a boat was tacking from the moment the boat passes head to wind until she is on a close-hauled course. That definition must now be inferred from Rule 13 which says; "After a boat passes head to wind, she shall keep clear of other boats until she is on a close-hauled course."

Room is enough space to permit a boat to do whatever she is entitled or required to do while manoeuvring promptly in a way that is seamanlike for the existing conditions.

Mark-Room is the space required by a boat to sail to a mark and to round or pass it. That is the basic intent of *Mark-Room*, but there is more detail below and in the official RRS.

Limitations on the boat entitled to mark-room

1. Here W825 (Ed Tait) is about to round onto the beat. He is *leeward* boat and has right of way. However, since CL523 has an inside *overlap*, 825 is required by Rule 18 to give 523 *mark-room*, which, here, is "*room to sail to the mark when her proper course is to sail close to it*", and to round the *mark*. 523 is expected to round in a seamanlike manner, i.e. keep his boat under reasonable control for conditions: board down in time for the beat, sails in promptly and sail as close to the mark as a good seaman could be expected to do given the conditions. With the mark and the boats bouncing around as they are here, 523 is entitled to considerably more space than he would be in light airs and flat water.



2. As of 2013 *mark-room* only includes "*room to sail to the mark when her proper course is to sail close to it*." Thus if the *mark-room* entitled boat has screwed up the rounding, she is no longer entitled to sail above *proper course* in a belated attempt to shut the door on a boat taking advantage of the gap that may have been left by the entitled boat. For instance, if 3854 (left) goes very wide of the *mark* but belatedly sees Jim (who did not have an *overlap* when Al entered the *zone*) trying to cut inside, Al is no longer entitled to sail above his *proper course* - in this case above close-hauled - to close the door on Jim.

Keep Clear You are *keeping clear* if a right-of-way boat does not have to change course to avoid you. If you are beside a right-of-way boat, you must, to *keep clear*, stay far enough away from that right-of-way boat so that it can change course in either direction without immediately hitting your boat.



(left) Len Macdougall in W6732 (on port tack) has *kept clear* of Nick Seraphinoff in 864 who had no need to take avoiding action. W2960, Don Thwing, however, has reached the danger zone: Unless 2960 tacks now (or riskily, bears away violently), he will not be *keeping clear* of the starboard boat, W864, and thus foul him. Within the next second or so, Nick in 864 will have to begin avoiding action or face breaking rule 14 in a possible collision with 2960.

Can't be said too often: If a collision is imminent, **always luff up** rather than bear away and pick up speed! Here Nick and Don could get to within a metre of each other and still avoid most of the impact by luffing up violently at that point.

Marc Bennett (W6 on left) is *keeping clear* of Tanya in the white-hulled W to leeward of him, but Tanya has sailed so close to W3854 to leeward of her that Uncle Al can no longer "change course in both directions without immediately making contact with the windward boat". Thus, Tanya is not *keeping clear* of 3854 and has fouled Uncle Al under rule 11 (windward boat keep clear).



Proper Course is any course you might reasonably sail to finish as quickly as possible if the boat whose presence requires you to sail a *proper course* were not there.



There is a widespread belief that *proper course* is the same thing as sailing straight towards the next mark on anything except an upwind leg of the course. This is in fact rarely the case. In the photo above for example, Jeff Eames's W7220 (blue/white spi) has established an overlap from clear astern “**within two of her hull lengths to leeward of**” the Laser. Thus, rule 17 requires him not to sail above his *proper course* here. But that does not necessarily mean Jeff must sail straight at the next mark. He is simply required to sail the course that he feels would get him around the course in the fastest possible time “**in the absence of the other boats referred to in the rule using the term**”.

In this instance the Laser would be the “other boat” (the boat with which he became overlapped from clear astern). Sailing *proper course* means here that Jeff must not make any course alteration aimed solely at the Laser.

Jeff is however allowed to come up on the Laser as he defends his wind against Al (purple/pink spi). Or he can keep sailing higher than the Laser if this has been his strategy all along. Or he can sail higher if it is part of his on-going “up in the lulls, down with the puffs” strategy. In so many words, if we remove the Laser from the picture, any **reasonable** strategic action can be defended as Jeff’s *proper course*.

Before the start, we have no particular place to go, so there is, logically, no proper course before the start signal is made. Therefore, Rule 17 which requires sailing no higher than proper course after establishing an overlap from astern, does not “kick in” until after the start signal has been made.



Upwind, *proper course* is basically any close-hauled course that a boat may choose to sail. At right, Chris Lansdown (leeward) can pinch as high as he likes and Gary McIlroy in CL2679 (windward) is obliged to keep clear.

However, sailing *proper course* upwind **can** enter the picture, usually only just after the start: Let us assume for example, that these two have just started and that 4678 established a leeward overlap from clear astern of 2679. Both ended up "sitting" on the line luffing above close-hauled while waiting for the gun. After the start, rule 17 requires 4678 to sail no higher than his *proper course*. Thus, W4678 has to bear away to close-hauled (*proper course*) as soon as the start signal is made.



Fetching the mark is a British synonym for "laying" the mark, i.e. being in a position to round the mark without having to put in any more tacks.



Actually, "fetch" is what the Brits (and others?) say instead of "lay" - as in "Can we lay it yet?" I do find "fetch" useful as a noun though: "The beat had turned into a fetch." (= one-tack beat) whereas the noun "lay" tends to convey a different meaning to the North American ear.

Fetching??!! Fetching :)
You want fetching, I'll give you fetching.

The young ladies of the social committee (*left*) at the 2012 inaugural Bayview YC One-Design Regatta are very fetching indeed!"

Or of course, Fido and Rover are familiar with the word "Fetch".

Here Greenwood Lake Rebel sailors, Bob and Jean Zimmer, look like they are fetching/laying the mark at the Rock Hall YC One-Design Regatta in 2012.



An **Obstruction** is anything large enough to require you to make a sizeable course alteration when you are one boatlength away from the object. A boat of which you must *keep clear* ranks as an *obstruction* but any vessel underway is never a continuing obstruction.



Apart from obvious but rarely met *obstructions* such as a ferry coming across or a pier sticking out in front of us, the *obstructions* that we face most regularly are right-of-way boats of which we must *keep clear*, boats to whom we must give *room*, or capsized boats. This photo illustrates a common situation: 1305 is on starboard. Both port boats will very soon have to take action to avoid 1305, so she ranks as an *obstruction* to both. The leeward port boat (1131) could call for "room to tack" for the *obstruction* (see rule 20) or choose to pass astern of the *obstruction* (1305). If 1131 chooses to pass astern, she must - under Rule 19 - give *room* to 171 if the latter also wants to pass astern of 1305. It's very much as if 1305 were a moving mark.

We **finish** when any part of our hull crosses the finish line from its course side. But if we hit the mark or foul another boat before clearing the line, we have to take our penalty and then re-finish.



(left) Stephan Nandrup-Bus (W4898) is finishing at this exact instant because his bow "*any part of her hull*" is just now breaking the plane of the finish line.



(right) If this were a "buoys to starboard" course, then this RC boat would be anchored on the "wrong" side for a "buoys to starboard" finish. This kind of thing happens frequently for a variety of reasons, and is not considered grounds for redress. The finish definition makes it clear that in such a situation, the side on which the mark was to be left no longer matters, because a boat finishes when she "**crosses the finishing line from the course side**". Thus CL1050 (Rob Wierdsma with son, Ben) is finishing correctly in the photo above, regardless of whether it was a buoys to port or starboard course.

Uncle Al's Sailing CV

Racing

- * 1954: Brutal Beasts for two summers > Danish Nordborg 15's (*below*) for two more



- * 1958-1963: crewed/helmed Lightning 7100 - Toronto area Team Race champions a few times
- * 1964: began Wayfarer career in W116 *SNOOPY* at Queen City YC (*above*) on Algonquin Island
- * 1966: driver's licence and VW beetle > Toronto Sailing & Canoe Club for easier road trip access > regattas of all kinds - my current event totals > 600+ since 1964, including Nationals in US, England, Denmark, Ireland and Canada
- * 1968: sold W116 > taught French and English for a year in a German high school
- * 1969-70: crewed with brother Mike in W276 > Nationals and North Americans winners
- * 1971: bought W852 *Son of Snoopy* > won my first Nats at Kingston YC
- * 1972-75: bought Fireball 4794 used, a lot overweight: won '72 Rothman's Olympic Week on Humber Bay; 2nd of 72 in '73 C Nats on the St. Lawrence River; won '74 Mids in Tampa ahead of Art and Joan Ellis that year's winners of Fireball Worlds in France
- * 1975: W4000, a Mk II composite, built for me by Gene Smyers in MI - well over minimum weight but won first "open" US Nats in 1976
- * 1977: acquired wood W3854, England-built for CWA Chair, Ron Gillespie > still happily sailing *SHADES* a.k.a. *Glory Days* today
- * 1978: my fiancée/current wife, Julia, and I capsized in all 12 W regattas in North America

* 2014: rule 69 gross misconduct meets Uncle Al who is racing-suspended 9 months by ISAF/CYA for on-line disrespect of CYA Appeals Committees (who had surely earned no respect from me!)

Cruising

- * 1964: sailed W116 across Lake Ontario from Toronto to Youngstown, NY (32 miles) and back along with Mike in W276
- * 1972: first of several cruises on Georgian Bay and in the North Channel
- * 1995: began regular participation in annual camping/cruising weeks
- * 2006-2022: annual Chesapeake Bay cruise participation

Other Sports

- * played hockey, softball and lacrosse

Volunteer

- * 1962-1965: award-winning sports reporter for *The Varsity* at the University of Toronto
- * 1964: became Canadian Wayfarer Owners' Association news editor in the last contested CWA officer election > published *Whiffle* into the early 2000's
- * 1998: started as CWA web master

1966 Around-the-Island Race, Queen City Yacht Club W116 *SNOOPY*



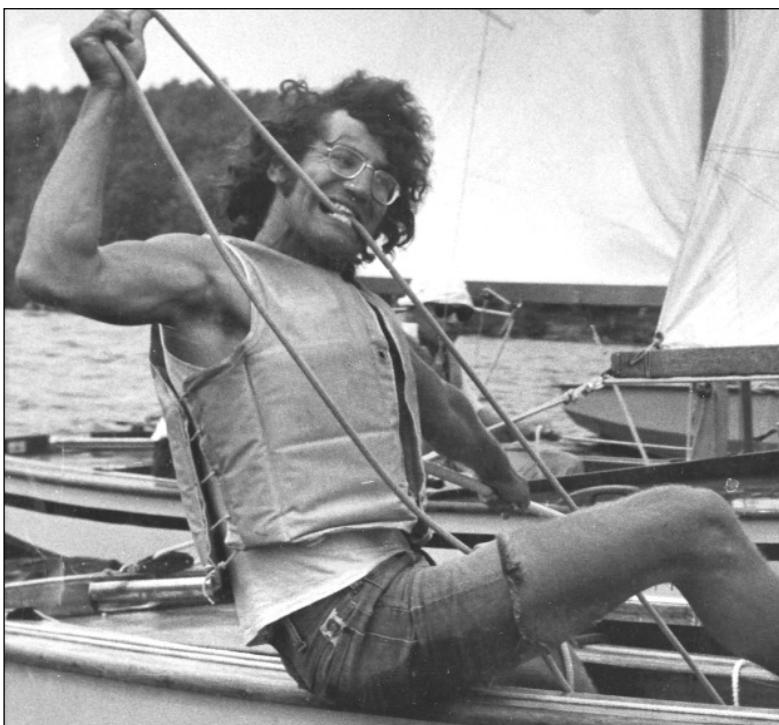
- * 1974: edited *Firebull*, newsletter of the Canadian Fireball Ass'n, CFA president 1975
- * 1992: first non-British International Secretary of the Wayfarer Class, two nine-year terms
- * 2014: Chairman CWA

Teaching, Coaching

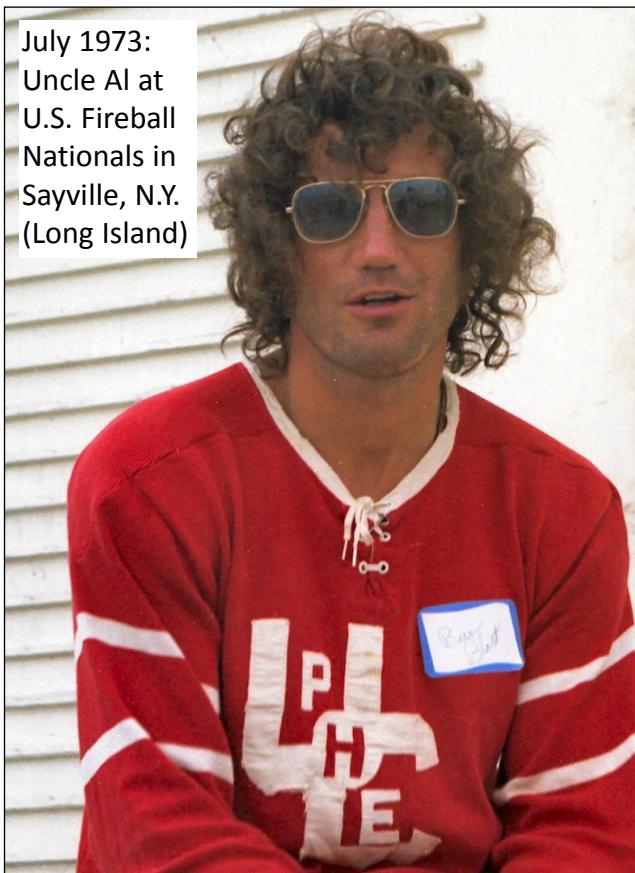
- * 1965-2005: teacher of high school French, German, Latin and a bit of Mathématiques



- * 1969-1982: Head Instructor at Bronte Harbour YC Junior Club. During that stretch, our "Junior Grubbies" won three Eastern Canadian titles: two 16-and-under and one 13-and-under.
- * 1979: became CWA Class Coach, still on duty
- * 1990: created four two-hour Wayfarer coaching videos cobbled together from early VHS tapes - editing crude, content praised but does run on
- * 1998: started Wayfarer web sites leading to: wayfarer-canada.org, wayfarer-international.org widely enjoyed as a teaching, communications and promotional tool. A main focus is the



July 1973:
Uncle Al at
U.S. Fireball
Nationals in
Sayville, N.Y.
(Long Island)



Wayfarer Institute of Technology (WIT), which presents encyclopedic collections of coaching materials from numerous fine sources. One of my own best WIT efforts is *Uncle Al's Rules in Pictures* praised and borrowed world-wide.

*1999: co-creator of *Keys to French*, three 8-page fold-outs that summarize in seven pages the Canadian high school French curriculum. Level 1 has sold 70,000+ copies.

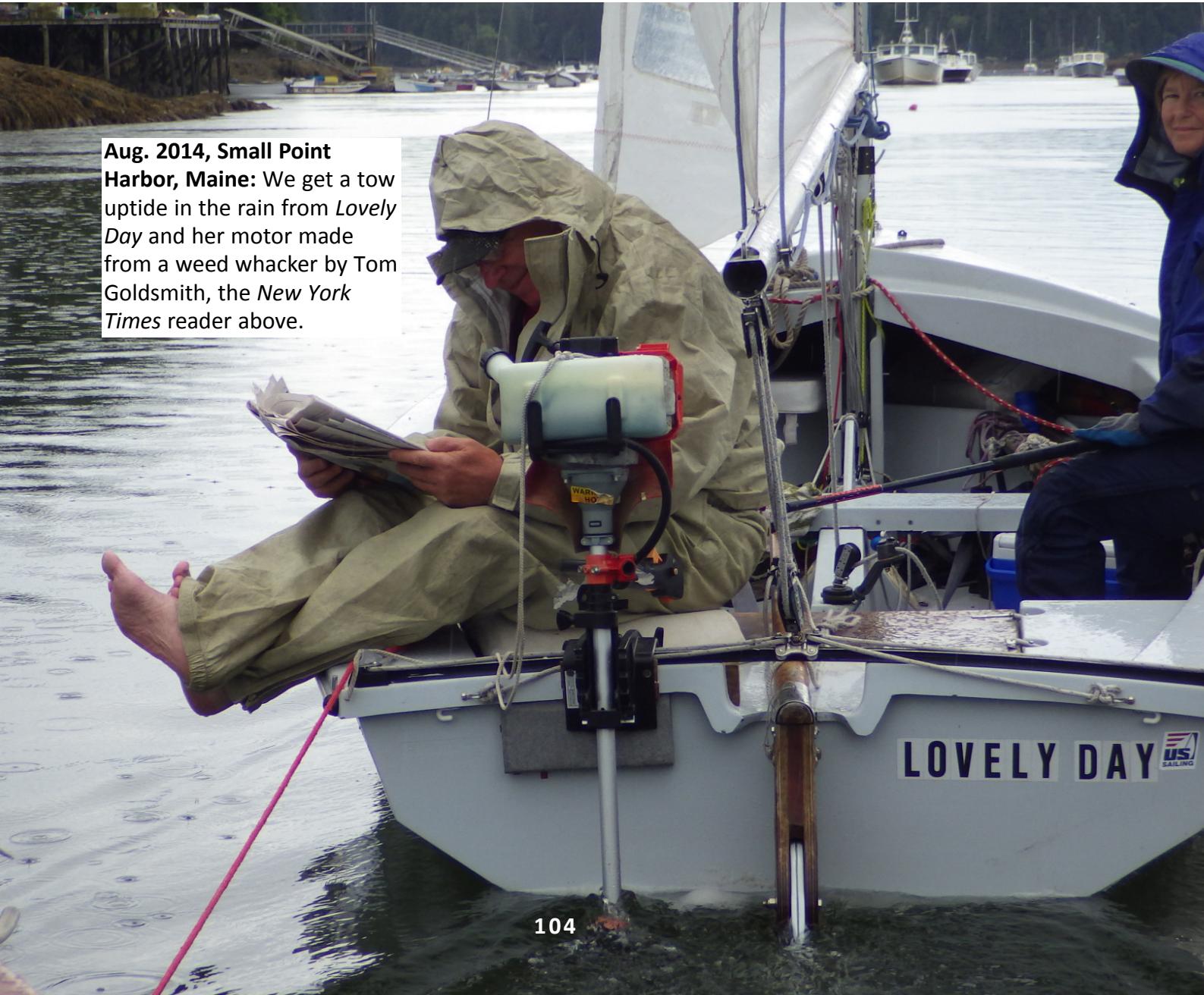
Honorary Memberships

UK Wayfarer Association
Canadian Wayfarer Association
Lake Eustis Sailing Club,
Toronto Sailing & Canoe Club

1973: North Bay Wayfarer Weekend
Al's teeth-on-mainsheet start captured by Toronto Star photographer, Ken Elliot W2276, "cannot be recommended"- in the immortal, if translated, words of Danish W6741 Arne Stahlfest who was advising against verbal spousal crew abuse such as "Get the f_cking jib in!"



Sept. 2015, Clark Lake, Michigan:
Special gratitude to Robert Mosher
(W3445), the first buyer of *KISS*.



Aug. 2014, Small Point
Harbor, Maine: We get a tow
up tide in the rain from *Lovely
Day* and her motor made
from a weed whacker by Tom
Goldsmith, the *New York
Times* reader above.

My heartfelt gratitude goes out to all fellow sailors who have made my life a dream come true.

In particular to

* my many fine crews, including but not limited to my wife, Julia, Frank Goulay, Anders Pjetursson, Marc Bennett and Shannon Donkin

* the many photographers who freely shared their work with me, my web sites and this book

* Paul Robinson who made my diagrams professional

* Ken Jensen, Ton Jaspers, Mike McNamara, Ralph Roberts, Ian Porter, Jesper Friis, Poul Ammentorp, Jens Konge Rasmussen and many other regular contributors to my web sites and *Whiffle* newsletters which ultimately led to *KISS Your Dinghy*

Thanks, finally, to the countless kind folks who have, over the years, given me warmly hospitable places to lay my head.

Uncle Al W116, W852, W4000, W3854



Catawba Yacht Club, Charlotte, NC

A peaceful November Sunday morning
at the 2018 Old Brown Dog Regatta

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KISS

Your Dinghy!

1. boat set-up, gear
 2. tuning basics
 3. sail tuning & trim simplified
 4. safe, efficient sailing
 5. boat handling techniques
 6. make lighter work of heavier air
 7. strategy & words to live by
 8. the Racing Rules of Sailing in brief
- Uncle Al's Sailing CV

K eep I t S imple, S ailor!



August 2011: Hermit Island, Maine
Uncle Al introduces a lovely young
family to the Wayfarer.