NCESA WINTER 1976 Vol. 12 No. 1

# E REPORTER

## SPECIAL EDITION ~ PART 1

IN THIS ISSUE:

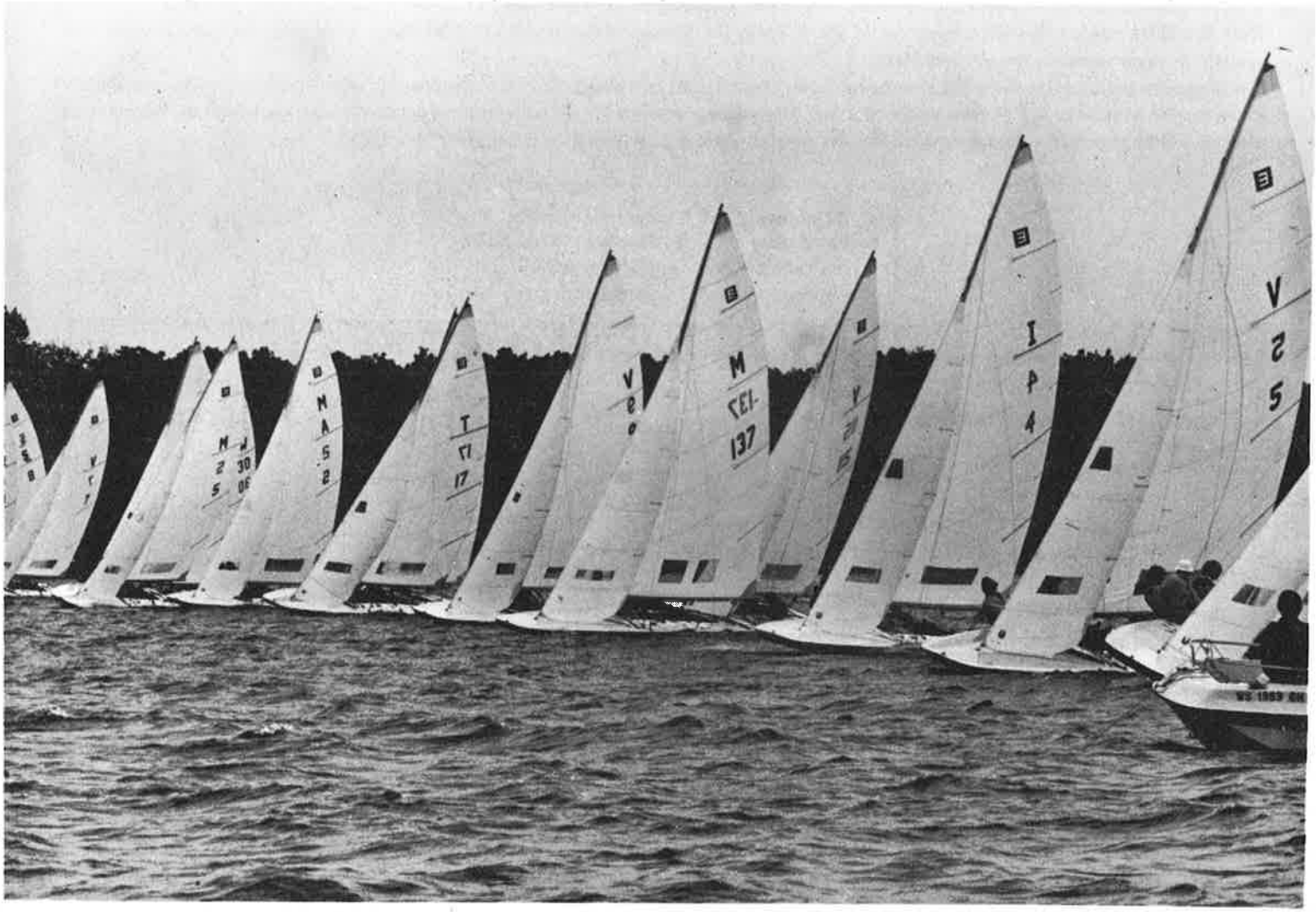
EXPERT ADVICE AND INFORMATION ABOUT CURRENT TECHNIQUES RELATING TO TUNING, TRIMMING, TACTICS, WINNING & LOSING.

1976 CHAMPIONSHIP REGATTA, REPORTS & PHOTOS.

IN PART 2:

IN-DEPTH PRESENTATION OF THE EVOLUTION & DESIGN DEVELOPMENT OF THE E-SCOW AND ITS SAILORS, CLASS ORGANIZATIONS AND LEGENDS - - - - PROFUSELY ILLUSTRATED WITH PHOTOS AND DRAWINGS.

Photo: Jim O'Brien



## FORWARD

Members of **NCESA** will recognize this Reporter as a special issue — different from what they are used to. The Reporter has, from its inception, born the stamp of Ted Brennan's particular genius for drawing and visual taste, and there is no change in that! But this Reporter is designed for longer use.

Repeated requests from new members for information about the boat, tips on how to sail it, where to get fittings and plans, how the boat was designed — all have pointed to the need for an issue like this one.

Putting an issue like this together requires lots of work from talented people. Among the E Scow family, there is plenty of talent, but its not easy to find - so get the word around - we need it for the future.

Frankly, we wouldn't mind hearing from you if you like it or if you don't. This shouldn't take a lot of effort.

Sam Merrick, Commodore
401 N Street, SW
Washington, DC 20024

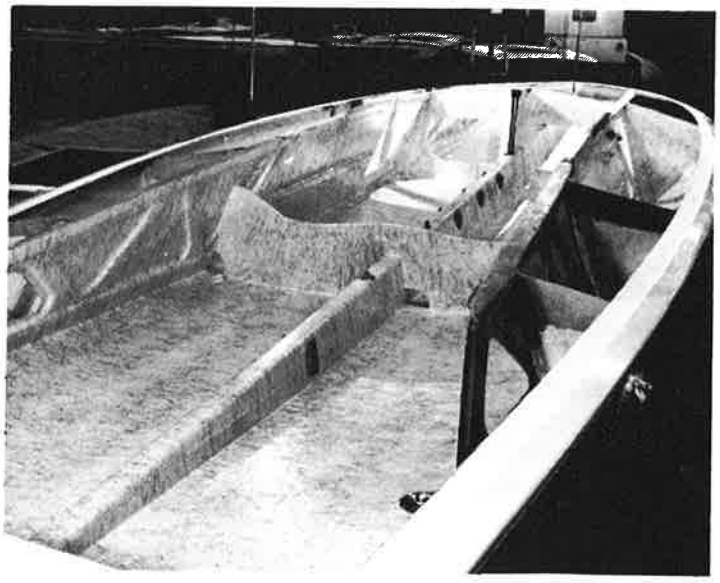
Ed. Note:

This "Special" issue of the NCESA Reporter will appear in two issues because of the material to be covered according to the wishes of the Board of Directors. This issue, Part I, deals largely with the mechanics of trimming, tuning, handling, recovering, repairing and racing, as well as coverage of the NCESA Championship Regatta at Minnetonka in September.

Part II will be concerned with the history of the E Scow, its development, the people who have sailed and the various clubs and organizations involved since the E's inception.

The Reporter is grateful to those people who have contributed their knowledge and efforts appearing in Part I and takes this opportunity to solicit for the next issue any photos, anecdotes, etc. that current readers might have in their possession (or know about). All material submitted will be returned with special thanks after printing, which is scheduled for next (early) spring.

This issue of the Reporter is dedicated
to the memory of **Iver C. Johnson** (1907-1976)
on behalf of the Class E-Scow sailors.



**THE ULTIMATE SCOW**

by Bill Allen

For many years the Scow sailors of this country have been saying that a fiberglass E Scow can never be successful. But, as of 1976, the wood boat is a thing of the past.

The first glass E's were built in the 60's and those, along with a second group, were total failures. It wasn't until the fall of 1974 that Johnson Boat Works of White Bear Lake, Minn., introduced the first well-constructed hull. After minor improvements were made during the winter, more than 24 glass boats sailed successfully through the 1975 season. In the first E Scow regatta of the 1976 season, held in Columbia, S.C., over Easter weekend, nearly half the 52 boats consisted of new or one-year-old Johnson fiberglass Scows, and there were seven new Melges models racing.

The long-standing problem with fiberglass construction of E Scows, has been the straight and very long hull shape. E Scows measure 28 feet in length and run virtually straight the entire way. The bottom section is as wide as four feet in the middle and is also flat for the entire length. The boat has a minimum all-up weight of 965 pounds which has been very hard to meet with fiberglass until the developments of the past few years. Early builders found this weight totally out of range. Since the class has a very strong national organization, which is in the processing of tying down all scantlings, it is also illegal to use "exotic" or costly materials such as aramid or carbon fibers.

The strength problem has been attached in similar ways by both the Johnson and the Melges companies, at present the only E Scow builders. The Johnson hull and deck consist of an Airex foam construction from bow to stern with a high rectangular box-type keelson and full-length stringers extending fore and aft from each box. The hull and deck are tied together along stringers and keelson with rectangular box type uprights, diminishing in size toward the ends of the boat.

The Melges boat, on the other hand, uses a balsa core construction with a very high, angle-sided box keelson and a bridge truss (tube type cross braces) supporting the deck. There is a bulkhead under the mast that extends out to the shroud positions. On each side, both fore and aft, the same type of bridge truss is combined with airtight tanks to achieve the necessary stiffness while it adds flotation.

The Johnson hull includes a built in traveller brace behind the board boxes, tying the boat together at this point, whereas the Melges uses a half-height bulkhead for the same purpose. Both also depend on a maximum six-inch deck crown to add stiffness.

Having been a wood boat fanatic all my life, I was surprised to find that the fiberglass E Scow was much to my liking. There are advantages to glass which a wood boat simply cannot match. Because of the smoothness of the fiberglass, the side boards slide up and down with much greater ease than on any wooden Scow. The sail controls run much freer under the deck because there are no deck braces causing friction. I'm sure the ropes will last longer for the same reason. Another problem that has been alleviated by fiberglass construction is the difficulty of sponging out the boats. The rib construction of a wood boat can trap small amounts of water way under the bow, and this is nothing but a nuisance.

The final and most important problem that the fiberglass boats eliminate is the constant upkeep involved in owning a wood boat. This has always been a problem for those who sail on salt water and those who live in hot, humid climates. It's considerably easier to find proper off-season storage for a fiberglass boat than for one made of wood.

Of course, there are the old diehards who claim that a fiberglass boat has no aesthetic value — "if it doesn't smell like wood, it can't be good." I'm sorry, fellas, but from watching the transformation of Scow from swiveling, wood-masted cigar boxes to what they are today, I have to say that the E Scow has finally reached the ultimate.

Reprinted courtesy of
YACHT RACING MAGAZINE

## TUNING AN E SCOW SPAR

by Sam Merrick

This is an article about tuning an E Scow - mostly about the tuning options of raking the spar. However, any article on tuning should start with two precautions never to be forgotten. First, the art of sailing fast is not an exact science. Although aerodynamics is a recognized discipline with respect to airplanes, the research community has not had the incentives to learn much about what happens under what sailing conditions. And even if it did, there are few among us sailboat racing enthusiasts who are enough organized to plot all the adjusting controls to conform to all the variables in a boat race. Hence the emphasis on "feel" and "seat of the pants" which so often separates the men from the boys, or (in these days) the persons from the also rans.

Second, often those of us nervy enough to write about tuning, find our observations being memorized rather than understood. The trouble with this approach is that memories are sometimes inaccurate. It is much better to understand, (at least to some extent) the why, the complete picture of what happens to the various components in the rig.

With these warnings let's address ourselves to tuning an E Scow as of the end of the 1975 sailing season, bearing in mind that new insights may already (June 1976) be available.

For many years (from the beginning of the swiveling box-shaped wooden spar), the jib halyard has been fitted with a series of swaged balls which becomes the control mechanism for raking the mast in various positions. This has been the key tuning device. All through this period (including the present) conventional advice has been to set up the rig for light air by having the spar plumb (both fore and after and latterly) with drum tight shrouds. (Helpful Hint: slack off the headstay when the boat is hauled out - it will be grateful not to live under tension!). With aluminum spars, the advice becomes a bit more complicated because of the second (lower) shroud. The lowers cannot be set up quite as tight as the uppers because they bear less load and therefore stretch less. If they are equally tight, the middle of the spar will appear to bow to windward. Because the amount of looseness for the lowers cannot be gauged while the boat is at rest, the lowers have to be adjusted under sail - the effort being made to get the spar as straight latterly as possible. Because the lowers need readjustment in different windspeeds, many of the modern boats use conventional turnbuckles on the uppers (which don't get changed much) and "staymaster" (easy to adjust) type turnbuckles on the lowers. As I said, this is the standard approach to setting up for sailing in light air, that is, up to the point where the boat is starting to get overburdened.

Depending on crew weight, fullness of sails or the amount of chop (chop will prevent your ability to feather puffs quickly and therefore avoid overburdening), the top wind speed for this setup (drum tight - plumb spar) will vary - but somewhere between 10 and 15 mph.

Now then, as the wind increases we do exactly what the naval architects always said not to do: we let the spar go aft. The reason for this advice was because, as the wind increases, the center of effort (a theoretical point in the sail which is the center of all the energy imparted by the wind) moves aft, thus producing increased weather helm. Therefore, the old prescription was to get the spar forward for higher wind velocities, thus restoring the balance so necessary to good boat speed between the center of effort and the center of resistance (again, a theoretical point) somewhere on the lee bilgeboard in a scow.

But in these days we let the mast go aft* as the wind increases, because there are so many available ways to control the position of the center of effort. Among the most important are the use of dacron in sails, the availability of marine hardware for control systems and the sophistication of our sailmakers and spar manufacturers. By flatening the sail, by moving the draft forward, by tensioning the "cunningham", by having a slack leech, and the traveler eased, the center of effort gets moved forward despite the increasing wind. Significantly, the need to shift the bilgeboards aft or by raising them (to move the center of resistance aft) is no longer the imperative thing it once was, because the whole job of restoring balance is so easily handled by sail controls and raking the spar.

It is with regard to raking the spar that I want to concentrate. The scow rig has more than enough sail for its size and weight which it can utilize on reaches but not on the wind. It is for the purpose of dissipating the forces which over burden the boat upwind that the mast is raked aft.

A number of things take place when the mast is raked and these need careful understanding.

* Most boats are rigged so that the luff wire in the jib becomes the headstay so that the mast does aft by easing the jib halyard. For others the headstay as well as the jib halyard have to be adjusted.

1) The rig in effect falls to leeward;

2) The jib, especially the upper part, drops back and away from the spar.

3) The spar develops a pronounced lateral bow - usually to windward at the hounds.

4) Without any alteration in the trimming system, the lower half of the jib gets flatter.

5) The boom is closer to the deck.

The overall effect is spectacular: The boat doesn't point quite as well. However, she surely goes much faster and seems able to carry sail to windward without as much sense of being overpowered. The radical change in performance is why many boats are getting fitted with a "black box" or "magic box" as the adjusting mechanism rather than the old locking device for the swaged balls at the end of the jib halyard. The point is that by using the enormous mechanical advantage of the "magic box" the rake of the mast can be controlled while underway going to windward in the event of changing wind velocity. I don't think I would advise doing quite this; if the mast is aft, you had better slack the main somewhat and the vang generously before the rig gets pulled forward - there are limits to everything!

But to return to the effects of raking the spar; each of them deserves analysis if you are going to understand why instead of just what. First: because a scow has no permanent backstay, the shrouds are by rule required to be at least eight (and not more than sixteen) inches aft of the mastline so that if someone fails to get the running backstay cleated, the rig will not go over the bow. Our manufacturers approach this matter differently with Melges positioning his shrouds more forward than Johnson within the allowable tolerances. There are advantages to both approaches not relevant

here, but something quite different does result from a given amount of slack on the jib halyard depending on the position of the shrouds. It can be verified that for every (say) inch of slack on the jib halyard (more rake) the mast will drop off to leeward more if the shroud position is aft (Johnson) than if it is forward (Melges) - just how much I am not prepared to say. But if you imagine shrouds three feet aft of the mast line you can readily see that an inch more of jib halyard will drop the mast to leeward a great deal. It can be generalized therefore that to obtain the same amount of "drop off", you will have to slack more halyard on the Melges boat than on the Johnson, Because so many effects flow from raking (or not), it is difficult for me to assess whether the Johnson position or the Melges one is better, but you ought not to forget they are different.

A brief comment on drop off. I am unable to be explicit about the physics of why it is better. But the technical literature shows that the further to leeward a rig is carried, the less heeling force is transferred to the hull. (By the same token, it is important to have the shrouds tight, rig therefore to windward, in lighter wind conditions.) Perhaps also a slack rig in some way cushions the punch of sea and heavy air. As I said, the boat performance is noticeably better.

Second: The side view of a scow with the mast plumb will show the upper leech of the jib very close to the spar. As the halyard is slacked two inches, the spar backs away from the jib so that, when under way, the "slot" between the upper part of the jib and the spar is greater. What we know from available studies is that for higher wind velocities this is desirable on principle. As the wind increases, the force of air through the slot increases geometrically. There are more scientific ways of saying this, but the meaning is clear. Of course, the size of slot to begin with is a critical matter, and making it larger as the wind increases is desirable only if it is not already too open in lighter air. In this connection it is interesting to see the difference between an E scow jib with one for a Soling which is almost the same size but which provides a much larger slot because the jib intersect point is three feet higher on the spar. The scow jib is designed with a pronounced flare to leeward which if put on a Soling would make a worthless sail this side of a gale.

Third: Assuming a latterly straight spar in the light air (forward) position with upper shrouds drum tight, raking the spar will produce a different relationship between the upper and lower shrouds than existed before, You had better find out for yourself which way: whether the middle of the spar bows to windward or to leeward. It will depend on shroud placement, the length and positioning of your spreaders, the make and health of your spar and the amount of flex in your boat. My recommendation is that the spar bend to windward several inches. As I noted earlier, the lowers have to be easily adjustable and those "staymaster" turnbuckles are ideal for the Purpose. **Don't adjust the uppers at all, but work on the lowers to get what you want.** By having the middle bow to windward, two things are accomplished: the top of the spar falls off more (very good for handling too much wind) and the "slot" is enlarged (which is, as we have said, also desirable).

Fourth: Many boats are still equipped with various ingenious hardware for the purpose of moving the trimming angle ( on the jib clew) fore or aft. The holes on the clew board with a fixed-track look cleaner but can't be changed as easily under way. But raking the mast forward or aft does exactly the same thing with out more. Of course you may want more adjustment for extreme conditions, and that's okay, too. Just to be certain that you understand what happens: moving a deck-mounted trimming point forward, or relocating the sheet blocks on the clew board aft, or having a spar in a forward position all cause the lower half of the jib to be fuller and the leech to harden. As the wind increases, neither of these effects is desirable. So, go the other way. Raking the spar changes the trimming angle more backward and less downward -- thus flatter.

Last of all, the boom is lower - and just why this is desirable is uncertain; which is to say I don't know and the "authorities" don't either. It probably has to do with preventing the rush of air flowing from the windward side of the sail (high pressure) under the boom to the leeward side (low pressure) - the so-called "end-plate" effect. Suffice to say, everybody's doing it in all kinds of racing boats (Solings, Stars, Finns, 12-meters, etc.) with deck sweeping jibs and neck scraping booms. It seems to be more important as the wind increases. When the mast is raked, the vang "honked" to its utmost, end boom blocks positioned to get the lowest trimming point, (see below) it's all a fellow can do to pretzel himself from side to side on the tacks. Please note the danger of not getting under the boom in time! — which is to say that the limit on the amount of the rake may not be how low the boom can be trimmed, but the ability and size of the skipper to get from side to side without developing into a turtle. One final thought on getting the boom lower by raking: don't forget you have to have plenty of tension on the mainsheet so that "two-blocking" should be avoided unless you are absolutely sure that you never want to get the main sheet.

## SPINNAKER DESIGN

By John E. Gluek, Jr.

As spinnakers have developed, the term "spinnaker" is almost lost since sailmakers and sailors speak of spherical, radial, tri-radial, maxis, star-cut, flankers, etc. However, the key to understanding the modern spinnaker is not the language but the thinking that goes into design and construction of spinnakers.

Let's look at the specific parameters to which a spinnaker must be designed. First, to a great extent, a spinnaker must support itself in air. Second, it must be controlled by three points; halyard, sheet, and guy. Third, it must operate in a wind gradient in which the wind in the lower portion is less than the upper portion. Fourth, it must be capable of being flown optionally by a person in some rather unstable conditions.

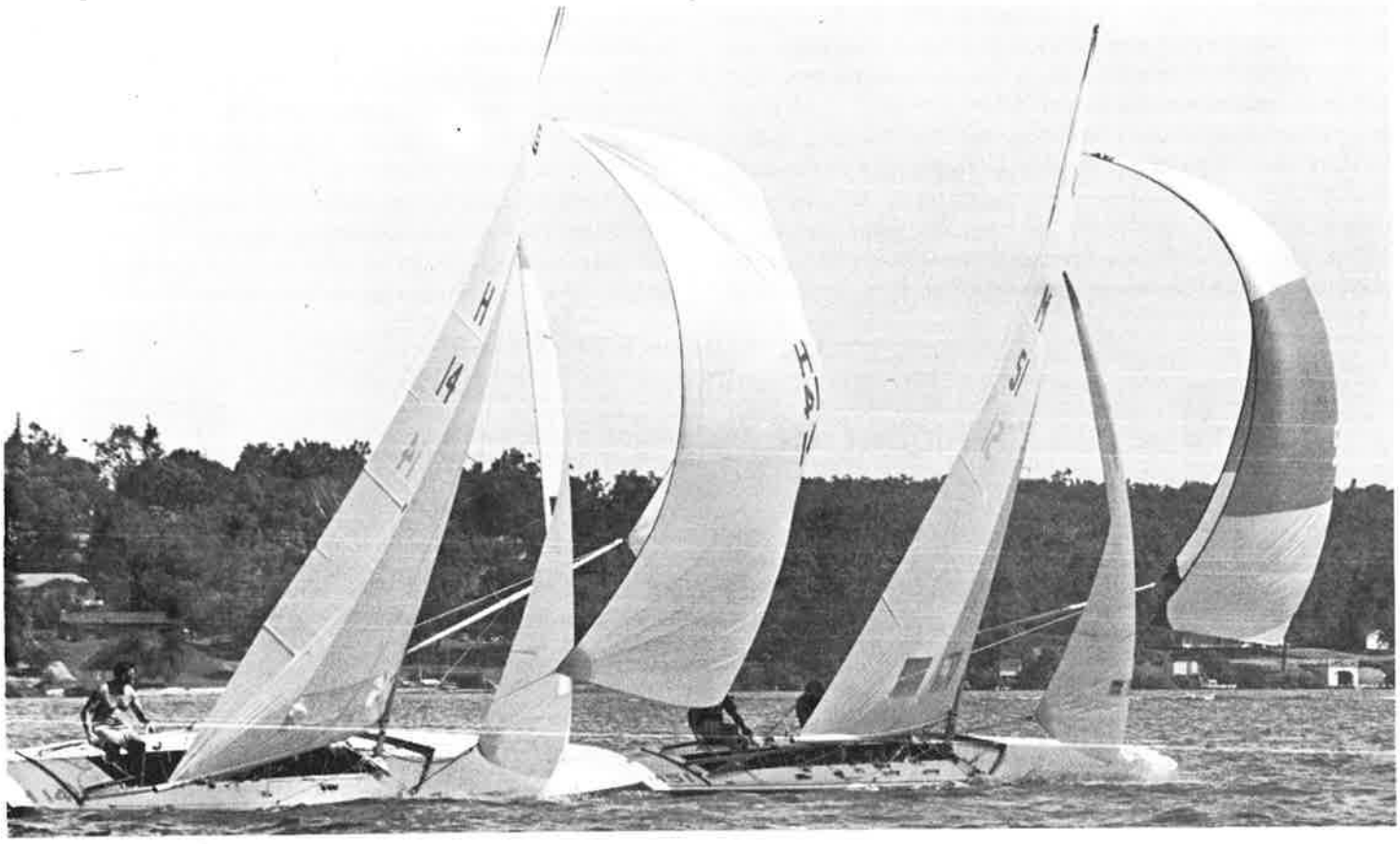
We at Bowers Sails design spinnakers for the "E" with a radial head. This design was introduced in the country and abroad in the early 1960's and it has become more and more popular because the stretch is both uniform and minimal which causes less distortion when it is loaded. There is a good reason for this. In the lower half, the panels are all horizontal - in the upper half, they are all vertical and converage to a common point at the head. In all spinnakers, the stress radiates from the three corners. As most spinnakers are considerably taller than wide, the load on the upper half is supported only by the head, while the load on the bottom half is shared by the two clews. The stresses radiating from the head are much greater than those in either clew. In a radial head spinnaker, the threads in the head panels are completely aligned with these stresses. In other words, there is no bias loading whatsoever and consequently, no distortion. If it is loaded enough on a tight reach, which we sail often on our "E", the sail will stretch but it will stretch uniformly, maintaining the same fair curve from one leech to the other.

We feel that the radial construction is a truly significant development in the evolution of spinnaker design for two reasons: first, eliminating bias distortion making possible a sail which is retaining a predetermined shape; second, the designs are simpler mathmathically speaking. For these two specific reasons, we feel production techniques are subject to much tighter control and product uniformity is not just better, it is dramatically better. In essence, more and more people are getting truly good spinnakers.

The "E" scows are using two spinnakers during the course of a race, the soling and the mini-max. For the soling, we recommend using a material called Dynac, a 3/4 oz. nylon heavily coated with resins to prevent stretch and zero perosity - (no air passage). Here we carry our pole height around five feet off the deck and at the highest, perpendicular to the fore stays at the outboard end of the pole. When tension is pulled down on the leading edge of the spinnaker, the luff, it becomes rounder (just as increasing tension on a cunningham on a mainsail) and the trailing edge actually flattens as the sail lifts and curves out away from the boat.

The mini-max is made out of 3/4 oz. Stabilkote and is a smaller and flatter chute than the previous runner. On a run, the most important factor is projected area, shape not being that critical. By flattening out the chute it gives a greater projected width for a given arc length than do the fuller ones. This also makes it better if you are forced to reach with it. Here we carry our pole height at 4'6" off the deck and the pole perpendicular to the mast.

Finally, the sailor who understands what the sailmaker had in mind in making the sail can trim the spinnaker more effectively so that the spinnaker will do the job for which it was designed.






## HARDWARE PLACEMENT AND WHAT REALLY MAKES THE DIFFERENCE BETWEEN WINNING AND LOSING

by Bud Melges

Melges Boat Works has created a deck plan in each class boat built simply by extensive time testing in game conditions and by conversation with the top rank skippers in the class in order to establish the ultimate working layout. The big plan on our "E" sloop has evolved over the last ten years to its highly efficient status of today. The leader in the field, without question, was Bradley Robinson. He was the first to eliminate the double leads above deck, put the mechanical advantage under deck and have these leads be brought out to crew and skipper as he thought could best develop speeds, in order to be a consistant winner around the bouys. Melges Boat Works picked up the ball from Brad and scored with the present super layout. We did not have the luxury of Harken blocks or other ball bearing or roller bearing fittings to accomplish the turns, the outlets, and the MA's necessary to make the manipulation effective for all crews, be it muscle men or girlfriends or even the wife.

At this point, I think it might be of interest for all concerned to review what a deck layout consisted of in 1940. Starting from the bow and moving over the deck, adjustable forestays were not present. Instead, on the end of the forestay was an eye loop, accomplished with copper wire and solder, it was short of the forestay chainplate by some 12 inches. One-eighth lacing cord passing to the eye or shackle to another shackle on the deck was more common place than our later day chain. It looked nautical, too. The jib tack secured to the forestay chainplate with a shackle and pin and there were no adjustable jib clew arrangements. The jib itself was secured to the jib luff wire by being sewn at the head and periodically along the luff and was again secured permanently at the tack end of the wire. The need for an adjustable jib luff in the 40's is questionable, for the cotton sails did not have the stability to be effective by downhaul or cunningham. The materials would merely stretch and move aft from the wire in direct proportion to the wind velocity going over the surface of the sail. As we travel aft on the deck we notice the funny towel rack a couple of feet in front of the spar, the brass rod type traveler. Mind you, this is not where we hang our duds to dry, what it really is, is the sheeting point of the jib. Also, the jib had a jib boom or more often called a club, it was secured at the clew and ran the full length of the jib foot and then again secured at the tack. Along the foot of the jib were sewn sail slides that attached to a 5/8 inch track, but very seldom was the foot adjusted. Regarding foot tension for different wind velocities, about three-fourths of the way aft on the boom there appeared an eye strap, this brass eye strap accommodated a single brass pulley and on the aforementioned towel rack we placed a brass Becket pulley. The jib sheet started at the Becket, passed through the single block attached to the club, returned to the Becket block on the traveler, forward to a block secured to the deck near the tack of the jib and then aft to a fairlead near the mast and around a winch so that the jib man had purchase power. This was a self-tacking jib of the first order. At the mast base there were four and sometimes five blocks with wood cleats. Portside-spinnaker and jib halyard, Starboard side-main halyard and starboard spinnaker halyard, some boats had a fifth, which was the sliding boom downhaul. Cunningham's were not known at this time. The bilgeboard tackle consisted of a single block attached to the neck of the board, a Becket block on the deck, midway on the board box trim were secured cleats to secure the bilgeboard lines. The board had a long neck and when in the up position remained four to six inches in the air, a perfect thing to rest the back of your legs on sailing to windward. No matter, the boards were usually left down a bit. The so-called monkey bars (a wood dowel stretching from stem to stern approximately eight inches from the edge of the boat) were used by the crew by grasping then standing on the bilgeboard and extending one leg out board, bilgeboard riding was the vogue in those days.

Just aft of the bilgeboard trunk on the deck was the halfcam wood cleat, secured port and starboard. They were meant to be used for the spinnaker outboard, or for modern day sailors, the spinnaker guy. At this time the outboard was composed of a wire about twelve feet in length attached to an eye at the end of the pole that had a single brass pulley at its other end. On the deck secured a Becket block. The control line of the outboard started at the Becket block, secured at the deck near the skippers location forward to the single block on the wire returning to the block on the deck and then to the aforementioned half jam. The spinnakers, even though symmetrical, had a clew line sliced on and the tack had a swivel boat snap secured to it in order to attach to the pole eye at the tack end of the pole. Two poles were carried on the deck and when it was necessary

to jibe the spinnaker was turned inside out, the spinnaker pole dropped, the other pole picked up and the jibe completed. This system was in force until 1948 when Harry Melges, Sr., used the single pole jibe and now the present single lead sheets, a big step forward and the start of a big clean-up of the deck plan.

As we move on aft along the deck, we now come to the backstay, a brass strap secured to one of the ribs at the shear. The backstay line secures to the brass strap, to a single brass block on the backstay, to a Lignumvitey fairlead and then to a double pinch cleat secured to the deck near the skippers location.

Moving aft to the skipper we find no main cam cleats, but instead, on the backbone of the boat there is quite a large brass winch mounted horizontally around which we wrap the mainsheet and upon each stack find it very difficult to have the winch contain the sheet without re-wrapping. We travel aft again beyond the skippers position and notice two more so called towel racks, these are the main travelers and are mounted sixteen inches apart, each has a large single brass pulley attached to the traveler to weave the main sheet into position. Starting at the clew of the boom and on a 45 degree angle downward and foreward we meet the first block of the rear deck traveler. We go forward and upward at another 45 degrees to a block on a boom return to the block on the traveler forward and downward at 45 degrees passing through the block and upward and forward at 45 degrees to a block forward to the third block on the boom, mounted over the winch we turn and fall to the floor. I might say, at this time, that the main traveler towel racks were approximately twenty-six inches in length, had no control system and the jib traveler was the same.

This was the era of simplicity, it developed helmsman, super sensitive as only jib and mainsheet adjustments affect changes in boat speed. I mentioned this deck layout to point out it's absolute simplicity, which had its drawbacks as well, mainly, the boredom of the crew, the lack of teamwork going to windward and, the obvious untouched speed that could be accomplished when the scows went on the wind.

To make my point, I compare now the 76 "E" with aluminum stationary mast, high performance sailplan and deck layout. Again, for any scow that has not been modernized in the last 5 years, the comparison is simply this: Lake Geneva Yacht Club has the famous Sheridan Race, the length of the lake race. Bill Allen started boat for boat with his class "E" scow and beat the "A"s over the course by better than two minutes. In 1958 I had the pleasure to be aboard an "A" scow during Yachtings One Of A Kind Regatta on Biscayne Bay, Florida. In this Regatta, the "A" gave the "E" one minute per mile and saved her time in every race. Let's compare what took place briefly point by point. The "E" changed to the aforementioned aluminum fixed spar. The "E" sophisticated its jib trim rig with a barber hauling track. The "E" instigated an 8 to 1 M/A boom vang to be used, not just down the wind, but on the wind, as well. The "E" has rear travelers, adjustable to skipper and crew positions readily moved at all times during the race. The "E" has an effective hiking strap system for maximum leverage over the side. The manufacturer has maximized strong lightweight construction. The sail manufacturer designed new, smaller, highly effective, reaching and running spinnakers. All this, while the "A" boat stood pat with her fore and aft single jib tracks, her unmanagable rear traveler control, her ineffective hiking system, the old triangular reaching spinnaker and finally the lack of good working sails. Progress is the name of the game in this particular race.

It's now time to look at the 1976 and 1977 Melges "E". We will start with the bow, and the first thing we notice is that the new boat has an adjustable forestay. This forestay is adjusted with block and tackle 3 to 1 purchase using the now famous Harken block. The tack of the jib is secured to a fork extending from the deck, which accomodates an eye swedge on the jib luff wire, a smooth low windage attachment.

Right behind this fitting is a wire extending from the deck with a spring loading U shaped key shackle attached to a grommet at the tack of the jib and manipulates the cloth control, so vital to boat speed, with dacron in changing and adjusting jib camber. As we move aft on the deck, we have an amazing clean foredeck, there are no spinnaker poles, there are no monkey rails and there are no jib towel rack travelers.

We're at the mast now, there are no cleats on the deck, spinnaker halyard exits the aft side of the mast to a cam cleat mounted below the Harken exit block right on the mast. There are two cam cleats just below and opposed to one another, a new spinnaker pole control, simply a pole up and pole down to control the elevation of the pole at all times. In 1940 the unused spinnaker halyard was used to lift the pole by some of the more energetic crew.

The jib sheet, barber hauling jib tracks are recessed in the deck and on a perfect radius from the jib tack in order to maintain the identical jib sheet tension as the leads are taken outboard or brought in as the conditions dictate. The big reason for the recessed track is simply that the boats of today have maximum crown decks and the scope between the jib clew and the point of trim on the deck is of minimum distance and the recess opens this distance in order to properly sheet the low clewboard, and low skirt jibs of this ear. The control of the in out jib track is to the windward side, port and starboard, minimum crew movement and the change is made.

The new ballgame with maximum effective speed adjustment is simply to accomplish a change with minimum effort and the least distraction of the skipper. This and the fact that to hesitate on an adjustment is to win or lose the boat race!

As we look forward around the mast and in the front corners of the cockpit we find little else for the jib man to do, we feel he is already too busy with preparation of spinnaker pole, sheeting the jib properly. We have decided that the adjustable jib luff used sparingly can be mounted under the foredeck on center line as can the adjustable forestay. Some boats do have a magic box on the jib halyard so that the rig can be changed while underway. I recommend this only for the track thru skippers who understand exactly what they are accomplishing. Otherwise, simplicity should prevail in spar tune.

Moving aft on the deck, we find that the boards in their up position have no extension above the deck and therefore it is comfortable for the jib man and other two crew members to hike over the bilgeboard trunk without cutting their legs on the sharp board. At this station and between the legs of the jib man and second crew we have stationed the cunningham and boom vang. We have done this in order that the second man becomes an integral part of the boat tune with these two adjustments: main cunningham on todays shapes of dacron material is a critical adjustment, it must be continously played in oscillating winds and main sheet tension, applied by skipper. As the skipper increases his sheet tension or the wind increases, the sail will work down the luff groove in the mast

and create horizontal wrinkles that must be eliminated with cunningham. In extremely strong winds the cunningham may be used to excessive degrees in order to bring the luff camber extremely forward, flatten the center of the sail and hopefully dump the batten section.

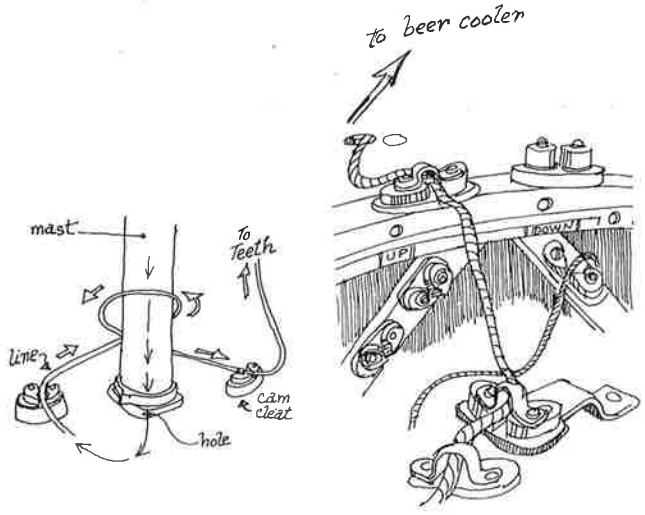
Other people are writing articles in this Reporter that will refer directly to tune in sailing your boat around the course.

The eight part boom vang is used to stabilize windward sailing in medium to strong winds. By strong use of the boom vang, low mast bend will be promoted, the boom will be bent in the forward third in order to eliminate sail draft and most importantly, when we ease the sail under puffy conditions the boom will travel laterally outward and not be raised and draft reapplied under the mast because the mast straightens, the boom straightens and the boom lifts. At this station, we also have a swivel cam cleat that accommodates the board pennant. The board now has a single line that easily raises or lowers the board because of Harken ball bearing blocks and effective cleating systems.

As we move aft to the third crew position, we find only one cleat between the second and third crew and that is to control the rear traveler. We set this in this location as the second crew can manipulate the cunningham vang and rear traveler while the jib man operates his forward corner, but in case the two of them are busy, the third crew can at least operate the rear traveler for the skipper. The real **why-for** of the placement is that the jib man can trip the boom vang and the cunningham loose if by chance the second man is busy with the spinnaker.

Moving aft we find the Harken hexaratchets mounted on a bit of an angle in the deck, exiting through this block is the spinnaker sheet, that enters the deck just forward of the rudder posts carried forward under deck and exiting approximately 66 inches after the shroud. Here again, the Harken blocks come into their own, easing the trim and the one-way blocks aiding the holding or the continuous playing of the spinnaker without complete exhaustion of the crew. There is a cam cleat at the edge of the cockpit which allows for the guy to be cleated and periodic cleating of the spinnaker sheet is permissable.

As we move aft and into the skipper's area, we find a small cam and a Harken exiting block, to control the skipper's tail of the rear traveler, allowing him to make minor adjustments to balance the boat or correct the helm as he prefers to sail on the wind. This control also allows the skipper, when sailing to the windward mark, with crew in the pit, and busy with the spinnaker, to ease the traveler to the proper location laterally on the track, to gain upright stability and power the rig while setting the spinnaker.




Just aft of these two cleats, port and starboard, are larger cleats that are used for securing the mainsheet to rest the skipper or to free up a hand to make another correction to boat set up. Some of the skippers as earlier mentioned, using magic boxes, do have this control leading to their position.

Aft of the skipper there is only the entrance cup for the spinnaker sheeting under deck.

Across the back deck we have a recessed area that maintains a radius from the spar itself and it is the trough in which the main traveler track is secured so that the track is flat and has the correct radius in order that the rear traveler be used laterally without change of sheet tension. This about sets up the deck hardware and layout.

Inside the cockpit we have only the hiking straps to think about and through experimentation has been set up in a "herring-bone" effect from front to back. Actually, hiking straps were not legal in scows until after 1964. And only then were they brought to the attention of the Inland, by those such as myself, who had been outside sailing other national one-design classes. I think the hiking straps have made the boat easier to sail and brought the gals back into the picture as competitive crew on high performance "E" scows in national racing.

The rig that has now become so popular on our "E" is another product of Melges Boat Works. In 1969 and 1970, experimentation was done on the deck step rig, similar to the Soling, using the Soling extrusion. This rig was found to be competitive, simple and durable with the only hang-ups being turtling on capsize, caused by interior shroud books and halyards. In 1977, Melges Boat Works intends to have sealed spars, at least to the spreader so that one who capsizes has a China-man's chance of riding the boat and continuing on in the race.

Those who missed this China-man's chance and are sailing a 1977 Melges "E" in fiberglass will find that the boat has positive bouyancy, not only in styrofoam, but also from four air tanks that have now been properly sealed after one years' experimentation of side tanks. This system, along with an opening in every transom (covered with cloth) will offer a crew a chance to survive a turtled capsize. An average crew should be able to sail dry, without outside assistance, the 28 foot "E" sloop. This has been accomplished in testing — we know it can be done! The aluminum spar has, without question narrowed the competition gap and now adds its part to closer racing and better competition.

Apart and away from the deck layout and all the fine tuning that is here in this Reporter (by myself and other people of qualified experience), I would like only for each skipper to look into the mirror and ask one question. **Can a quarter of an inch adjustment on a turn buckle put me out front in my racing program?** I believe, in all honesty, the answer must be **no**, for on two experiences in 1976 crewing in quite competitive Regattas, good success was achieved on the boats that I crewed simply by properly trimming the sails and then getting the skipper to devote a deeper sense of concentration to steering than he had ever done before. The first test was South Carolina with the Ackerman boys; one second the the rest **first**

places in a Four Race Series. At the Inland Championships (my seond experience) with Don and Lee Curtis, further proved my argument, for throughout the Regatta, in varying winds, the jib halyard was placed on one ball, not a turn buckle turned during the entire series, only the jib travelers, the main travelers and the sheet tensions were varied. Don Curtis, the skipper, did more concentrating than he'd done all year; he didn't see much of the races but he saw the finish line long before competitors of superior helmsmanship than Don experienced, and why? Because he was made to concentrate. When we adjusted the main trim and were basically set up, a change required a count of each click on our Harken ratchets. The same went for the jib and by the middle of the first race the idea was firmly planted in the minds of the Curtis brothers.

Besides a gentle trim and a correct trim on the sail, we keened up our senses to boat speed and the deep concentration by Don on the angle of heel was in direct proportion to the amount of speed that he accumulated in the water, through the sensitive trim of main and jib. So much for the windward work. Off the wind, we now have a new ball game (and I do mean new ball game). That is to say, that when on the flat leg of any course we gyrate, we tack down the wind, we no longer go for the shortest distance, we go for the great speed that an "E" scow can travel by freshening off of a flat run into a broad reaching situation. While we're doing this new tack down wind, we must maintain the heel to the boat at all times in order to decrease wetted surface and pick up a scalloping off wind course, freshening to the wind in the lighter velocity and then turning and running with the wind in the greater velocities. Always bearing in mind that we must keep the boom kissing the water, not dragging. And it is up to the crew and the skipper to anticipate the wind strength changes in order to maintain this proper heel and great speed. The greater the speed, brings the apparant wind forward and allows for a more open angle away from the wind to the home mark.

In closing, my remarks are simple. There is no magic to winning boat races and yacht races. The magic is simply in the amount of experience one has had and the ability to work with the elements instead of against them. Of all the boats I've sailed, none compare with the excitement, competition, happiness and joy of the "E" class. **Right, Sam?**

---

Ed. Note: PART II of this **Special Issue** will contain schematic drawings and photos of various stages in the evolution of the E, including sail plan, hardware, rigging, hull modifications, etc. One of these stages will be the 1940 era as described above by Bud. An analysis of the structural solutions as developed for the current fiberglass E hulls by the Johnson & Melges designs will conclude this documentation.

The Reporter pleads that anyone having photos of vintage E scow details, please send them (on loan) to T. Brennan, Route 1, Box 503, Lake Geneva, WI 53147.

## SETTING JIBING AND TAKING DOWN SPINNAKERS

by Sam Merrick

Spinnakers are the extra power - that which makes reaches and runs a challenging and eventful part of any race. Their use provides the best opportunity for gaining big distances over competitors, so their quick and efficient handling is worth lots of hours of practice with each member of the crew (skipper included) doing the assigned task in whatever arrangement the particular abilities of the crew member may dictate.

Stu Wells in a separate article describes crew tasks and what he says can be fitted in here. This piece analyses the various elements in the spinnaker system but not which crew member does what.

**Setting the spinnaker** requires a line to be attached to each of the three corners of the sail. Because this is often done in a great hurry, some form of quick connector should be chosen - but not a simple snap-hook. Such a fitting for sure will hook itself to various parts of the rig at moments of crisis. It is better, also, not to choose identical connectors for all three corners. To do so will, sooner or later, result in the sail being hoisted sideways when the halyard gets attached to one of the clews! On my boat this can't happen because I use brummel hooks on the clews despite the time lost in connecting them. One further preliminary: the timing of connecting is a matter of personal preference - at the last minute before hoisting or well in advance. If the latter, you have to have some fittings to keep all the lines snug and out of the way during the tacks and maneuvers leading up to the point of hoisting.

If at all possible, the spinnakers to be used should be "made-up" before the boat leaves the dock. It takes skill to do it inside the boat, but it's worth the effort between back-to-back races. Making up entails folding the sail into a neat roll something like an elongated football, or a rolled-up sleeping bag, with a clew sticking out each end and the swivel eye (at the head of the sail) sticking up at the top. The roll is held together with shock cord so that it can be quickly released at the moment of hoisting.

The person responsible for the spinnaker going up right will usually want to be in charge of making it up. It's his reputation, so he should do it his way. The details of the process are not worth the room here needed to explain it - get lessons from somebody who knows. The objective is to fold backward and forward one layer of cloth on top of the other so that it will be flat and thus permit a neat and compact roll that will not twist the sail when it is hoisted. Dynac, which is coated nylon, requires more care especially when it is new because of its resistance to being even partially stuffed. So in that case, more careful folding is essential.

The first step in actually setting a spinnaker is getting the pole up. It's easy when you go into the mark with the windward side the one on which the pole is to be set. Put the spinnaker guy through the end of the pole with the jaw facing upward, connect the lift to the center of the pole and shove it outward so that the inboard end of the pole can be connected to the ring on the mast. It's easier when you pre-set the lift (to a mark at the cam jam) and with one hand at the exact center of the pole (so that it balances in one hand) bring the pole upward so as to be able to connect the lift with the other hand and **then** push the pole out. When you go into the mark with the pole side to leeward, it is best to work from the windward side - but only **after** laying the pole across the boat forward of the shrouds and then fishing the spinnaker guy into the fitting at the down end of the pole. Then holding the pole in the center in a horizontal position, bring the pole up so that it meets the pre-set lift in the same manner described above. From this point it is easy to thrust the pole outward perpendicular to the boat without disrupting the leech of the jib and, as before, attach its inner end to the ring. As the boat comes about to round the mark, the pole needs to be shoved forward against the head stay in preparation for hoisting, otherwise you will not be able to trim the guy and the sail will hang uselessly to leeward.

Next step is to get the sail on deck and ready to hoist. If it is not made up (for example, it has already been used once in that race), it will have to be hoisted aft the shrouds on that side of the boat which will initially be leeward on the spinnaker leg. If made up, it should be set forward of the lee shrouds so that the guy (another name for the windward sheet) can be trimmed to take up the slack before hoisting - so that there will be **less distance** to trim when the sail is being hoisted. This **less distance** is desirable because more than anything it will prevent "hour glass" twists. Of course, in placing the rolled spinnaker to leeward of the jib just prior to hoisting, the two sheets must not cross, but instead both lead away from the roll, one forward, one aft from the sail. Moreover, it is better practice to align the spinnaker so that it will unroll toward the boat rather than into the water if the actual hoisting is not very fast. Make very certain that the halyard leads downward **forward** of the shrouds if that's where the spinnaker is set from, or aft the shrouds if otherwise. Hoisting through the shrouds is the mark of carelessness on the part of the someone assigned to connecting up and he is neglecting a primary duty.

Now all is in readiness. The skipper gives the word to hoist, the chute goes up and the boat picks up speed. If it's done right, the sail pops open and full hardly before the boat passes the mark.

**Jibing the spinnaker** without a "break" is a must on scows. For many of the same reasons tacking is a part of the windward leg, jibing is an inherent part of the leeward legs. Scows, except in very high wind velocities, get downwind by reaching at an angle to the wind depending on the strength of the air - the lighter the closer the reach. Assuming a shifting wind, there is at any given moment a right and wrong jibe to be on - hence the need to jibe frequently and without breaking the chute. This is apart from the need to go after wind streaks or avoid traffic.

The only time the sail should be allowed to break (and collapse) is the single instance where the jibe is around a mark from reach to reach in heavy air with the need to swing fast because of nearby competitors. Under these circumstances, the pole handler can't get the pole in the eye without the spinnaker.

But normally the spinnaker shouldn't break. There are three elements in the jibe sequence: the direction of the boat, the handling of the two sheets and the manipulation of the spinaker pole. If any one of these elements is mishandled, the spinnaker will collapse. We can eliminate discussion of the backstays, the main sheet trim and the boards because these elements are part of jibing without a spinnaker and take place in their proper time.

If we can think of the normal jibe taking place in constant wind speed, we will realize that the purpose is to bring the wind over from one side of the boat to the other with the wind ending up at the same angle to the axis of the boat as it was before the jibe. There is a symmetry in the maneuver in that the **amount** of trim on each sheet (or guy) should be the same, but reversed. This is true because there is a correct angle of wind to boat for constant wind speed. Put differently, if both sheets are marked by black rings at the 30 foot point and the marking was in the cam cleat on the windward side but four feet away from the cam on the leeward side before the jibe, then the markings will bear the same relationship to the cam cleats as before only on opposite sides. If the helmsman steers accurately so that the wind angle on which the boat ends up the same as it was before and the handling of the lines (out one side and in the other) synchronizes with the tiller work, then the jibe can be accomplished without watching the spinnaker at all - it's like an instrument landing in an airplane rather than a visual one, and it's worth practicing that way so that the whole procedure takes place without the need to concentrate so completely on the spinnaker.

The handling of the pole can easily disrupt the operation just as effectively as bad steering or sheet handlng. For this reason, if for no other, the pole handler should face forward so that he can watch what his movements are doing to the spinnaker. The steps are four: 1) the pole is disconnected from the mast and allowed to come inboard across the boat. The guy (windward sheet) needs to be trimmed at the same time to keep the sail full; 2) the pole is then disconnected from the sail so that it flies free; 3) the pole is then reconnected to what **was** the leeward sheet. At this point the boat is about dead before the wind with main boom coming in for its journey to the other side of the boat; 4) the pole is then pushed outward toward the new windward side, with the pole handler making certain he does not push too fast and at the same time making sure the outer end of the pole stays forward close to the sail. He then connects the pole to the mast.

If you practice this in 10 knots of wind until you and the crew are happy with the maneuver, you can then work up and down the wind velocities. In light air the objective is being very deft - everything as smooth as glass, connections and disconnections, with no jiggles to the sail. In heavier air, the jibes must take place with a much narrower swing of the boat; for too wide a swing is a quick ticket to a capsize. Heavier air complicates the problem of handling the sheets - not many crew members are strong enough to hold both sheets at once and shouldn't be allowed to try. Under heavy wind conditions, both sheets should be cleated as the boat heads off to about 10 degrees from dead down wind. When the pole is first disconnected from the mast, the sheet can be brought in, say, three feet and cleated again. Then the boat is jibed and the pole is reconnected to the new guy but not pushed out until the new guy can be slacked the same few feet needed to set the sail correctly. So get out and practice!

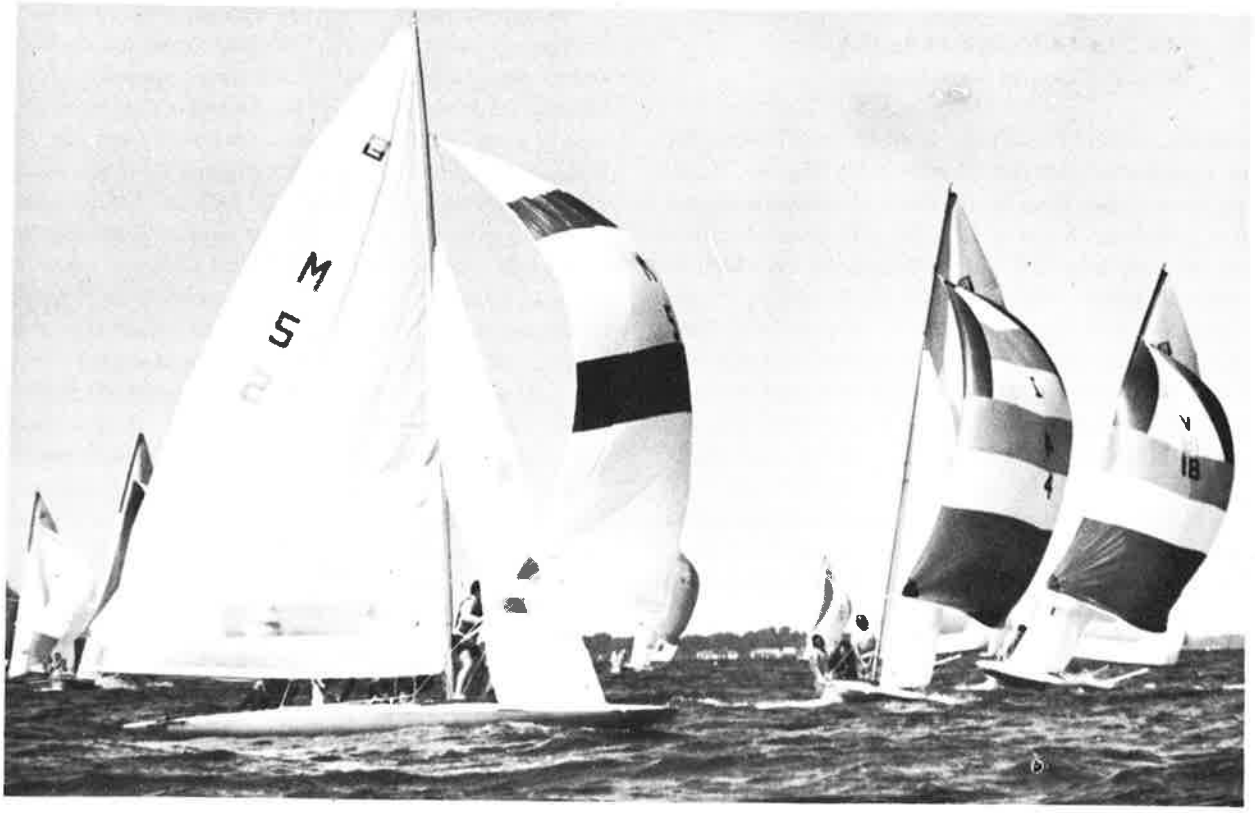
**Spinnaker dousing** always used to take place on the leeward side. Because it was blanketed by the mainsail we thought it was safer that way. The guy was allowed to run - then with the help of a "twing" (lake sailors have a different name) the foot of the sail was

1. "STANDBY" M-6 DEBATES TIMING OF CONTEMPLATED JIBE TO CLEAR WRECKAGE UP AHEAD.

2. WHEE' M-6'S BOOM OVER OK WHILE FOREDECK STRUGGLES TO RETRIEVE SPINNAKER. M-51 PREPARES TO JIBE.

3. M-6 & M-51 WITH JIBES COMPLETED AND HEADING FOR MARK. NOTE HOW HIGH M-51'S SPINNAKER FLYS.

PHOTOS: JIM O'BRIEN



gathered in and the sail lowered slowly enough to be kept out of the water. This system worked well enough with the flat equilateral reacher at the end of reachs and the big chute at the end of runs when the sail really **was** blanketed. But even then there were occasions when the sail briefly filled from various causes (for example, knots in the guy) and stopped the boat cold. Moreover, the system depended on having "twings" in order to catch the sheet - otherwise it would be way out yonder somewhere as soon as the guy was let go. With the Soling size chutes for reaching we have come to realize the windward takedown is far superior. It involves no twings to add complications, it needs no "feeding" of the halyard because the sail comes down into the rigging and out over the side, and it keeps the crew on the windward side of the boat. The steps are three: 1) the pole is disconnected and stowed. During this activity, the chute can be kept flying by trimming the guy and if possible, using an arm as a temporary spinnaker pole for the last few feet before the mark; 2) the sheet is allowed to run - knots are not likely since the sheet has been active; 3) the sail is then hauled in and down into the windward side of the boat across the head stay and jib between the shrouds and the mast - **not** around the shrouds. At the point when the clew of the sail makes its first contact with the person fathering the sail, the halyard can be allowed to run free. Sounds risky, does it? Well, it isn't, with the one caution that you make a special effort to tape any part of the rigging that might rip, the nylon — especially Dynac.

There are lots of other things to be said about spinnakers - especially about how to keep them drawing at their maximum pulling power. You have to live with them for a while to understand them (spinnakers, that is), but what is written here will help you avoid some mistakes and focus on the most important ingredients of their extraordinary impact on boat speed.

Sorry to report that this high flying spinnaker rolled in the ditch seconds after posing here.

Fallen gladiator admires I-4's recovered form.

Even the Top 10 have problems.

(photos: REPORTER & Jim O'Brien)

## 1976 CHAMPIONSHIP REGATTA
### by Special Eastern Correspondent

At the head of a record 71 boat fleet, Gordy Bowers became the winner of the 18th Annual National Championship Regatta. It was his initial win, just ten years from the time he first became a skipper of an E boat in a National Regatta. Like the 1976 event, the 1966 National was held on beautiful Lake Minnetonka up there in Minnesota country. Gordy, who had done his E boating as Stu Wells' crew before he took the helm, came in third in 1966. Since then, Gordy has been in two National Regattas without winning. But put him on Lake Minnetonka, his home port and he turned out to be much too good for all the other classy E boat performers; His finishes: 2-4-2-6-1-2. His sixth was dropped, so that his score was 17 points.

Not only was the home team represented by Bowers, but sailing a steady series was Johnny Gluek who came in second with 43 points. So it was Minnesota twice before all the talent from Wisconsin was able to place. Will Perrigo was third.

The weather was just short of ideal for the series which was sailed in six races, morning and afternoon on September 9, 10, 11. The first two days provided air in heavy quantities. The third day was something else -- interspersing planing breezes with periods of calm and meandering zephers. It was on this last day that Gordy Bowers ran away with the show despite the baffling vagaries of wind that sank all the hopefuls. Gordy made it through this thicket with a 1-2 by getting out of trouble and working out in front. It showed that he knows his lake -- at least he gets credit for it.

The regatta started out with all signs of another Allen victory -- Bill Allen, that is! Bill had won the Nationals for 1973, 1974 and 1975, the 1976 Inland and Invitational. So when he motored through the fleet in the first race, it looked as though he would make it four straight Nationals and a 1976 gland slam.

The Allen victory was scored at the expense of brother Harry who, despite an early lead, dropped to third when first Bill, then Gordy passed him during the later stages of the race. The wind that first day was heavy and gusty - up to 30 on occasions. It was especially shifty into the shore where the windward mark was positioned a bare quarter mile from land. Lots of boats upset -- probably 15, and rescue craft spent a busy time bringing in the wreckage.

Allen ended the first day with another fine performance in second place behind Henry Bossett, a Barnegat Bay sailor who earned his reputation as the near invincible M scow sailor during his recent Lake Geneva employment. Bossett had hooked a wayward and powerful port tack lift on the first beat to build up an invincible lead. Bill Allen came from a modest sixth at the first windward mark to almost catch Bossett on the final beat. So at the end of that first day it was Bill Allen with a 1-2, Bossett a 5-1, Gordy a 2-4 and Harry a 3-3 and nobody else in sight.

The second day was another beauty but more relaxing - instead of the northwesterly blasts of Thursday, a pleasant southwesterly air in the 8-12 range made for lots of boat speed with minimum effort. It was for sure Perrigo day — he won both races — the first one comfortably after ending the first beat in first place and then running up a nice lead; the second one with a few feet to spare over Sam Merrick after catching him on the second beat. Except for Bowers with a 2-6, the leaders of the first day dropped back. Bill Allen needed a big final day to retain his crown.

And then came that final day with beautiful sunshine and gentle air from the south. Unlike all the other contests, the fifth race was sailed windward-leeward, 2-1/2 times instead of the normal Olympic choreography used for the other five races. A start in 5 mph of wind (all spreaders were unpinned for those who do such things) soon turned into nearly nothing -- all hands on the leeward deck. This condition lasted fully an hour before some signs of returning wind did things for the favored few. Joe Norton from Green Lake, Stu Wells and Jack Kern (Delavan) came off the west shore to be temporary leaders, but their joy only lasted part way down the lake because the air vanished. Boats soon were seen all over the lake on both tacks on all points of sailing - many without steerage way. Gordy Bowers, John Gluek and Jack Kern drifted out ahead and were seen beating to windward -- this on the run! When the wind decided to blow, it scraped up everyone except the three leaders like a road grader. The crunch at the leeward mark was bad indeed. Bowers won in the distance. At lunch Gordy figured he was the new champion no matter how well Perrigo or Allen or anybody else performed in the final race. Gordy could take a DNS and use it as his drop-out (The National Regatta permits counting the best 5 races - if 6 are sailed).

So the final race was an anti-climax for the new NCESA champion. It was however the vehicle for Gluek to take a regatta second. The contest itself was won by Skip Johnson under conditions of a vanishing wind similar to the morning race. It all seemed as though a big dragon were up there giving a big sigh from time to time -- but between sighs there was not much air.

It is worth mentioning that a famous non-scow skipper of many victories (Lightnings especially) Bruce Goldsmith got himself a boat and crew. He was good upwind, nearly always up in the first ten at the first weather mark. His technique on reaches and runs needs brushing up — maybe somebody will offer him instruction for another year.

The Minnetonka Yacht Club did a magnificent job of organizing the Regatta. A race committee headed by Art Ives ran the races well, set good lines (except for the last race when the wind had gone on a binge of shifts) chose good courses and put the bouys where they belonged. Willie Crear and then Bunny Kuller and Bill Barnett were the fellows organizing all the logistics of boat handling, launching, arranging taxi service to and from the yacht club's island club house. The haul out operation at the end of the regatta had to be especially remarkable. Trailers parked a half-mile away were allowed to enter the hoist area when the right boat was ready - all this by walkie-talkies.

A protest committee chaired by Nat Robbins with Mike Meyer and Jack Strothman assured high competence for a regatta that was cleanly sailed despite the large number of entries.

A new wrinkle at NCESA regattas took place when regatta announcements carried the promise of finding housing for visiting sailors, particularly far-traveling ones, with local residents. (The Kenny Allens were early drum-beaters for this feature). Under the energetic leadership of Nancy Middleton (wife to Commodore Blake Middleton) more than 100 were accommodated. Nancy was also in charge of registration and seemed everywhere when things had to get done.

**THURSDAY - SEPTEMBER 9**

**FIRST RACE - Course: Olympic; Wind 320 degrees, 18-25**

Harry Allen came off the line in good shape and tacked early to the right side behind other starboard tackers. He met a good header, tacked again and had a nice lead at the pin. He went

straight for the next mark followed by Gluek, Gordy, Perrigo and Bill Allen. But all of them jibed to get out of the blanket zone in Brown's Bay. That turned out not to be good strategy, for the wind soon came in hard and ahead from around Brockett's Point. Bill Allen was lucky to have had spinnaker trouble so he could reach fast and didn't have to struggle with a takedown. Stu Wells and Danny Bowers who didn't jibe followed Harry to the jibe mark and they led the race going into the second beat. Bill Allen rounded fourth, tacked and went to the left side of the course. This paid off by landing him in first place with Harry still in second. Gluek had also gone left and he also passed Stu Wells and Danny Bowers to round the windward mark 4th behind Harry and Gordy Bowers. After that the only change was when Gordy passed Harry Allen on the run.

**SECOND RACE - Course: Olympic; Wind 320 degrees, 18-30**

Some of the gusts during this race were the heaviest of the day and more boats upset. The boats starting on the leeward end of the line, if they stayed on starboard tack, did best - because eight minutes after the start, a big blast of air came from Smith Bay with a beautiful port tack lift. Henry Bossett was the furthest left and before long he was reaching into the windward mark right over the rest of the fleet. Ken Kornoelje (Muskegon) had stayed on the starboard side also and he was next in line - well out in front of the pack. These two boats were halfway to the next mark before anybody else rounded. Bill Allen came around in fifth, held very high on the expectancy of getting a blast of close reaching wind past Brockett's Point and got what he expected. Unlike all those behind him, he was able to carry his spinnaker around the jibe mark and pursue the leaders. For the rest of the fleet, most of them got in trouble with another blast of air on the second reach which again made chute carrying dangerous. Bill Allen passed brother Harry on the run and Gordy Bowers on the final beat by playing the shifts. Although Bossett had been far out in front, Bill Allen closed rapidly on him as Bossett traded space for safe covering in the shifty air in Brown's Bay near the finish line.

**FRIDAY - SEPTEMBER 10**

**THIRD RACE - Course: Olympic; Wind 220 degrees, 8-12**

Four general recalls were necessary before a successful start. A long starboard tack from the leeward end of the line was the best strategy. Bruce Goldsmith, Will Perrigo, John Gluek, Ed Chute and Chuck Kotovic all followed this course. Goldsmith had the best start at the port end of the line and he stayed with his starboard tack longest. Perrigo took several short hitches and was able to round the first mark ahead — but not much ahead of Goldsmith and Gluek. Goldsmith died on the reaches so Perrigo got away with a nice 10 length lead by the jibe mark. Gluek also got away from the pack with a comfortable second place. Gordy Bowers, who had been 10th at the first mark, managed a fifth at the bottom pin and a third at the end of the second beat. On the run Bowers got by Gluek. On the third beat Chuck Kotovic and Ed Chute made such great progress up the right shore that for a time Perrigo got worried he might lose his lead. Their wind came -- then went, so Perrigo won the Gordy Bowers second.

**FOURTH RACE - Course: Olympic; Wind 240 degrees, 8-12**

The last shift before the gun favored the windward end and Sam Merrick was there. He soon was working to windward of the fleet. As the wind backed, Bruce Goldsmith, Tom Hesketh, Cliff Campbell, Stu Wells and Mike Huck got involved in the struggle for first place, but Merrick made it around first with a nice 5 length lead over Hesketh. Bill Allen and Cliff Campbell got away from the pack and passed Hesketh. Campbell nipped Allen at the leeward mark and both of them tacked to starboard expecting help from the eastern shore. Merrick stayed on a lifted port tack as long as he dared, leaving Allen and Campbell. However, Perrigo and Kotovic in 4th and 5th positions stayed on port — soon to become much favored by a starboard lift. Perrigo thus became a close second and then took over first place by the end of the beat. On the run John Gluek picked up Kotovic. On the final beat Merrick chased after Perrigo and almost caught him. Lon Schoor took third place by going up the right of the course and coming in fast from the right. Gluek and Bill Allen followed from the left side and Gordy had his worst finish in sixth.

**SATURDAY - SEPTEMBER 11**

**FIFTH RACE - Course W-L 2 1/2; Wind 200 degrees, 0-15**

After an hour or so of almost vanishing air, there were three groups visibly ahead of the bulk of the fleet: 1 - Boats on port tack with an on-shore breeze on the west side of the lake headed by Joe Norton, Stu Wells and Jack Kern, 2 - those on starboard tack on the east side also with an on-shore breeze headed by Sam Merrick, Bob Pegel and Chuck Kotovic, nd 3 - those out in the lake but near group 2 with similar air headed by Gordy Bowers, Harry Allen, Will Perrigo and Danny Bowers. Those in group 1 got more air and reached into the windward mark from about 90 degrees to the course axis. Gordy Bowers and Will Perrigo from his group and Merrick from his each picked up air so as to get around the mark. But then the wind played many games. It remained around the windward pin and toward the yacht club so that Gluek, who had been deep, skirted masses of becalmed boats down the east shore. Jack Kern and Gordy had also made it to the shore. Before long these three got a spell of north wind and found themselves beating to the leeward mark. The three got around and headed up the lake before the wind again gave out. From time to time, the air came down the lake in a series of steps. As it did so, more and more of the fleet got packed together. By the time the leeward mark had been reached, a huge pile-up was inevitable. By this time Gordy Bowers was over the horizon with his championship followed distantly by Gluek and Kern. Tom Norris stayed a jump ahead of the pack and that was the way they finished.

**SIXTH RACE - Course: Olympic; Wind 210 degrees, 0-12**

A minute before the gun, the wind backed so it was difficult to make the line on starboard. Merrick got about at the port end of the line and was on top of the fleet. Bill Allen right behind elected to go for the east shore and looked buried for good. Merrick kept going with air that had him almost on the lay line. This shift finally terminated but by then Merrick had a lead which got him around 10 lengths ahead of Tom Norris, Harry Allen and John Gluek. Merrick stretched the lead on the first reach but then the wind disappeared on the second reach. Good air then came down the lake so that competition could resume. Merrick was still first at the leeward mark, but it wasn't long before Tom Norris sailed into first place around Merrick in the middle of the lake in fitful air. A group of boats found air near the right shore, before a good breeze came again from the right. Merrick resumed the lead at the end of the second beat. Merrick then left the course so Bowers took over the lead. Halfway down the run was total calm so that the fleet again piled up in chaos. Somehow Lon Schoor rounded the leeward mark in first place and went for the right shore. Skip Johnson got out of this mess in about sixth and got over to the east shore when the air again gave out. Johnson kept going, got wind from the yacht club

area and before long, was the winner of the last race. Both Gordy Bowers in second and Ed Chute in third also ghosted up that left shore. Minnesota had a big day!

**"IN THE MEANWHILE"**
**[or]**
**"BACK IN THE TANK"**

by Special Mid-western Correspondant

Sufficient "healing-time" has elapsed allowing most of the black regatta frustrations to blur into a fuzzy grey — cancelling out much of the best forgotten detail of the race by race detail. Happily, the overall recall is that of an interesting and hospitable regatta. For instance — the housing arrangements! How nice to get away from the prevailing odor of that special cleaning fluid used by all motels. Some guys really lucked out — breakfast on the sideboard, friendly dogs, E-boat on a mooring out in front, a tow to the line and back by a beautiful Bertram in light air, the opportunity to snitch a vodka and tonic from the pantry when backs were turned --- who cares where they wound up in the standings?

**First Race:**

Seventy-one boats seem like one hundred seventy-one when stooging around in that heavy air. The start seemed the usual shouting match to most of us and the progress of the fleet started sorting out near the top mark. As pointed out in the preceding account - the first chute leg after the offset was of critical importance and we know some guys who allowed themselves to get buried forever by the following boats going above them. As the race progressed one could spot an increasing number of capsized hulls around the course, which (to some of us) creates conflicting emotional responses — compassion for the poor guys/sneaky inner elation that at least there's one less boat to beat/chilling thought that you've got at least four more jibes coming up and better be damn careful. Also, whereas you're aware of an occasional leader struggling with a windward chute strike, a fast review of the situation suggests you stay with the conventional leeward take down.

We happened to be in a position to observe (and feel) the memorable effect of one of those viscious and capricious swirling blasts that come through the fleet on the second (or third) weather leg. As past-commodore Walt Smedley was crossing us on port a really snarly-looking hunk of water came down at his weather rail and instantly knocked him over ... he never had a chance. The snarl hit us seconds later and knocked the boat over onto port (fastest tack we've ever made). Everyone sat in the middle, dropped all the strings and waited for two seconds when we got jammed right back on port again ... this time for real with all hands to the high side. Recalling that we had just crossed ahead of a port tacker prior to this, I took a quick look and saw he had suffered the same fate as Smedley. Needless to say we approached the finish line with toes and fingers crossed and with a new appreciation for the advantages of being on starboard.

**Second Race:**

More of the same. Again lots of the middle boats had a tough time getting away from the first offset on a clear course. Saw some traumatic encounters between port-tackers attempting to knife into the long starboard parade to the top mark. Except for fewer capsizes, the race pretty much resembled the morning event.

**Third Race:**

The four general recalls provided extra practise for big fleet starts and it would seem (later at the beer keg), that perfect or near-perfect starts were had by those who didn't get away in good shape at the official start. A couple of us were at the leeward end for this start and experienced the frustration of being less than a boat length from getting clear air at the line only to fade inevitably back and to leeward.

**Fourth Race:**

The shifts were pronounced and tempted many in the pack to tack prematurely to one side or the other, based on what was happening ahead, only to find there would be a different slant or velocity than was anticipated. One bad habit continues to exist in the regattas on the part of a minority and that is a port-tack indifference to **right-of-way.** Four encounters on one weather leg is **too** much!

**Fifth & Sixth Races:**

Too many painful memories here and too many "if I had just followed so and so to the west shore" thoughts. The finish of the last race was a real Mack Sennett comedy for those from about 15th position back. How the RC could catch finish position is still a speculation. A couple of boats went way up toward the Yacht Club, picked up a breeze that took them over and into the 20 or so boats sitting within ten feet of the finish line — some right on it. Somehow the two with momentum managed to find slots to get through and cross the line despite all the yelling and arm waving of the stalled, would-be finishers. This sort of situation would be interesting to diagram and discuss from a right-of-way standpoint.

**Random thought:** if logs or odometers could be installed on the boats it would be fun to compare mileage traveled in the last two races. At times, when the wind was zero-zero, several boats could be seen skating back and forth with their spinnakers in a tiny ruffle of air but not progressing at all on the course leg.

Of well, the sun was warm and it was a good day for those involved in tennis or golf!


*Boats and Crews cope with "Irish Hurricane".*
photo: Jim O'Brien

# 1976 NCESA REGATTA AWARDS CEREMONY-MINNETONKA Y.C.

Regatta Champion Gordy Bowers and crew recieving Trophy from Vice-Commodore Stu Wells (11th).

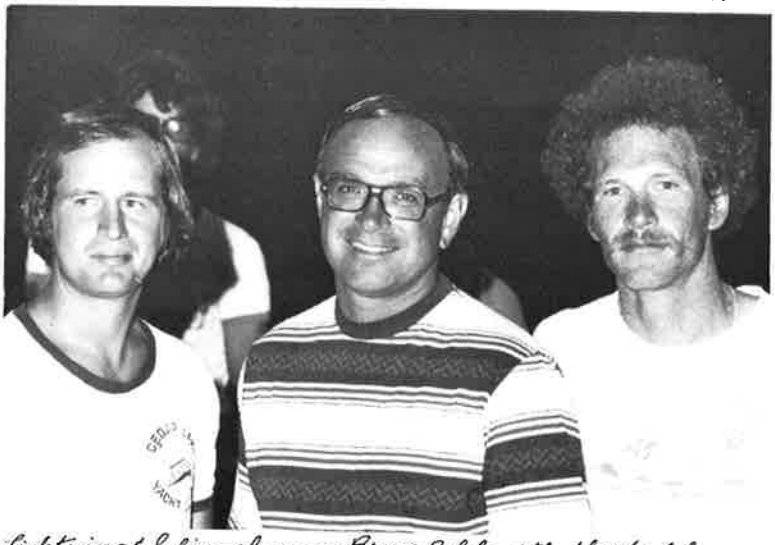
John Gluek made it 1-2 for Minnetonka.

Powaukee's Will Perrigo was a very close 3rd.

Skip Johnson (12th) presenting the Iver Johnson memorial Trophy to 4th place Henry Bossett.

Bill Allen's 5th place trophy seems to be telling him something.

Tom Norris was a solid 10th.



Lightning & Soling class ace Bruce Goldsmith flanked by crew - Dave Baldas (l.) and Dan Webster (r.)

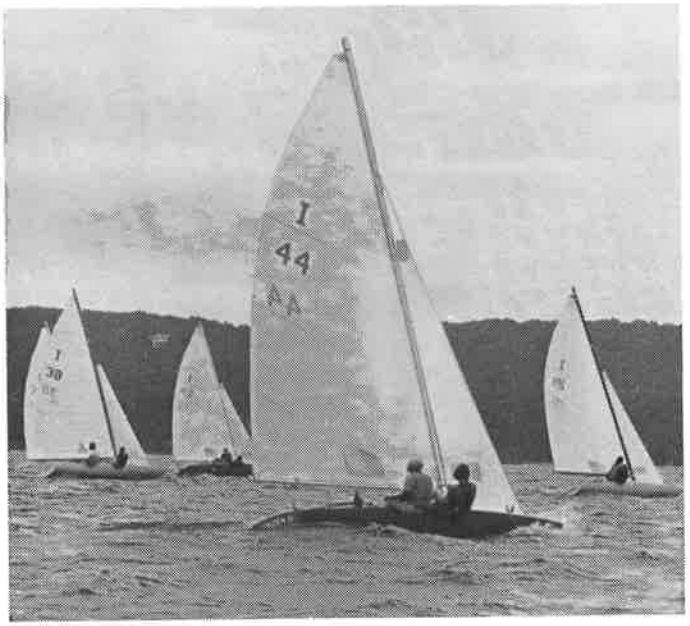
Ward and Peggy Wight in support of MA-10.

Cliff Campbell looking a bit on the wayside.



PHOTOS: DAN WEBSTER, SAILING MAGAZINE

# BEAUTY IS ONLY



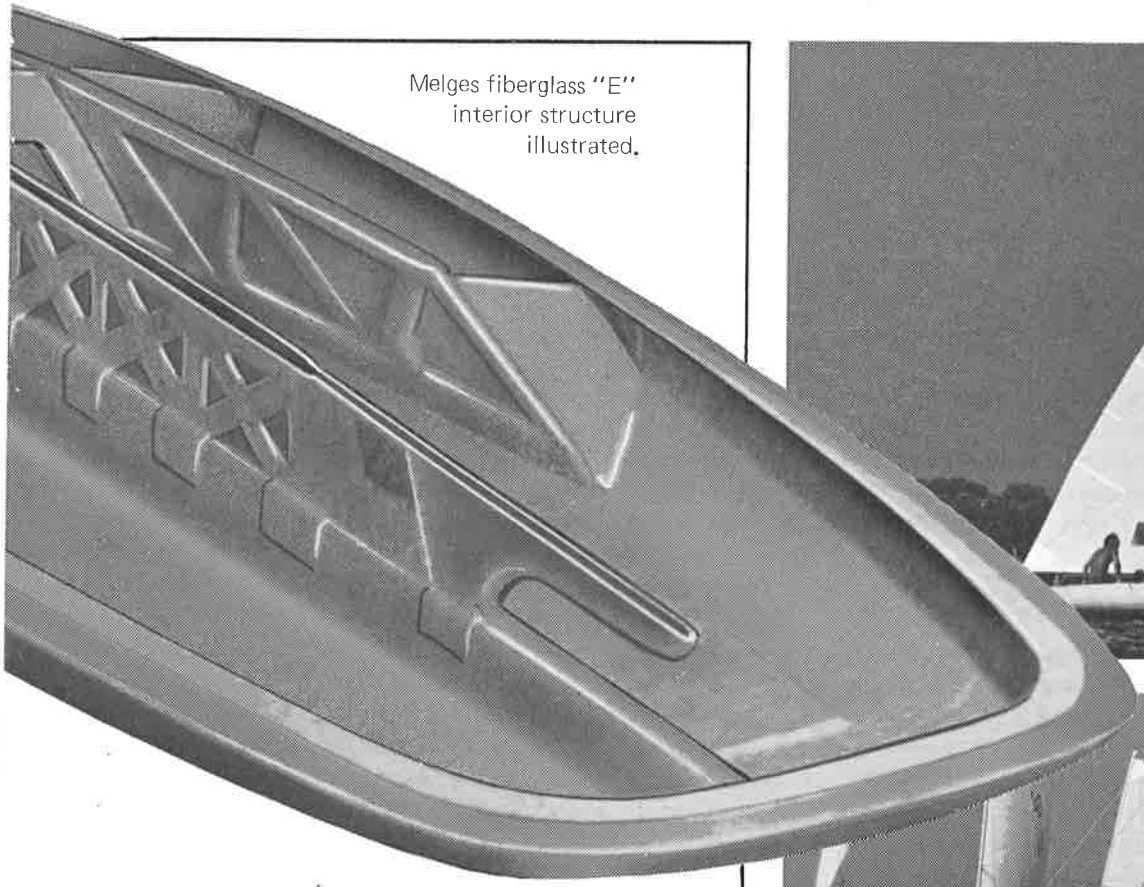
## IS IT?

Second best is not good enough for us. While you knock yourself out on the race course, we're knocking ourselves out to design and build the best boats for you. After all beauty isn't only skin deep. Even though our boats may cost a bit more than the competition we give you more. When you're out there competing you'll know that you got a lot more for your money not only in design and construction but also in service. You'll be confident with the latest and most efficient hardware systems, incorporating ideas Bud Melges has formulated. We take the extra time to put fiberglass stringers, fiberglass truss systems, quarter tanks and bulkheads into your Melges scow to make it extremely stiff and long lasting. Our unique balsa core construction with the vacuum impregnated system is time consuming and costly but we feel it's important in giving you a boat that's better.

Don't just sail a beautiful boat this year . . . invest wisely and get a lot more for your money. At Melges Boat Works we give you beauty that isn't only skin deep. Call or write us Today!

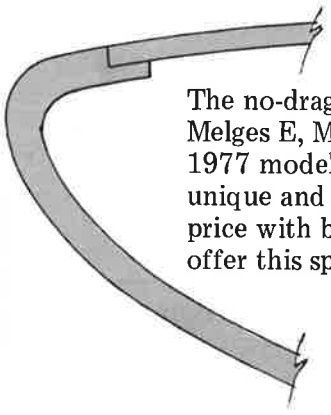
Melges Scows made an impressive showing this year in area regattas. Melges "E" scow sailors finished 1, 2, 4th and 5th at the "E" Invitational and swept the Inland with 1, 2, 3, 4, 5, 6, 7, 9 and 10th places. M-16 sailors topped the fleet at the Invitational with 2, 3, 4, 5, 6, 8, 9th and 10th place finishes . . . the Championship brought a 2, 3rd and 5th. An excellent showing was made by "C" scow sailors with a 1, 2, 3rd and 4th at the Eastern and a 1, 2nd and 5th in the Western. At the Inland the fiberglass "C" placed 2, 3, 4th and 5th. "X" boat sailors started the year at LaBelle with 1st through 4th place finishes. The Inland brought a 2nd and 5th in the Senior fleet and a 2nd and 6th in the Junior fleet. Blue Chip results were 1st and 3rd.

# SKIN DEEP!



Melges fiberglass "E" interior structure illustrated.





The no-drag rub rail makes the Melges E, M-16 and now the 1977 model C's aesthetically unique and is competitive in price with boats which do not offer this special feature.

**MELGES BOAT WORKS INC.**
**zenda, wis. 53195 414·248·6621**

## PREPARATION & PRACTICE FOR THE 1976 NATIONAL E REGATTA

by Gordy Bowers

After the ILYA "C" Championships, I asked Skip Johnson if he had an "E" that I could sail in August for the Nationals, as I had been thinking of buying one of these great boats for several months. Skip said yes, and a week later I picked up the boat. It had been sailed a little less than one summer and was in super shape. It had only one major piece of equipment missing, a "magic box", which is used to rake the mast. In view of the short time (one week) we had to practice for the Nationals, I decided not to put one in and just concentrate on the fundementals.

It had been two years since I raced the "E", however, I was anxious to apply the lessons learned in the "C", "M", Laser, and DN Iceboat. My experience with spinnakers in the Flying Dutchman at the Olympic trials and later as tune-up boat for Norm Freeman at the Olympics, also gave me many new ideas to try.

Finally I had decided to race the "E" because although I had sailed one many times during our sail testing sessions, I now believe you must race as well to really see what the boat needs. The pace of development is so fast in today's competitive one-design class, that the winner often is the one who is only a week ahead in his tuning technique.

After Skip ok'd the boat, my thoughts turned to crew, the vital human factor without which any success in the "E" is impossible. My first choice was my brother Mark, at 6'4" and 175 lbs. and with an excellent feel for boats, he was ideal. Furthermore, I was told by John Riggs, my FD crew, that brother teams always scared him because of the success of the Pageot brothers (World Champ '75) and Dieschs (Gold Medalist '76 Olympics). I knew from sailing with my brother Tom in the "C" Scow, that most of the time we were on the same mental wave length which could only help our racing. Besides, everyone who races an "E" knows of the Allen brothers. As the remainder of my crew, I recruited the Schmidt brothers, (a bit of overkill). Steve is tall, light and a 9.7 second 100 yd. man and would be perfect for the front end of the boat where speed and agility are essential. Dave, just last year, barely missed winning the "X" Interlake and who was third at the "X" Inland, fit right in as our fourth. He kept me informed of boat positions, of the wind, and was that vital extra pair of hands so often necessary. Together, we only weighed a total of 615 lbs. yet due to our height and agility, we could handle any breeze to weather.

Practice! Where do you start when you only have a week? First, I made up a preliminary list of crew responsibilities and priorities.

Second, our schedule was to sail at 5:00 p.m. every day no matter what the wind. We were lucky to have John Gluek, a top "E" skipper, testing our progress. John works at our sail loft and likes to beat his "boss". Without Johns' up-to-date racing experience, we would not have been able to leap-frog our tuning progress. Using the two boat testing format, I gradually learned what made the boat go. Often we would pull over to the curb and talk about sail trim, steering, balance, etc. We tried different sail combinations, re-cut our mains, jibs, and spinnakers several times so that we felt very confident in our boat speed in all conditions.

Our tuning proceeded rapidly, using just one mast rake. I turned down the uppers super tight as had been successful in the Olympic 470 class. In heavy air, I set the mast straight sideways while in medium air I allowed it to sag very slightly to leeward in the center. We were still searching for more light air speed when John and I went out very early before Saturday's final two races. We found more mast bend was needed to get a more open leech so we unpinned our spreaders which is now common practice. I went a step further and tightened the lowers super-tight so the spar would pop out to weather, thereby opening the leech even more. We moved aft a hole on the jib clew board and set the jib leads outboat between 14 and 16 inches (13" from centerline is our standard position). Now we had speed on John for the first time. I told him what we had done and we hooked up with a first and second that morning in the light stuff. I guess this is what I mean by up-to-the-minute advances in technique of sailing.

One evening, John's crew could not come out so we worked on the basics . . . things like smooth accelerating, ice boat type turns at the weather mark. nice, crisp spinnaker sets, with every hand a part of the team.

The same approach was used for spinnaker take-downs to weather and to leeward. We incorporated the Laser type roll tack and also the roll jibe. On tacking and jibing, everyone has to do his thing or else the boat just doesn't feel right, and there is no subsequent quickness or acceleration. In the heavy air of the late afternoon, we worked out a system whereby Steve worked the jib traveler, Mark the jib sheets, and Dave the main traveler.

The result was something extra special in heavy air. As the evening wore on, I had the crew sail and tack several times with their eyes closed in order to sharpen their feel for the boat and where they were in it. We found that if we jibed with the twings down tight with either the soling or mini-max chute, the chances of a collapse were greatly reduced. Heavy air reaching really showed up any faults in my steering. If I did not head up soon enough after the puff, the boat would flatten, develop lee helm and die. If I did not head off fast enough on the puffs, we were on our ear and easing the main. Small changes in the outboard end of the spinnaker pole were made while Mark observed and felt their effect. If the pole is too low, the chute collapses very fast. If the pole is too high, the chute becomes unstable and wants to collapse high. The wind kept dropping all the while, giving us a chance to try everything again only in lighter air. In fact, we got so into it, that we sailed home with a full moon shimmering on the water, another high to an already great day!

At the end of the week, we had three races to sharpen our feel for boat speed, strategy, and tactics as they related specifically to the "E" scow. We got some excellent help in the form of really great competition from John Gluek, Harry Allen, Dan and Steve Bowers, Edmond Chute, Dave Ferguson, Jay Ecklund, and my old-time friend, Stu Wells, who came over from White Bear to race and tune with us. It was just like a regatta! Good competition brings out the best in you. The first race taught me to use the full potential of our mainsail off the wind. The vang, as in the "C", must be played constantly, the pucker string was pulled in much tighter than the others, (again "C" boat technique), then the foot was eased to different positions, and the main sheet was played to the rhythm of the puffs and lulls.

We won that race, and the next day I told the crew that we had started "too well" and did not get enough time with boats around us to gauge our performance. So the inevitable happened. As we

were luffing at the line, John came sliding up to leeward and really gassed us coming off the line. Several tacks later, we were in last. Needless to say, we had plenty of boats around us but it was here that we really began working as a team under race conditions. There must be no panic and total discipline to sit in bad air and wait for your chance. John won, but we worked our way back to third. We learned more than we had on the first race. The next day was a real blow-down, 18-28 mph and our team work and timing began to show as we built up a large lead against very good competition. We were now ready for the **Nationals**!

As winners of the "E Nationals" 1976, I will leave the race by race reporting to those who saw it more objectively. I had demanded much from our guys and in the end they really came through. I will state however, that all my sailing in single handed boats like the Finn and Laser, had robbed me of the beautiful feeling of team work, confidence, and love of people working their hardest together to achieve something really worthwhile. John Gluek's team worked just as hard and came in second, But I have promised them a chance to beat me at next year's Nationals. I guess that's what sailing is all about.

**CREW RESPONSIBILITIES**

#1 JIB MAN - Steve

UPWIND: Trim jib sheet, traveler, main cunningham, balance #3 priority, main foot.

DOWNWIND: Take spinnaker halyard down, read compass, set pole, hoist spinnaker, push pole forward, slack foot, east cunningham, trim pucker string, trim jib, ease sheet and traveler in iceboat turn, jibe pole, set guy hooks, balance #2 priority. Take down pole, lighten cunningham and foot, loosen pucker string, ease halyard on run, lower halyard.

#2 SPINNAKER MAN - Mark

UPWIND: Trim jib sheet in 20 mph, trim and ease vang, lower board, watch for boats, watch compass, balance #1 priority.

DOWNWIND: Set spinnaker, trim spinnaker, pull down spinnaker and put in bag.

#3 FOURTH - David

UPWIND: Trim and ease traveler, watch the boats, balance #2 priority, backstays, pull up board.

DOWNWIND: East traveler, ease vang, open spinnaker bag, balance #1 priority, set boards, trim guy, get backstays, roll jibe, close spinnaker bag, watch wind and competition, spot the marks.

Stu Wells practicing pit stops while taking crew aboard at Pewaukee.

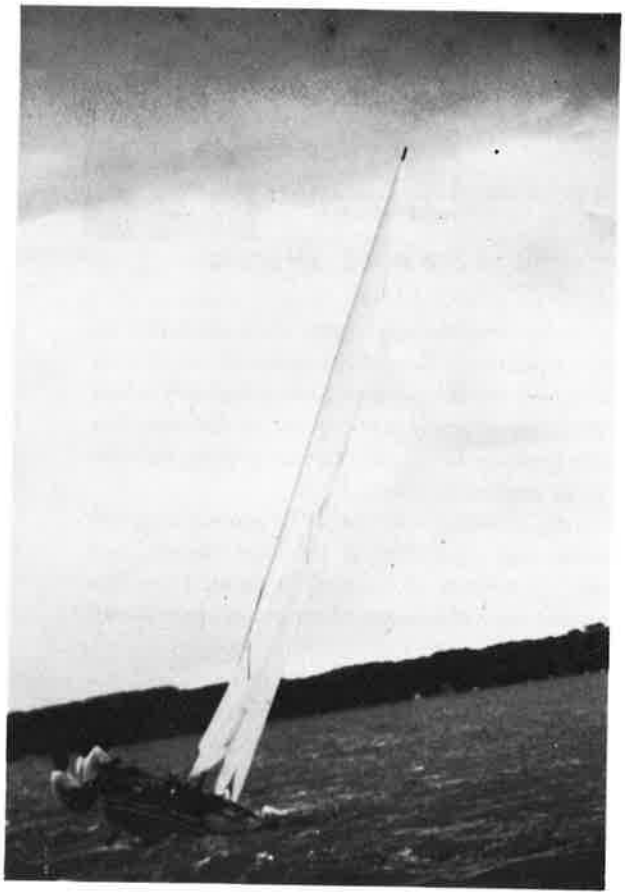
– practicing ice boat turns or perhaps Grand Prix cornering?

photos : Jim O'Brien

# 1976 NCESA CHAMPIONSHIP REGATTA RESULTS

| POSITION | SKIPPER | 1 | 2 | 3 | 4 | 5 | 6 | 7 | POINTS |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Gordy Bowers | M-11 | 2 | 4 | 2 | 6 | 1 | 2 | 17 |
| 2 | John Gluek | M137 | 4 | 8 | 5 | 4 | 2 | 16 | 43 |
| 3 | Will Perrigo | V18 | 7 | 31 | 1 | 1 | 5 | 11 | 45 |
| 4 | Henry Bossett | D30 | 5 | 1 | 10 | 12 | 5 | 9 | 51 |
| 5 | Bill Allen | I4 | 1 | 2 | 15 | 5 | 13 | 15 | 53 |
| 6 | Harry Allen | M5 | 3 | 3 | 18 | 11 | 28 | 13 | 71.4 |
| 7 | Dick Wight | MA10 | 13 | 6 | 13 | 13 | 44 | 6 | 80.4 |
| 8 | Lon Schoor | H-7 | 19 | 11 | 60 | 3 | 21 | 5 | 84.7 |
| 9 | Ed Chute | M-51 | 35 | 26 | 4 | 17 | 12 | 3 | 86.7 |
| 10 | Tom Norris | V5 | 10 | 27 | 6 | 14 | 4 | 66 | 88.7 |
| 11 | Stu Wells | W67 | 14 | 10 | 19 | 10 | 8 | 47 | 91 |
| 12 | Skip Johnson | W30 | 18 | 21 | 11 | 21 | 31 | 1 | 95 |
| 13 | Cliff Campbell | T-17 | 9 | 19 | 16 | 7 | 27 | 17 | 98 |
| 14 | Chuck Kotovic | X50 | 20 | 30 | 3 | 9 | 10 | 48 | 98.7 |
| 15 | Dan Bowers | M74 | 8 | 17 | 7 | 26 | DNF | 12 | 100 |
| 16 | Bruce Goldsmith | I-6 | 12 | 7 | 22 | 23 | 19 | 19 | 109 |
| 17 | John Wright | MA8 | 6 | DNF | 9 | 15 | 18 | 38 | 115.7 |
| 18 | Jule Hannaford | W1 | 38 | 18 | 21 | 38 | 14 | 8 | 129 |
| 19 | Joe Norton | L-13 | 24 | 33 | 12 | 19 | 20 | 25 | 130 |
| 20 | Dick Turner | CH-5 | 21 | DNF | 27 | 24 | 11 | 18 | 131 |
| 21 | Sam Merrick | MA-2 | 22 | 12 | DNF | 2 | 6 | DNF | 137.7 |
| 22 | Doug Mills | V-800 | DNF | 9 | 40 | 31 | 7 | 26 | 143 |
| 23 | John Chandler | UM-2 | 25 | 38 | 34 | 22 | 24 | 10 | 145 |
| 24 | Rich Russel | W-111 | 32 | 15 | 29 | 58 | 38 | 7 | 151 |
| 25 | Bill Ackerman | W-3 | 11 | 23 | 28 | 37 | DNF | 22 | 154 |
| 26 | Mike Huck | CR-81 | 34 | 29 | 25 | 18 | 34 | 20 | 156 |
| 27 | Tom Hesketh | I-7 | 44 | 25 | 23 | 16 | 42 | 28 | 164 |
| 28 | Don Gamble | M-6 | DNF | 13 | 30 | 27 | 25 | 50 | 175 |
| 29 | Chas Bartholdi | W-6 | 37 | 16 | 44 | 28 | 30 | 37 | 177 |
| 30 | Dick Leaveworth | UM-5 | 30 | 36 | 24 | 44 | 32 | 38 | 180 |
| 31 | Jay Ecklund | M-1 | DNF | 58 | 8 | 8 | 29 | 48 | 181.5 |
| 32 | George Hill | W-15 | 33 | 41 | 26 | 41 | 35 | 21 | 186 |
| 33 | Jack Lampan | LE-31 | 28 | 28 | 38 | 39 | 33 | 31 | 188 |
| 34 | Dan Crabbe | T-3 | 16 | 14 | 42 | 63 | 48 | 42 | 192 |
| 35 | Ken Kornoelje | SL-8 | 63 | 5 | 36 | 46 | 16 | DNF | 195 |
| 36 | Larry Price | SL88 | 26 | 43 | 20 | 36 | 53 | DNF | 208 |
| 37 | Paul Wickland | SL22 | DNF | DNF | 14 | 29 | 17 | 47 | 208 |
| 28 | Jeff Lines | T-26 | 31 | 50 | 58 | 42 | 26 | 30 | 209 |
| 39 | Jack Kern | D-3 | 44 | DNF | 49 | 30 | 3 | 58 | 210.7 |
| 40 | Kay Larkin | TO-1 | 36 | 20 | 72 | 40 | 47 | 40 | 213 |
| 41 | Fred Chute Jr. | M-20 | 39 | 24 | 48 | 61 | 72 | 27 | 229 |
| 42 | Roy Morduant | W-11 | 37 | 39 | 37 | 50 | 40 | DNF | 233 |
| 43 | Mike Spark | BH-1 | 47 | 35 | 35 | 25 | 65 | DNF | 237 |
| 44 | Bob Hunt | M-10 | DNF | DNF | 33 | 45 | 37 | 24 | 241 |
| 45 | Robert Pegel | I-11 | 41 | 22 | 57 | 57 | 57 | 32 | 241 |
| 46 | Woody Jewett III | M-77 | 38 | DNF | 39 | 49 | 15 | 72 | 242 |
| 47 | James Klauser | V-99 | 29 | 40 | 50 | 35 | 60 | DNF | 244 |
| 48 | Dan Crear | M-131 | 49 | 32 | 45 | 43 | 49 | 52 | 248 |
| 49 | Roger Carlson | S-100 | 48 | 42 | 51 | 34 | 59 | 45 | 250 |
| 50 | Dick Arneson | UM-21 | 43 | 44 | 41 | 53 | 43 | 56 | 254 |
| 51 | Frank Demonchaux | UM-8 | 52 | 49 | 67 | 51 | 41 | 33 | 256 |
| 52 | Walter Smedley | LE-7 | DNF | DNF | 32 | 32 | 61 | 33 | 259 |
| 53 | Gordon Nelson | W-60 | DNF | DNF | 47 | 52 | 46 | 14 | 260 |
| 54 | Harold McClure | CR323 | 61 | 34 | 31 | 47 | DNF | 57 | 260 |
| 55 | Mark Saliterman | M-4 | DNF | 47 | 72 | 33 | 51 | 29 | 261 |
| 56 | Jan Wengler | W-5 | 50 | 48 | 60 | 59 | 39 | 41 | 267 |
| 57 | Jack Zimmerschied | M-26 | 55 | 51 | 46 | 48 | 45 | 51 | 271 |
| 58 | Ted Brennan | I-77 | 51 | 45 | 55 | 56 | 57 | 36 | 273 |
| 59 | John F. Christie III | LE-32 | 46 | 46 | 59 | 65 | 62 | 44 | 287 |
| 60 | Bob Valdes | BD-88 | 70 | DNF | 43 | 62 | 54 | 43 | 302 |
| 61 | Trond Jakobsen | W-14 | 53 | 52 | 70 | 60 | 64 | 55 | 314 |
| 62 | William "Skip" Dickel | M-2 | 54 | DNF | 54 | 54 | 52 | DNF | 315 |
| 63 | Dan Ferguson | L-9 | 45 | DNF | 52 | 72 | 72 | 46 | 316 |
| 64 | Robert Shellenbarger | UM-7 | DNF | 53 | 65 | 70 | 58 | 53 | 329 |
| 65 | John Davis | M-22 | DNF | 56 | 64 | 64 | 56 | 61 | 331 |
| 66 | Sandy Sundrol | Z-1 | DNF | DNF | 61 | 72 | 55 | 54 | 342 |
| 67 | John Barlow | UM-6 | DNF | 54 | 66 | 69 | 66 | 59 | 344 |
| 68 | Al Butterfield | UM-1 | DNF | DNF | 68 | 72 | 63 | 60 | 363 |
| 69 | Candy Kadimik | HO-23 | DNF | DNF | 62 | 66 | 66 | DNF | 366 |
| 70 | John Tendall | W-16 | DNF | 55 | 69 | 71 | DNF | DNF | 367 |
| 71 | Ted Beier | S-27 | DNF | DNF | 63 | 67 | DNF | DNF | 373 |

# TRIM YOUR BOWERS SAILS AND WIN . . .



# CONSISTANTLY!

**When you want top results in your particular racing class, come to the successful sailmakers of the Northwest . . . Bowers of Minnetonka.**

**Our only business is producing and servicing winning sails. Bowers Sails consistantly lead the field in the research and development of winning designs in each of the scow classes including A, E, C, M20, MC, M and X.**

*Witness the proof in the Bowers' first and second place in the recent 1976 E National Championships at Lake Minnetonka. Those top two places were won with a complete inventory of the Bowers main, two jibs, plus a soling and mini-max chute . . . (white Dynac, of course.)*

**The Bowers brothers and staff service their sails with on-the-spot tuning on your boat.**

**They're interested in your performance whether you're a serious racer or casual competitor . . . and they'll take the time to prove it!**

YOUR RACE IS IN OUR BAG

*If you want to be out front, consistantly, call or write the serious sailmakers, Bowers of Minnetonka. Ask for tips on how to go faster with Bowers Sails.*

**14916 MINNETONKA BLVD.**
**MINNETONKA, MINNESOTA 55343**
**(612) 933-6262**

## UPDATING AN OLD WOOD "E" SCOW

by Skip Johnson

The foremost consideration one must make when up dating an old wood "E" scow is whether it will be sailed competitively or used for pleasure. If top flight competition is your goal, it probably would be better to buy a new one, or nearly new one. Let us consider then restoring the boat for pleasure sailing. This means putting the boat and rigging back to its original condition.

The fine finish on the bottom of your Class "E" scow is achieved by an initial blonding coat comprised of 1/3 spar varnish, 1/3 mineral spirits, and 1/3 exterior oil base white paint. Over this blonding coat successive coats of clear spar varnish are applied with a fine sanding between each coat.

If you are restoring your hull completely down to bare wood, it's best to apply a paint and varnish remover to the sides of the boat while it is in an upright position. After the sides are bare, turn the boat over and complete the bottom. (This will make it easier to keep the remover off the deck.) After the remover has done its work, the hull should be thoroughly sanded with an electric sander, then completely by hand (with the grain) to remove the electric sander marks. Of course, all cracks, holes, etc., should be repaired at this point. After a fine sanding and a complete cleaning, the bottom is ready to blond and varnish.

The deck to be recanvased requires the same attention to detail as the bottom. To begin with, all the hardware, molding, and cockpit trim must be removed. The old canvas can now be peeled off the wood deck and all old tacks, staples, etc., should be removed. The deck should now be thoroughly sanded and cleaned. The new canvas is now applied by first tacking it across the transom and then folding the canvas back and draping it over a sawhorse placed behind the boat. The deck is now coated with a very heavy layer of either varnish or paint. The canvas is now stretched extremely tight forward and tacked around the bow. Once this is accomplished one person on each side of the boat stretches and tacks the canvas, starting amidships and working forward and back in unison. Immediately after the canvas is stretched, another coat of the same paint or varnish is applied over the canvas and approximately 50 pounds of weight placed in the cockpit area to stretch the canvas tighter yet. Two or three coats of paint are then applied after the initial blonding coat. The cockpit combing, molding, and all the hardware should now be replaced. The excess canvas should be trimmed now with a sharp knife. If you have paid attention to the detail work, your boat should now be as beautiful as when it was first constructed.

To make a ten year old "E" scow competitive with the new ones you must be aware of the equipment you need and the costs involved with each items. This is especially true with respect to an aluminum mast. This is important to keep in mind because there certainly is a point where it is more economical to sell your existing boat and purchase a newer one that already has the equipment necessary to be competitive. One should have:

1) An aluminum mast and preferably an aluminum boom.

2) A floor type boom vang, adjustable from either side of the cockpit.

3) An easily adjustable stern traveler.

4) Adjustable jib tracks, that would give you an in and out range from as close to the centerline as 8" and as far out as 24". The older "H" type equipment will pass, but it's 'messy' looking.

5) A cunningham adjustment that is controllable from either side of the cockpit.

6) A set of sails that are preferably new or at the most, one to two years old with a cut to correspond to the type of mast on the boat.

These are the major items that are absolutely necessary to compete with the sailors at the top end of the fleet. To be sure, there are many other items that the 'new' boats have to make it easier and more effective to handle sails, make adjustments, and adapt the boat more readily to changing wind conditions.

The cost of all these items, over $2000.00, should determine the degree you wish to modernize your existing boat. However, if you have the inclination and the time to restore your "E" scow, I'm sure you will come to realize the enormous amount of effort and care that went into its initial construction, and you'll be able to share in the pleasure of having a truly unique racing or pleasure craft.

## RECONDITIONING AN OLD BOAT

(Editor's Note:)

Old E boats emerge in odd places — far away from their original homes and removed from fleets where experienced advice can help with their restoration or consignment to non-sailing chores.

We get many inquiries from all over asking how to restore these boats. These brief pieces are designed to provide some help.

E boats for many years prior to 1970 came with box shaped spars which swiveled on a mast step. These spars had single shrouds on each side. They also had jack stays which needed to be kept tight. Otherwise the spar would overbend and break. Reconditioning these spars require's sandpaper and varnish — the more work, the better the final job. The same treatment for the wooden boom. Because booms didn't break often, old ones are easier to get. Advertise in **Scow Reaches**, the newsletter of the National Class E Scow Association, for old spars — there's a strong likelihood there are plenty stored away in garages.

One thing further. Nearly all the boats in existance have been built by Johnson or Melges. Identifying numbers have been imprinted into the wood on the inboard side of the board wells. The Johnson boats have a new series of hull numbers for each year; the Melges boats are numbered from the beginning of their production. **For more details, write the builder of your boat:**

Johnson Boat Works
White Bear Lake, MN 55110

Melges Boat Works
Zenda, WI 53195

## RANDOM THOUGHTS BY EXPERTS

I-4 had the vang adjustable from four places on the boat and we still tipped over twice because we couldn't get to it. I was pinned under the boom one time and Ronnie was hanging over the side ... when that boom hits the water, you're through. I've been thinking we ought to install a "panic-button" station back by the skipper since he is the one who knows when we're getting in trouble and is in a position to do something bout it ... he can always let go of the main and slip off a cam release. We always try to sail maximum all the time ... vang full on ... taking chances at the reaching marks and that gets you in trouble once in a while.

Everytime I've tipped over I've been on the low board instantly. Being on the low board gets your weight below the center of gravity, giving you a turning leverage, whereas weight on the high board simply pushes the hull deeper into the water.

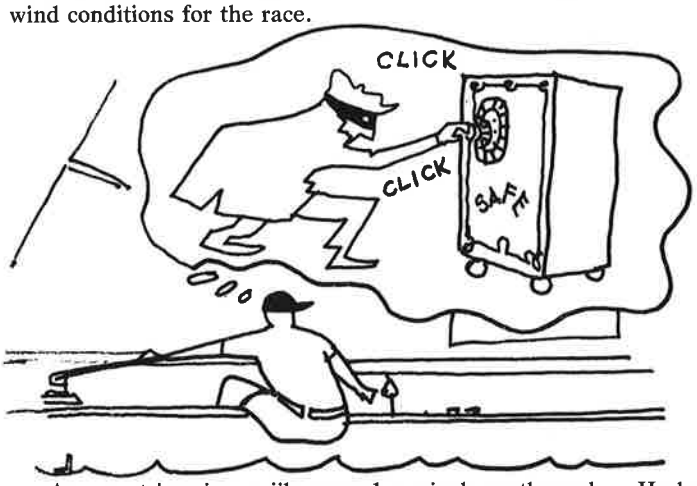
Once we find the right settings for the jib leads I never change them ... ever! With the new jib clue board, we'll probably wind up using one hole position all the time, once we feel we have the right one.

E's didn't have vangs when this was taken but Mike Meyer is doing everything else right.

I guess I learned from Stu Wells ... grew up crewing for him. Stu was really the first one who insisted on keeping the boat well-heeled off the wind ... dragging the boom in the water all the time. Another thing that separated us from a lot of people was our use of the boom vang.

Down wind is where crew ability shows up. Better skippers gain more off the wind. Crew work on reaches is most critical. You have to have been doing the tough work yourself.

I ignore the subtleties of precise mast tuning and concentrate on sailing the boat. The most important of these basic factors is the fairly simple and obvious fact that a mast which bends off to leeward at the top losses power. This is lovely in heavy puffs when you are already hanging by your toes and don't want any extra power but it is disasterous in any less wind. As a consequence, I try to make sure that my mast is as straight as possible in the average or general wind conditions for the race.

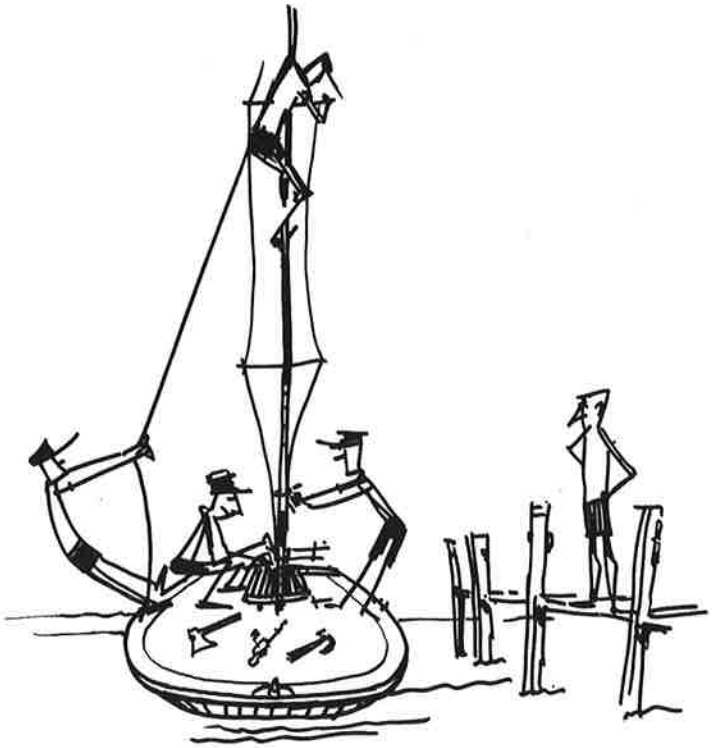



Anyone trimming a jib around a winch or through a Harken Hexa-ratchet and cannot count the clicks is losing complete feel and tune of his sails in the sense of sheet tensioning. In all cases, take a click at a time, sit, wait, and evaluate loss or gain of speed through each sail adjustment. Because of these two points, the E's are performing at a higher rate of speed and a greater speed differential from the hotshots to the beginning sailors.

I had held jib and handled the spinnaker work for years but that is a rat race on a boat. I'd have to push the 3rd crew back off the jib after coming around and I'd have to give him the jib about a hundred yards from the top and it just wasn't smooth. So we decided to change and let me handle the middle of the boat, fly the spinnakers and be right there to clean up the mess. Ronnie and I make trim adjustments automatically. When a puff comes in ... pull down on the cunningham, let the rear traveller out a little bit ...fool around with a couple of cranks on the jib ... we try to keep fairly quiet and just keep that concentration. As soon as you start talking and looking around, you find yourself up on the wind and you're not letting the traveller out in time when a puff hits ... that's when the timing is really crucial. I make all the adjustments except for the jib. When we hoist the chute, Billy pulls the guy around so it flies right away. All I have to do is grab the sheet, trim it and it's full. Ronnie handles the pole. It's a really nice technique ... really works. It gets your spinnaker flying at least five seconds faster than the guy who isn't doing it that way. Most people just pull it out and pull the guy around and then trim in the sheet. With Bill pulling in the guy as the spinnaker is being hoisted, it's going to pop right out in front and won't get tangled ... but if you just pull it right up and the corners can get around each other, when you trim it, you might get a figure eight ... but if you pull the corner first, the whole guy corner opens up. Often in light to medium air we pull the guy to about the forestay before we even hoist.


Some people think the E has gotten too complicated, but you get this in almost every sport and alot of people don't take the time to understand many of the changes. As far as I'm concerned, all the refinements just make the boat so much more enjoyable and easier to sail ... and the more stuff there is for the crew to do makes for much more exciting racing.

In light and medium winds I believe the mast should be very taut so that power is not lost on account of the mast leaning any farther to leeward than it has to. After making sure that my upper side stays are the same length, I tighten both to get the mast quite taut. I do this by tightening each stay on alternate tacks until the leeward stay is fairly taut. I do not think this should be carried to absurd lengths, however, since the key factor is the straightness of the mast.



Almost every time that I have felt the boat was slow I was able to correct by straightening the mast.

# THE MARK OF PERFORMANCE

As one design sailmakers, we've concentrated our efforts on a limited number of classes, enabling us to become very successful in each. Because we've limited ourselves to a small field, our standards are very high and we've become experts in creating a fast sail that can be tuned to your specifications. Our Board of Experts designed and built the sails which took the first three places at the E and M-20 Inland Championships and seven of the first ten places at the National E Championship. Exhaustive testing of the X boat sails last Fall brought results of six of the first ten places in the Senior Fleet and five of the first seven in the Junior Fleet. In a very competitive Olympic year our Soling sails dominated regattas in Europe as well as North America. Our design team produced sail designs which won seven of the first ten places in the Soling Class at the Olympic Games, including the U.S. Silver Medal winner. The knowledge gained from this intensive design program is applied directly to our Scow Sail designs and keeps Melges Sails ahead of the competition.
Call or Write Today!

**MELGES SAILS**
**INCORPORATED**

**MELGES SAILS, INCORPORATED, Zenda, Wis. 53195 414/248-6623**

**THE RACE: Things To Think About !**
**Or Whatever**

by Bill Allen

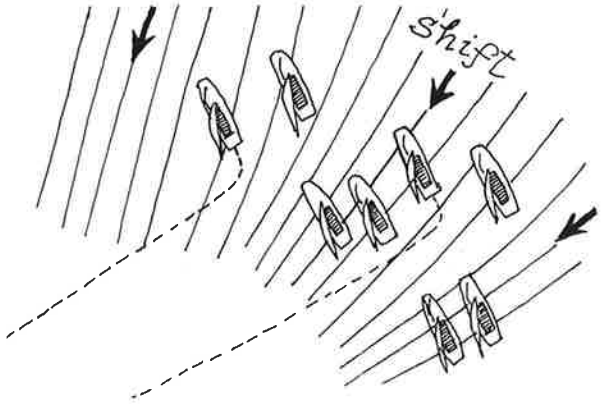
In this article I will try to pass on to you the many ideas that go through my mind prior to and during a **"typical"** E boat race. The discussion will be based on an incident concerning a poor start and the things that should be done to steadily improve the position. Many of the same ideas apply if you're trying to get from 2nd to 1st or from 53rd to 52nd. Naturally the most important aspect of a race is the start and there have been many good books written about the subject. If you have trouble, especially in large fleets, you should spend some time reading but in the final analysis the only way to get good is to practice and this means concentrating on each start whether there are 4 or 40 boats. The same techniques apply to same for small fleets as they do for large, the only difference being that in large fleets there is less room for error.


To begin the discussion we will say that we had a poor start in one of the 3 positions in figure #1. In all 3 situations the hope of getting free air without tacking is almost impossible. From all positions every effort should be made to tack as soon as there is enough room to turn the boat. Once on the port tack, the most important thought in your mind should be finding clear air. If this means ducking the whole fleet then it must be done. At the same time I think it is important to keep an eye on the good sailors as well as the best of the local talent. Many times they may know something about which way to go and how far!

After we have cleared our air, we should think immediately about heading back in the same direction as the majority of the fleet. (Unless, of course, you're sailing a lift.)

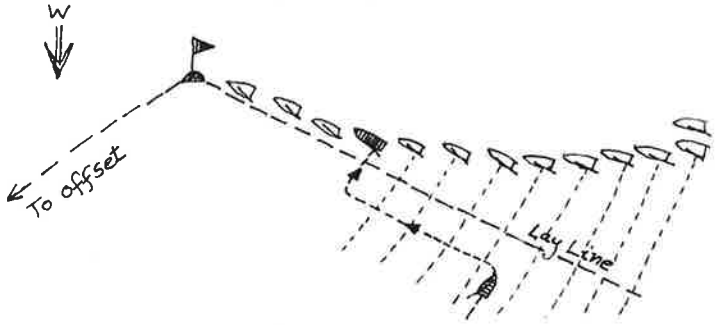
One of the most important rules to remember on the first beat is **tack as few times as possible.** This is also the one I see abused more than any other, mostly because someone has tacked on your air and even if it's wrong to tack, (i.e. a big lift) most people will. It's a very simple rule — the more you tack to clear yourself, the farther ahead the boats get that didn't have to.

Always try to sail far enough in front of your boat so that you don't get caught in places you don't want to be. Set yourself up so you can play the shifts while maintaining clear air in the slots between the boats ahead of you.

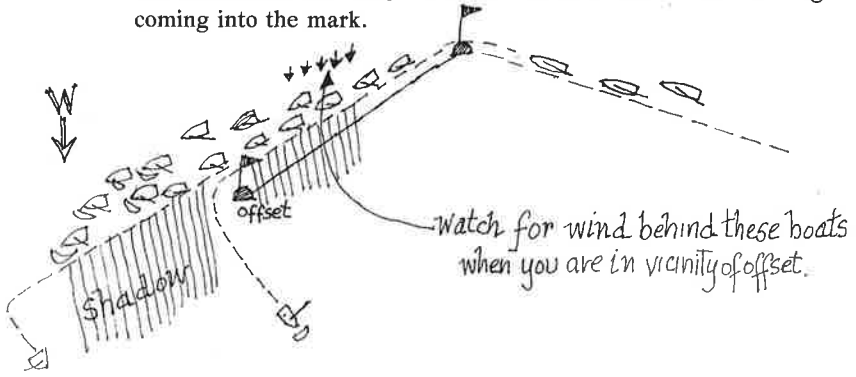



One thing that most people don't even consider is letting someone cross on port when it's going to be close but you have a nice slot to protect. In this case I often have my crew wave boats by and even turn down some because the last thing I want is for a crossing boat to tack and get a safe-leeward position and force me to tack away. Most of you know that the most difficult position to sail from is with someone on your lee bow.

It has been my experience that one of the best places to pass boats is at the first weather mark. It takes some good smart sailing (thinking 2 or 3 tacks ahead of yourself) and a bit of luck, but it's usually good for at least five or six boats. As we approach the mark we tack 8 to 10 boat lengths short of the starboard layline in a slot with clear air and let everyone else go on. As a pack of boats get out to the lay line each one crosses behind the one in front and tacks on his weather quarter in clear air. By the time the tenth boat has done this he is well overstood. As you approach the port lay line you find a spot to tack so that when you cross you can tack below the majority of boats and still make the mark. In this situation it is rarely good to come in right at the mark on port because most people are bearing off to round and the possibility of a foul is much more likely. At the same time you must be close enough so you don't have to sail in too much bad air (for too long) before you reach the mark. Once we've




rounded the weather mark there really seem to be few alternatives if we are back in **the pack.** Protect your weather quarter (clear air). Always drive the boat hard in a clear direction while the spinnaker is being set. This usually means carrying higher than the boats in front of you - as much as is necessary to protect yourself. The worst thing you can do is slide in below a boat in front of you while the best of the fleet goes up. It's no surprise that a fleet of E's with spinnakers up can throw a pretty large cover. If it becomes apparent that a jibe is necessary to get to the jibe mark (which often happens with the great angles we sail downwind) it is often advantageous to jibe early and get away from the fleet. This depends greatly on the wind shadow of the fleet that is still rounding but this not only gets you away from the pack which is carrying high, but it gives you the advantage of freshening for the mark when everyone else is trying to slide down. This move also gives you an inside position with bouy room on boats that have jibed as well as a starboard tack advantage coming into the mark.

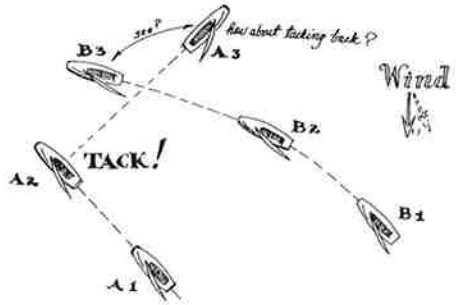


If you cannot establish an inside overlap and it looks like you'll have to round outside a boat this is the time to slow the boat down. Make quick turns with the rudders, collapse the chute or whatever, but try to slow down enough so you can pass the mark close and fall in behind this boat. This applies at all leeward marks as well.

On the second reach the same basic principles apply. Try to sail as low and fast as possible while still protecting your weather quarter. In this case if a jibe becomes necessary remember that this time the boat that jibes later will have the inside position as well as the starboard tack.

The second beat is not only a good place to pick up boats but more importantly that is often a chance to pick up a lot of distance on the leaders. While they are dog fighting each other for position and often times tacking too much, it is easy to sail the first few good shifts and find yourself right up there.

As you round the leeward mark and the boat in front of you is sailing off on port, you should seriously think about being the first to tack. This depends on a couple of factors, the most important of which is the presence of the oncoming fleet approaching the mark. Once clear of them tack and you'll usually find that whoever's ahead of you will all start tacking. As you sail off on starboard, maybe you'll get headed or you'll see everyone infront of you being headed. Maybe you won't even get headed, but when you see these people coming down on a different slant, tack instead of holding on for another one or two hundred yards. Get back to them and as soon as they start to get up on their fresh angles then go back again. At this pont you may have picked up 20 - 30 yards and if you have a hundred to make up you need only do it four more times.




Once you have established the general direction in which you're going to sail you have to take advantage of the shifts and play for course position. If someone is just ahead of you, try to pick up 20 - 30 yards or 2 -3 boat lengths at a time. If you get a little shift or see the boat above you begin to fall down a little to you, **tack!** Even if you cross behind him you're still gaining distance by it. When you are behind, the idea is to gain a little distance all the time, rather than going to the corner and hoping to get a big shift off the shore. I rate your chances from the corner at about 1 in 10 and that's not very good odds. One of the hardest things to do is say to yourself, "O.K., it's time to take the lumps — let's save what we can and get back."

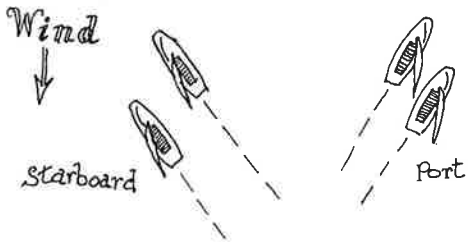
Hopefully by this time in the race, having taken advantage of these tactics, we are already in first place when we reach the second weather mark. One way or the other there are certain things to think about as we approach it. Firstly, can we take advantage of overstood boats again or have things thinned out too much in front of us? Secondly, and most importantly, (also a major concern at the first weather mark) at this point is whether the spinnaker is ready to go up right away. It is good forethought to leave enough room for yourself so that when you tack for the mark you have plenty of time to put up the pole and get the halyard hooked up before getting there.

Once again as you round the mark, drive the boat fast and hard as you prepare to set, always protecting your clear air. Immediately analyse the wind and your position. It is not often that you will want to jibe right away, because of the blanket of rounding boats, but if you see more wind it is most often worth the gamble. With the new methods that have developed for getting downwind in the E, a well sailed boat can mean the difference between passing boats or being passed. Keep the boat heeled, the vang on so the top main batten is soft, pull on the leech cord, pull the pole back about 5 or 6 feet from the headstay and drive the boat as fast as it will go. Be aware of the puffs and make every effort to sail to them. When you get there head off, bring the pole back a bit and drive down the lake. As the puff passes let the pole forward and drive up again. The telltales should always be pointing aft of the mast line unless you are driving off in a puff.

A good point to remember is that if two boats get to fighting each other in front of you, drive off as much to leeward as they are to windward. If nothing else you will be improving your angle. One method I use to get the advantage on a boat from behind is to plant my bow on his leeward quarter and wait tell everyone looks away or there is some commotion on the boat. At this time, I would drive the boat up hard making it difficult for the other boat to respond without panic. By the time he can react I have already gotten well to weather and may already be in a blanketing position.

As on the reaches, a point that must once again be considered, is being the inside boat the the mark. Many times this can be achieved by holding on with the spinnaker just a bit longer than the person in front of you. A good clean take down at this time is imperative.

Now we should certainly be in first place so all we have left to do is cover. I have a favorite method for covering that I feel works especially well on the lakes. If I want to force a person to the left I would tack directly above him on the starboard tack. He is much more likely to stay on that tack because he has clear air. When he gets on to port I would lay on a perfect cover, thus making him think immediately about going back. This method will often mean that he won't tack so much because at least on the starboard tack he has clear air and if someone is close behind in third he won't gain so much because of a tacking duel. If we're not ahead then we must apply the same ideas as on the first two beats.




If we don't win this race then we go home and spend a short time thinking about not only the mistakes but the good things we did too. Once it's all clear in our minds then put it away and come out fighting for the next race. **Good luck and have a happy winter. See you in the spring!**

## TECHNIQUES FOR RESCUING CAPSIZED CRAFT THAT HAVE GONE TURTLE

bu N. Robbins and T. Brennan

It was a windy and difficult sailing day when Ted and I recognized that it might be wise to write an article for the **Reporter** on the subject of rescuing sailboats which have gone turtle after capsizing. The setting was Pewaukee during the 1976 ILYA Class E Invitational and about six boats were over at one time — stretching the availability of knowledgeable pilots of rescue craft. The class E yacht will take almost any amount of steady wind, but because this wind increased significantly after the race started and more important, blew across the lake in hard hitting, direction changing puffs, that made it very difficult to get the boat in the groove. Hence, an inordinate number of capsizes.

It is not the purpose of this article to discuss the preventative measures for capsizing, nor to discuss personal safety during the event. Instead it is to help both skippers and spectators who are always potential rescue boat drivers effect an expeditious and safe rescue that does not damage either the sailboat or motor boat.

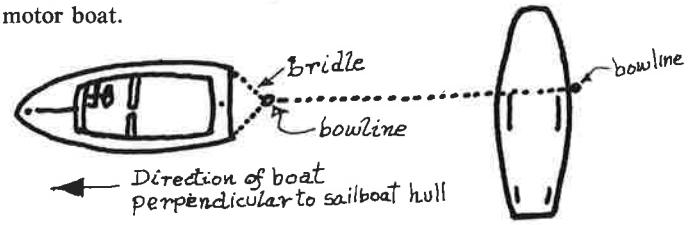
First of all, each boat captain (motor and sail) must understand each other's situation. The spectators are generally unhappy that their attention must be diverted from an exciting race. The sailboat skipper is angry at himself for his situation, unhappy about having to quit a race and concerned for the safety of his boat and crew.


Yelling at one another doesn't help.

Once the sailboat has capsized, assess the situation — crew all accounted for, life jackets on, injuries, if any, recognized. If someone is hurt or excessively cold, plan to get them into a near by boat first. Then check for loose or drifting gear, sails, lines, etc. that could foul-up the propeller of the potential rescue boat. While waiting for the rescue boat, get a spinnaker sheet, free it from the sailboat and coil it. When that boat arrives, have him ease near the sailboat on the leeward side. This puts the engine behind him and allows the two skippers to talk the situation over before the rescue operation.

The sailboat skipper should direct the operation. If the hull of the sailboat is lying across the wind, and it usually will be, have the motor boat go around to the up-wind side of the hull. Attach the spinnaker sheet (or other suitably long, strong line) to the leeward side, stay at or on the chainplate - use a bowline.


In the meantime, the motor boat should have a bridle on its stern so that the line from the sailboat can be fastened to the centerline of the motor boat. This helps steerage and maneuverability of the motor boat.




Be sure someone in the motor boat tends the bridle and line to prevent fouling with the propeller. The driver then proceeds to take the slack out of the line and when it is tight slowly apply a **little** extra power and keep it on continuously. At this time his boat direction should be perpendicular to the hull of the sailboat, regardless of wind directions!

Very easily, but slowly the sailboat will come to rest on its side. At this time the power can be reduced on the motor boat, but a little tension on the line should be retained to keep from going turtle again - although the tendency to do so is now greatly reduced because the sailboat is swamped.

Next, try to take down the main and the spinnaker, if possible. Frequently the halyards are so entangled that it is very difficult. If so, loosen the main downhaul and with life jacket on, swim out to tip of mast and take halyard off main at the peak. Don't worry about halyard, that can be retrieved later. Do the same for the spinnaker or reacher if one of these is up. Leave the jib and take it down later.

After these sails have been "lowered" (or should I say horizontaled) gather them in as best possible. Complete gathering isn't critical at this stage. Next, extend the upper bilgeboard. With a little help from the boat, two crew members can ride the board and the boat will begin to turn upright. When it is about three-quarters up, have the motorboat slack off power (keep the lines out of the prop because you would like that kind soul to pull you into shore). Usually the crew can right the sailboat by themselves from this

point on. Get the other two members on the other side of the sailboat to help steady it as it comes upright. However, the boat is very stable at this point and even if the main hasn't been lowered, it is not too dificult to keep the mast vertical until the sails can be lowered.

Now loosen the line on the side stay and put it on the bow piece. Have the motor boat hold into the wind with just a little way while the sailboat and its scattered gear are attended to — gathering in ropes, sails, sponges and other drifting gear. Finally, lower the jib.

Once all equipment is secure, try to get the hull enough out of the water so that with forward speed from the motor boat, the bailers might go to work. Usually they can and water will flow out from under the forward deck, out over the after end of the cockpit. When some of this is out, putting crew weight forward will generally lift the entire after portion of the sailboat so that no water is lapping in around any part of the cockpit. From here on the bailers will do all the work. Be sure no lines or other items plug them up. The speed of the motor boat should depend on its power and the sailor's assessment of the situation in their boat.

One last thing. If the sailboat isn't completely bailed by the time you reach the dock, be sure to close the bailers when you get there. As a matter of fact, close them anyway.

Thank the motor boat owner **profusely.**

Now that is the easy rescue. Sometimes the water is shallow enough so that upon turtling, the mast rests against the bottom. Under these conditions it is important that rescue be achieved just as soon as possible. Spectators who are familiar with the depth, or shallowness of their sailing area should be sensitive to the situation and give aid immediately. Masts can be damaged seriously if the rescue mission isn't initiated promptly.

When the mast is on the bottom, the skipper should be alert to the direction the boat drifted when the mast contacted the bottom. Usually it will be from the same point that the wind is blowing.

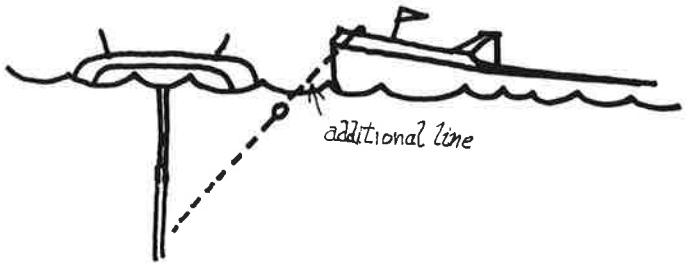
It is most important that the boat be pulled and righted **away** from that direction. Be sure the rescue boat understands that. In all other respects, the rescue operation is the same.

In the event that the mast is deeply or severely embedded in the bottom, the pull from the motor boat is likely to separate the mast from the sailboat at the step. Keep on the lookout for this occurrence. If it happens, slack off some power from the rescue boat, but keeping tension on the line, slowly turn the motor boat across the wind so that the hull of the sailboat will gradually parallel the mast. It's like taking the mast down under normal conditions, but here we are taking the hull down. Tension on the hull-to-motor boat line will keep them separated. This is all intended to prevent the mast from poking a hole in the deck of the sailboat.

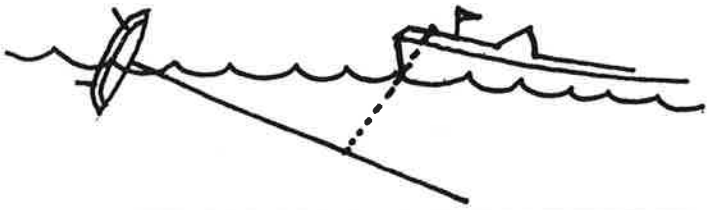
From here on there are no rules and good judgement must prevail because every situation will be different. Once the hull is free and clear of the mast, remove power from the motor boat and try to turn the hull of the sailboat upright. If wire cutters are available, cut the shrouds and stays to free the sailboat, although it will still be attached to the rigging by way of the main boom. Free the sheet and other lines and then once the sailboat hull is taken care of, an attempt can be made to pull the mast out — from the direction it imbedded itself.

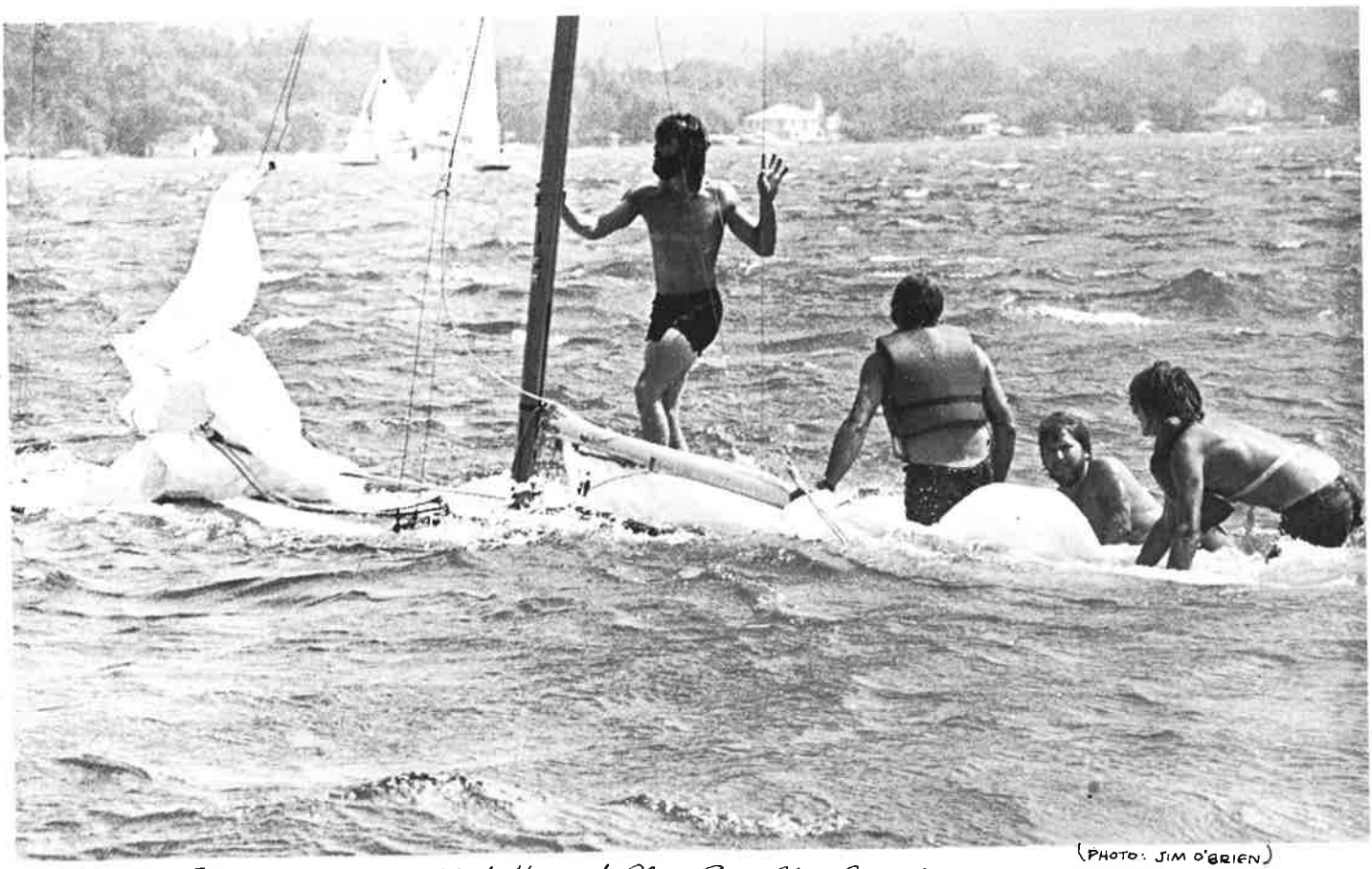
As you can see, this latter situation is a real mess. It can be avoided by keeping the forestay and/or the jib luff very tight or pinning the mast to its step. This small insurance will be well worth the risk of the disaster an imbedded mast renders.

Another method which has proven satisfactory is very simple provided the mast is not on the bottom. The rescue boat approaches the sailboat athwartships from the down wind side. A crew member of the sailboat unloosens the snap end of one spinnaker halyard and gives it to a member of the rescue boat. The other end of the halyard must be secure. The rescue boat then adds another twenty feet, or so, of line to the spinnaker halyard and makes the free end fast to the bow of the motor boat. (See sketch).




The rescue boat then gently backs down. When the sailboat mast is about halfway to its side (45 deg. from horizontal), shorten the line to the motor boat, keeping pressure on mast and pull the remaining angle. At some point, the mast can be helped to the horizontal manually by a member of the rescue boat and if cleated on the bow, the boat will lay aside the mast while the crew of the sailboat take the sails down and get ready for the uprighting. From here on all the techniques for final rescue are the same.





(PHOTO: JIM O'BRIEN)

*Hmm --- guess we'd better get Plan B or Plan C underway.*

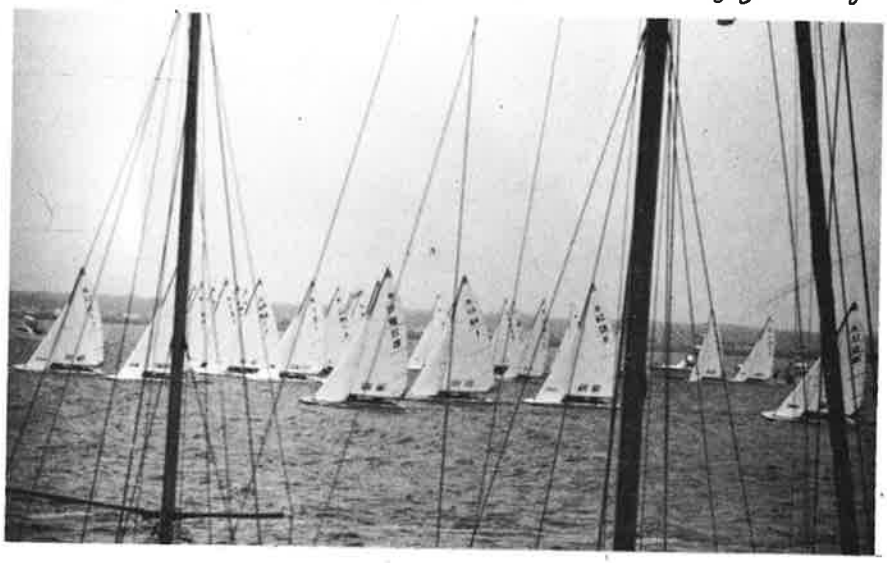
An extreme example of taking down to weather.

(REPORTER PHOTO)

Lady Kay Larkin on Kewaukee Safari astride Great White Hunter Gaylord's craft.

PHOTO: JUDY BERRY

--sorta lonely and a long way from Lake Geneva.



(photo: Judy Berry)

The 1975 Regatta fleet viewed through "lead belly" spars at Little Egg Harbour

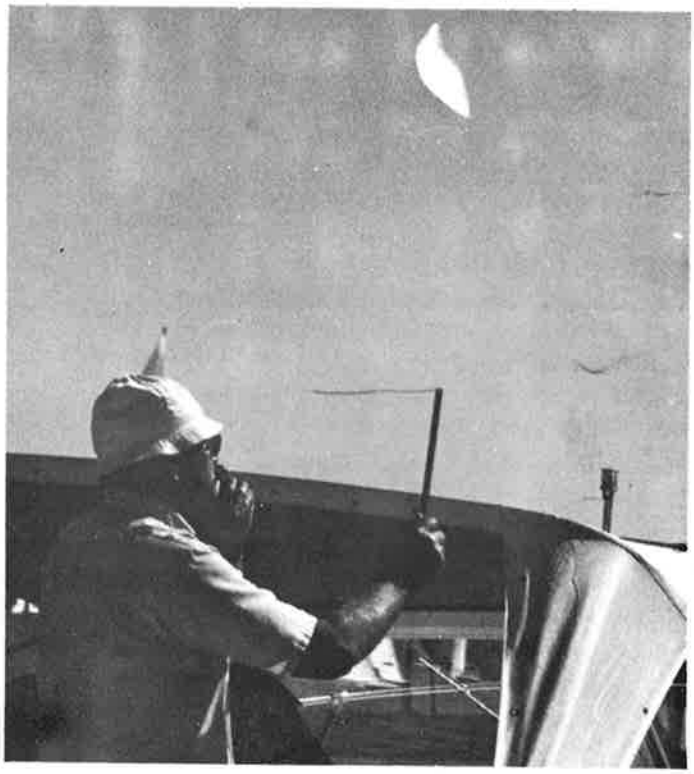
## ANOTHER INFAMOUS REPORTER PHOTO QUIZ

**Who Is This Man and What Is He Doing?**

Clue: This man is a sailing judge and often tells sailboat racers where to go ....

| | | YES | NO |
|---|---|---|---|
| 1. | The Judge has just shot a duck with the starting cannon. | ☐ | ☐ |
| 2. | The Judge is measuring the Northern Lights phenomena. | ☐ | ☐ |
| 3. | The Judge is taking an eye test. | ☐ | ☐ |
| 4. | The Judge has just launched a bratwurst with a New Zealand sling-shot. | ☐ | ☐ |
| 5. | The Judge is picking his nose. | ☐ | ☐ |
| 6. | The Judge is E.M. and is guessing at the salt air at Little Egg Harbor. | ☐ | ☐ |

(If you answered two of these correctly you have won!)



# THE MAN . . .

IVER C. JOHNSON (1907 - 1976)

THE SECOND GENERATION OF THE JOHNSON FAMILY. HE DEDICATED HIS LIFE TO SCOW BUILDING AND CULMINATED IT WITH THE DEVELOPMENT OF THE FIRST SUCCESSFUL FIBERGLASS E.

# AND THE BOAT


1st - TOMS RIVER "E" REGATTA • 1st - UP BAY REGATTA
1st - DOWN BAY REGATTA • 1st - HOPATCONG REGATTA
1st - 3 out of 5 Races - WESTERN MICHIGAN "E" REGATTA
1st - NATIONAL "E" SCOW REGATTA

## JOHNSON BOAT WORKS

WHITE BEAR LAKE, MINNESOTA 612-429-7221

SOMETHING IN THE BILGE IS BOTHERING SKIPPER HARKRADER

CLIFF CAMPBELL DEMONSTRATING HIS FAMOUS "OUT-HOUSE CROUCH"

DICK TURNER AND CREW TAKING A BREATHER

PHOTOS: JUDY BERRY, EVENTIDE STUDIO

**MOST MEMORABLE MEMO OF 1976**
**(From Cowan Lake YC)**

Fellow E Skippers: 5/30/76

With regret, we must tell you that the Cowan Lake E-Scow Regatta scheduled for May 8 and 9 has been cancelled.

The reason is very simple — there is no water in Cowan Lake.